UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 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: 001-38853

NGM BIOPHARMACEUTICALS, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**26-1679911**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

333 Oyster Point Boulevard
South San Francisco, California 94080
(Address of principal executive offices and zip code)

Registrant's telephone number, including area code: (650) 243-5555

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

Title of Each Class of Securities Registered	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, par value $0.001 per share	NGM	The Nasdaq Stock Market LLC

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

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

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

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

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

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

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

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

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

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

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

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

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant as of June 30, 2023, the last business day of the registrant's most recently completed second fiscal quarter, was approximately $147 million, calculated based on the closing price of the registrant's common stock as reported by The Nasdaq Global Select Market. Excludes shares of the registrant's common stock held as of such date by officers, directors and stockholders that the registrant has concluded are or were affiliates of the registrant. Exclusion of such shares should not be construed to indicate that the holder of any such shares possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the registrant or that such person is controlled by or under common control with the registrant.

As of March 5, 2024, the number of outstanding shares of the registrant's common stock, par value $0.001 per share, was 83,462,408.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information required by Part III, Items 10-14 of this Annual Report on Form 10-K is incorporated by reference to the registrant's definitive Proxy Statement for the 2024 Annual Meeting of Stockholders to be filed with the U.S. Securities and Exchange Commission pursuant to Regulation 14A. If such Proxy Statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K, such information will be included in an amendment to this Annual Report on Form 10-K to be filed within such 120-day period.

NGM BIOPHARMACEUTICALS, INC.
2023 ANNUAL REPORT ON FORM 10-K
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Unless the context suggests otherwise, references in this Annual Report on Form 10-K (the "Annual Report") to "us," "our," "NGM," "NGM Biopharmaceuticals," "we," the "Company" and similar designations refer to NGM Biopharmaceuticals, Inc. and, where appropriate, its subsidiary.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report contains forward-looking statements that involve risks, uncertainties and assumptions that, if they materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. The statements contained in this Annual Report that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Forward-looking statements are often identified by the use of words such as, but not limited to, "aim," “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” "seek," “should,” “will,” “would” or the negative of those terms, and similar expressions that convey uncertainty of future events or outcomes to identify these forward-looking statements. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. Forward-looking statements in this Annual Report include, but are not limited to, statements about:

- our expectations related to the Agreement and Plan of Merger, dated as of February 25, 2024, or the Merger Agreement, among the Company, Atlas Neon Parent, Inc., a Delaware corporation, or Parent, and Atlas Neon Merger Sub, Inc., a Delaware corporation and a wholly-owned subsidiary of Parent, or Merger Sub, including with respect to the parties’ ability to satisfy the conditions to the consummation of the tender offer and the other conditions set forth in the Merger Agreement, statements about the expected timeline for completing the transactions contemplated by the Merger Agreement, the Company’s and Parent’s beliefs and expectations and statements about the benefits sought to be achieved by Parent’s proposed acquisition of the Company and the possibility of any termination of the Merger Agreement;
- the success, cost and timing of our product development activities and clinical trials and the initiation of, enrollment in, availability of data for and other events related to such clinical trials;
- our belief that NGM707 has the potential to reprogram immunoglobulin-like transcript 4-, or ILT4-, and immunoglobulin-like transcript 2-, or ILT2-, expressing myeloid cells to shift them from a suppressive state that restricts anti-tumor immunity to a stimulatory state that may promote anti-tumor immunity;
- our ability to design and conduct a potential registrational trial of aldafermin in primary sclerosing cholangitis, or PSC, and our belief that aldafermin has the potential to lower bile acid production and to slow the progression of primary sclerosing cholangitis directly and as measured through certain biomarkers associated with PSC;
- our ability to design a toxicology package to support the potential initiation of a Phase 2 proof-of-concept study of NGM120 in patients with hyperemesis gravidarum, or HG;
- our plans with respect to our three key priorities for clinical development, and the therapeutic potential of NGM707 in solid tumors, aldafermin in PSC and NGM120 in HG;
- the therapeutic potential of our programs (including our NGM438, NGM831, NGM621 and NGM313 programs) whose further development is dependent on our ability to secure potential future collaboration, out licensing, partnering or other business development arrangements, or BD Arrangements, with third-party partners and our ability to secure such BD Arrangements on beneficial terms, if at all, and, in the absence of such BD Arrangements, whether due to limitations imposed on our ability to secure such BD Arrangements during the pendency of the Merger Agreement or otherwise, we are unlikely to advance development of such product candidates unless our portfolio prioritization changes and we are able to secure the additional capital necessary to fund such development;
- our ability to obtain funding for our operations;
- our ability to maintain compliance with the listing standards of The Nasdaq Stock Market LLC, or Nasdaq, if the transactions contemplated by the Merger Agreement are not consummated;
- our estimates regarding future expenses, revenue, capital requirements and needs for additional funds;
- our ability to obtain and maintain regulatory approvals for our current and any of our future product candidates, and any related restrictions, limitations and/or warnings in the label of any approved product candidate;
- our belief regarding the impact of our product candidates’ side effects and our ability to effectively manage these side effects;
- the commercialization of our product candidates, if approved;

- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- the rate and degree of market acceptance of our product candidates, as well as the reimbursement coverage for our product candidates;
- regulatory developments in the United States and other countries;
- our beliefs with respect to the availability of the accelerated approval pathway for any marketing applications that we may submit to the U.S. Food and Drug Administration, or FDA, including potentially with respect to aldafermin for the treatment of PSC;
- the performance of, and our ability to obtain sufficient supply of clinical trial material in a timely manner from, third-party suppliers and manufacturers;
- our beliefs around the competitive landscape for our product candidates and the success of competing therapies that are or may become available;
- our ability to attract and retain key scientific, development and management personnel; and
- our expectations regarding our ability to obtain, maintain, protect and enforce intellectual property protection for our product candidates.

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 of 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 “Risk Factors” in Part I, Item 1A of this Annual Report. The below summary is qualified in its entirety by that more complete discussion of such risks and uncertainties. You should carefully consider the risks and uncertainties described under “Risk Factors” in Part I, Item 1A of this Annual Report as part of your evaluation of an investment in our common stock.

On February 25, 2024, we entered into the Merger Agreement with Parent and Merger Sub. The Merger Agreement provides for, among other things, (i) the acquisition of the Company by Parent through a cash tender offer, or the Offer, by Merger Sub for each issued and outstanding share of our common stock, and (ii) the merger of Merger Sub with and into the Company, or the Merger, with the Company surviving the Merger. If the Merger is effected, our common stock will be delisted from The Nasdaq Global Select Market and we will be privately held. During the pendency of the Merger, we may be subject to certain risks and uncertainties as more fully described under “Risk Factors” in Part I, Item 1A of this Annual Report. If the Merger is not consummated for any reason, we will remain subject to the other risks and uncertainties described herein.

Risks Related to the Merger

- The consummation of the Offer and the Merger are subject to a number of conditions beyond our control, and if one or more of such conditions are not satisfied, and as a result, we do not complete the Offer and the Merger, we would remain liable for significant transaction costs, and the focus of our management would have been diverted from advancing our three key development opportunities, in each case without realizing any benefits of the Offer and the Merger.
- Failure to complete the Offer and the Merger within the expected time frame, or at all, could have a material adverse effect on our business, operating results, financial condition and our stock price.
- The Merger Agreement contains provisions that could discourage a potential competing acquirer that might have an interest in acquiring all or a significant portion of our common stock from considering or proposing that acquisition, even if it were prepared to pay consideration with a higher per share cash or market value than the Offer Price (as defined in the Merger Agreement).
- While the Offer and the Merger are pending, we are subject to uncertainties that could disrupt our business, and our stock price may fluctuate significantly based on announcements regarding the Offer and the Merger or based on market perceptions of the likelihood of the satisfaction of the conditions to the consummation of the Offer and the Merger outside of our control.
- While the Offer and the Merger are pending, we are subject to contractual restrictions that limit our ability to pursue or prevent us from pursuing attractive business or fundraising opportunities (if any), such as our ability to raise additional capital, incur indebtedness or pursue BD Arrangements. In addition, if the Merger is not consummated, we may face increased difficulties raising capital and may need to significantly delay,

scale back or discontinue development of, or abandon some or all of, our product candidates, or scale back or discontinue our discovery research efforts.

- Stockholder litigation or class actions lawsuits could prevent or delay the consummation of the Offer and the Merger, divert management's attention, adversely affect our ability to consummate the Merger or otherwise negatively impact our business, operating results and financial condition.
- We have incurred, and will continue to incur, significant costs and expenses, including fees for professional services and other transaction costs, in connection with the Offer and the Merger.

Other Risks Related to Our Business

- We have incurred net losses every year since our inception, we have no meaningful source of revenue, we expect to continue to incur significant operating losses and we may never become profitable.
- We have minimal committed external funding for our development efforts and will need to rely on our own financial resources and our ability to raise additional capital in order to further our development efforts.
- We need significant additional capital to proceed with development and commercialization of our current and potential future product candidates and to finance our other operations, and that additional capital may not be available to us on acceptable terms, or at all; as a result, we may need to significantly delay, scale back or discontinue development of or abandon some or all of our product candidates, or scale back or discontinue our discovery research efforts, or we may be required to cease operations altogether.
- We expect to depend in the future on BD Arrangements with third-party partners for the development and commercialization of some or all of our product candidates and for revenue and, if we are unable to secure those BD Arrangements, or if any future BD Arrangements are not successful, we may not be able to capitalize on the market potential of our product candidates or continue their development. BD Arrangements involve numerous risks, any of which could materially and adversely affect our business and financial condition.
    - While we may consider BD Arrangements to advance development of the product candidates that are within our three key priorities for clinical development, we are seeking BD Arrangements with third-party partners to progress, in whole or in part, the development of one or more of our other programs whose further development is dependent on our ability to secure potential future BD Arrangements, which include NGM438, NGM831, NGM621 and NGM313, and if we are unable to secure BD Arrangements to support these programs, we are unlikely to be able to advance their development unless our portfolio prioritization changes and we are able to secure additional capital necessary to fund such development. We may discontinue or abandon any or all of our programs altogether, in which case we will not realize any return on our investments in those programs.
- We may not be able to obtain and maintain relationships with future partners that are necessary to develop, manufacture and commercialize some or all of our product candidates.
    - We rely completely on contract manufacturers for the manufacture of our product candidates and the process of manufacturing, and conducting release testing for, our biologic product candidates is complex, highly regulated and subject to many risks, any of which could substantially increase our costs and limit supply of our product candidates and any future products needed for clinical trials and commercialization.
- We need to successfully complete rigorous preclinical and clinical testing of our product candidates before we can seek regulatory approval. The regulatory approval processes of the FDA and comparable foreign health authorities are lengthy and inherently unpredictable, and if we are not successful at each step of the process, commercialization of our product candidates will be delayed or prevented.
    - Our product candidates are in early stages of development, with our most advanced product candidates only in Phase 2 development.
    - Our product candidates may fail to demonstrate safety and efficacy in ongoing and future clinical trials, may never achieve regulatory approval and, even if approved, may not be able to be successfully commercialized due to competition or other factors.
- We may not successfully identify new product candidates to expand our development pipeline.
- Our future success depends in part on our ability to attract and retain highly skilled employees, including members of our senior management team.

- We face substantial competition, which may result in others discovering, developing or commercializing products before, or more successfully than, us.
- Even if we obtain approval to market our products, these products may become subject to unfavorable pricing regulations, reimbursement practices from third-party payors or healthcare reform initiatives in the United States and abroad, which could harm our business.
- Our success depends in significant part upon our ability to obtain and maintain intellectual property protection for our products and technologies.
- Our principal stockholders, including entities affiliated with The Column Group, Merck and our management, own a substantial percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.
- We or third parties we rely on or partner with could experience a cybersecurity incident that could harm our business.
- We are a “smaller reporting company” and the reduced disclosure requirements applicable to such companies that we have availed ourselves of may make our common stock less attractive to investors.
- The market price of our common stock has been and may continue to be volatile, and you could lose all or part of your investment.
- We continue to incur increased costs as a result of operating as a public company and our management devotes substantial time to public company compliance initiatives; for example, we are obligated to develop and maintain proper and effective internal control over financial reporting and to comply with the requirements of Section 404 of the Sarbanes-Oxley Act of 2002.
- We have failed in the past and may in the future fail to continue to meet the listing standards of Nasdaq, and as a result our common stock may be delisted, which could have a material adverse effect on the liquidity of our common stock.

PART I

Item 1. Business.

Overview of Our Business

We are a biopharmaceutical company focused on discovering and developing novel, potentially life-changing medicines based on scientific understanding of key biological pathways. Our mission is to translate complex, powerful biology with rigor and urgency into life-changing medicines. Our strategy is built on a straightforward central premise: create an environment that both allows drug discovery research to thrive by focusing on powerful human biology unconstrained by therapeutic area or technology approach and remain grounded in the singular motivation of delivering impactful medicines to address critical unmet or underserved needs of patients suffering from grievous diseases. As explorers on the frontier of life-changing science, we aspire to operate one of the most productive research and development engines in the biopharmaceutical industry. All therapeutic candidates in our pipeline have been generated by our in-house discovery engine, led by biology and motivated by patient need.

Our biology-driven and therapeutic area agnostic discovery engine has produced a diverse pipeline of product candidates spanning oncology, liver and metabolic disease and retinal disease. We have evolved our strategy to concentrate our resources on three product candidates in three specific disease areas and to continue our discovery research efforts. For our other product candidates and potential future opportunities that have been, and may in the future be, produced by our discovery engine, we are seeking collaboration, out licensing, partnering or other business development arrangements, or BD Arrangements, with third-party partners with sufficient resources and relevant domain expertise to further their development. We believe that this strategy, if successfully implemented, may enable more of the programs in our pipeline to be advanced effectively and efficiently.

Pending Transactions Contemplated by the Merger Agreement

On February 25, 2024, we entered into the Agreement and Plan of Merger, dated as of February 25, 2024, or the Merger Agreement, with Atlas Neon Parent, Inc., a Delaware corporation, or Parent, and Atlas Neon Merger Sub, Inc., a Delaware corporation and a wholly-owned subsidiary of Parent, or Merger Sub. Parent and Merger Sub are affiliates of The Column Group, LP, which, along with certain of its affiliates, is collectively referred to as TCG. TCG is our largest stockholder, holding approximately 26.7% of our common stock as of December 28, 2023.

The Merger Agreement provides for, among other things, (i) the acquisition of the Company by Parent through a cash tender offer, or the Offer, by Merger Sub for each issued and outstanding share of our common stock for $1.55 per share, or the Offer Price, and (ii) the merger of Merger Sub with and into the Company, or the Merger, with the Company surviving the Merger. Subject to the terms of the Merger Agreement, the Offer Price will be paid subject to any applicable tax withholding and without interest.

Upon the unanimous recommendation of the special committee of our board of directors, or the Special Committee, the members of our board (other than David V. Goeddel, Ph.D. and Roger M. Perlmutter, M.D., Ph.D. who recused themselves because of their relationship to TCG, and William J. Rieflin, who recused himself because he had entered into the Rollover Agreement (as defined in the Merger Agreement) at the time of the board's determination) have unanimously determined that the terms of the Offer, the Merger and the other transactions contemplated by the Merger Agreement are fair to and in the best interests of the Company and the Unaffiliated Stockholders (as defined in the Merger Agreement), authorized and approved the execution, delivery and performance by the Company of the Merger Agreement and, subject to the terms and conditions of the Merger Agreement, the consummation by the Company of the transactions contemplated by the Merger Agreement, declared the Merger Agreement and the transactions contemplated by the Merger Agreement advisable and recommended that the Unaffiliated Stockholders accept the Offer and tender their shares of common stock pursuant to the Offer.

The Offer is being made subject to all terms and conditions set forth in the Offer to Purchase, dated March 8, 2024, or, as it may be amended or supplemented from time to time, the Offer to Purchase, and in the related Letter of Transmittal, or as it may be amended or supplemented from time to time, the Letter of Transmittal. The Offer to Purchase and the Letter of Transmittal constitute the Offer. The Offer will expire at one minute after 11:59 p.m., Eastern time, on April 4, 2024, unless extended in accordance with the terms of the Offer and the Merger Agreement and the applicable rules and regulations of the U.S. Securities and Exchange Commission, or the SEC.

Pursuant to the terms of the Merger Agreement, as of the effective time of the Merger, or the Effective Time, by virtue of the Merger and without any action on the part of the holders, (i) each outstanding share of our common

stock (other than any shares of common stock (a) held in the treasury of the Company, (b) owned, directly or indirectly by TCG, Parent, Merger Sub or any other subsidiary of Parent, or the Rollover Stockholders (as defined in the Merger Agreement) at the commencement of the Offer, (c) irrevocably accepted for purchase in the Offer or (d) owned by any stockholders who are entitled to and who properly exercise appraisal rights under Delaware law) will be converted into the right to receive the Offer Price without interest, less any applicable tax withholding; (ii) the vesting of each option to purchase shares of our common stock, or Company Stock Options, shall be accelerated and (A) each Company Stock Option that has an exercise price per share that is less than the Offer Price, or an In-the-Money Option, that is then outstanding will be cancelled and, in exchange therefor, the holder of such cancelled In-the-Money Option will be entitled to receive an amount in cash, without any interest thereon and subject to applicable tax withholding, equal to the product of (x) the total number of shares of our common stock underlying such In-the-Money Option as of immediately prior to the Effective Time multiplied by (y) the excess of the Offer Price over the applicable exercise price per share of the common stock underlying such In-the-Money Option, and (B) each Company Stock Option that is not an In-the-Money Option will be cancelled for no consideration; and (iii) each unvested restricted stock unit, or RSU, of the Company that is then outstanding shall become immediately vested in full and cancelled, and, in exchange therefor, the holder of such cancelled RSU will be entitled to receive an amount in cash without interest, less any applicable tax withholding, equal to the Offer Price.

Merger Sub's obligation to accept shares of our common stock tendered in the Offer is subject to conditions, including: (i) that the number of shares of common stock validly tendered and not validly withdrawn equals at least a majority of all shares of our common stock then owned by the Unaffiliated Stockholders as of the expiration of the Offer; (ii) the accuracy of our representations and warranties contained in the Merger Agreement (subject to certain exceptions and qualifications described in the Merger Agreement and except, generally, for any inaccuracies that have not had a Company Material Adverse Effect (as defined in the Merger Agreement)); (iii) our performance in all material respects of our obligations under the Merger Agreement and (iv) the other conditions set forth in Exhibit A to the Merger Agreement. The obligations of Parent and Merger Sub to consummate the Offer and the Merger under the Merger Agreement are not subject to a financing condition.

Following the completion of the Offer, subject to the absence of injunctions or other legal restraints preventing or prohibiting the consummation of the Merger, Merger Sub will merge with and into the Company, with the Company surviving as a wholly-owned subsidiary of Parent, pursuant to the procedure provided for under Section 251(h) of the Delaware General Corporation Law, without any additional stockholder approvals. The Merger will be effected as soon as practicable following the time at which Merger Sub purchases the shares of common stock validly tendered and not withdrawn in the Offer.

The Merger Agreement contains customary representations and warranties by Parent, Merger Sub and the Company. The Merger Agreement also contains customary covenants and agreements, including with respect to the operations of our business between signing and closing.

The Merger Agreement contains customary non-solicitation restrictions prohibiting our solicitation of alternative business combination transactions and restricts our ability to furnish non-public information to, or participate in any discussions or negotiations with, any third party with respect to any such alternative business combination transaction, subject to customary exceptions in the event of an acquisition proposal that was not solicited in violation of these restrictions and that our board of directors (acting upon the recommendation of the Special Committee) or the Special Committee determines constitutes or could reasonably be expected to lead to a Superior Company Proposal (as defined in the Merger Agreement).

The Merger Agreement contains customary termination rights for both Parent and Merger Sub, on the one hand, and the Company, on the other hand, including, among others, for failure to consummate the Offer on or before June 15, 2024. If the Merger Agreement is terminated under certain circumstances specified in the Merger Agreement in connection with our entry into an agreement with respect to a Superior Company Proposal, we will be required to pay Parent a termination fee of $2.0 million.

We anticipate that the Offer and the Merger contemplated under the Merger Agreement will be consummated in the second quarter of 2024. However, there can be no assurance that the Offer and the Merger contemplated by the Merger Agreement will be completed. If the Merger is effected, our common stock will be delisted from The Nasdaq Stock Market LLC and our obligation to file periodic reports under the Securities Exchange Act of 1934, as amended, or the Exchange Act, will terminate, and the Company will be privately held.

Pending consummation of the Offer and the Merger, the Merger Agreement generally requires us to operate in the ordinary course of business consistent with past practice and restricts us from taking certain actions with respect to our business and financial affairs without Parent's consent. Such restrictions will be in place until either the Offer and the Merger are consummated or the Merger Agreement is terminated. These restrictions could restrict

our ability to pursue or prevent us from pursuing attractive business or fundraising opportunities (if any) that arise prior to the consummation of the Offer and the Merger. For example, our ability to raise additional capital through the issuance of equity securities, incur indebtedness or pursue BD Arrangements are generally restricted without Parent's consent during the pendency of the Offer and the Merger. In addition, if the Merger is not consummated, we may face increased difficulties raising capital and may need to significantly delay, scale back or discontinue development of, or abandon some or all of, our product candidates, or scale back or discontinue our discovery research efforts. See "Risk Factors - Risks Related to the Offer and the Merger." The following discussion of our product development and other plans assumes that the transactions contemplated by the Merger Agreement are not consummated and we continue to operate as a public stand-alone entity. For further information, see Management's Discussion and Analysis of Financial Condition and Results of Operations, included in Item 7 of this Annual Report.

Our Pipeline

Clinical Development Focused on Three Key Priorities

We are currently prioritizing the majority of our execution efforts and significant resources on three key development opportunities:

- completing a Phase 1 Part 1b dose escalation cohort of the ongoing Phase 1/2 trial evaluating NGM707 in combination with KEYTRUDA® (pembrolizumab) for the treatment of patients with advanced or metastatic solid tumors,
- designing a potential registrational trial of aldafermin in primary sclerosing cholangitis, or PSC, and continuing discussions with the United States Food and Drug Administration, or FDA, including on the proposed utilization of a primary endpoint composed of surrogate biomarkers with the goal of obtaining accelerated approval from the FDA; and
- producing a toxicology package that we hope will support the potential initiation of a Phase 2 proof-of-concept trial of NGM120 in patients with hyperemesis gravidarum, or HG.

Subject to our ability to obtain sufficient additional capital, whether through financing activities or potential future BD Arrangements, we may in the future pursue development of other product candidates and programs. While we may consider BD Arrangements to advance these three key priorities for clinical development, we intend to invest our resources in their development, contingent upon capital availability as described below, in the absence of BD Arrangements.

Program	Mechanism	Indication	Preclinical / Phase 1 / Phase 2	Status
NGM707 + pembrolizumab	ILT2/ILT4 Dual Antagonist + PD-1 Antagonist Antibody	Advanced Solid Tumors	PHASE 1/2	Ongoing; Target Completion in 1H24
Aldafermin	FGF19 Analog	Primary Sclerosing Cholangitis (PSC)	PHASE 2 *Designing potential registrational trial of aldafermin in PSC and in discussion with FDA on proposed utilization of a primary endpoint composed of surrogate biomarkers	In Discussion with FDA*. Received Orphan Drug Designation
NGM120	GFRAL Antagonist Antibody	Hyperemesis Gravidarum (HG)	PHASE 2 PLANNING **Producing a toxicology package to support potential initiation of a proof-of-concept trial	Producing Toxicology Package**
OTHER CLINICAL PROGRAM				
NGM438 + NGM831 + pembrolizumab	LAIR1 + ILT3 + PD-1 Antagonist Antibodies	Advanced Solid Tumors	PHASE 1 PART 1C	Ongoing; Target Completion in 1H24

FGF19 = fibroblast growth factor 19; ILT2 = immunoglobulin-like transcript 2; ILT3 = immunoglobulin-like transcript 3; ILT4 = immunoglobulin-like transcript 4; GFRAL = glial cell-derived neurotrophic factor receptor alpha-like; LAIR1 = leukocyte-associated immunoglobulin-like receptor 1; PD-1 = programmed cell death protein 1

NGM707: ILT2/ILT4 Dual Antagonist Antibody for the Potential Treatment of Solid Tumors, Including MSS CRC Patients

Cancer involving solid tumors is a leading cause of death globally and was responsible for an estimated over nine million deaths in 2020. There were an estimated almost 17 million newly diagnosed cancer cases around the world in 2020, excluding non-melanoma skin cancer. By 2040, the number of new cancer cases globally per

year is expected to rise to over 25 million and the number of cancer-related deaths per year to grow to nearly 15 million, excluding non-melanoma skin cancer. Cancer was the second leading cause of death in the United States in 2020, causing over 500,000 deaths that year.

Over the past decade, advances in cancer immunotherapy have driven significant improvements in clinical outcomes, especially in certain cancer types that are immunogenic, or capable of eliciting an immune response. In particular, T cell checkpoint inhibitors, including immune checkpoint inhibitors targeting programmed cell death protein 1 and programmed cell death protein ligand 1, or PD-1 and PD-L1, respectively, are designed to inhibit immune checkpoint pathways. When "active" these pathways act as “brakes” on anti-tumor immune responses, enabling tumors to evade detection and destruction by the immune system. T cell checkpoint inhibitors essentially work to “release” the “brakes” by inactivating those pathways. However, the overall response rate to PD-1/PD-L1 inhibitors is typically only 20% to 30% and many cancer patients who initially experience a complete or partial response using T cell checkpoint inhibitors may eventually experience cancer progression.

Our cancer research is currently focused on an emerging area of immuno-oncology research known as myeloid checkpoint inhibition. The tumor microenvironment, or TME, is composed of both cancerous and non-malignant cells. There is an abundance of myeloid cells present in the TME of many tumor types. While myeloid cells play a critical role in the immune system, in the tumor they can contribute to the inhibition of anti-tumor immune responses using multiple mechanisms, including suboptimal T-cell priming, T-cell suppression and physical exclusion of immune cells from the cancer cells. In essence, they serve as myeloid checkpoints, keeping the “brakes on” and enabling tumors to evade the immune system and drive resistance to cancer therapies. Our focus is on promoting myeloid reprogramming - switching myeloid cells in the TME from an immunosuppressive state to a stimulatory state that enhances anti-tumor immunity by releasing the “brake” and allowing these myeloid cells to potentially play a pivotal role in anti-tumor activity by acting to both kill cancer cells directly as well through the recruitment and activation of tumor-directed T cells.

We have built a portfolio of three myeloid checkpoint inhibitor product candidates, NGM707, NGM831 and NGM438, targeting four receptors whose elevated expression in myeloid cells in the TME has been associated with poor patient responses to T cell checkpoint inhibitors. We discovered NGM707, NGM831 and NGM438 while receiving funding from Merck Sharp & Dohme LLC, or Merck, as part of our research collaboration with them. NGM707, NGM831 and NGM438 are now wholly-owned programs and we have the sole right, at our sole discretion, to independently research, develop and commercialize each of them, at our sole expense, subject to the payment to Merck of low single-digit royalties on commercial sales of any resulting products. See “Licensing and Collaboration Arrangements—Merck Collaboration.”

NGM707, the lead asset and area of primary focus going forward in our myeloid reprogramming and checkpoint inhibition portfolio, is a dual antagonist monoclonal antibody that is designed to improve patient immune responses to tumors by inhibiting both Immunoglobulin-like transcript 2, or ILT2, and Immunoglobulin-like transcript 4, or ILT4, receptors. We believe NGM707 has the potential to reprogram ILT4- and ILT2-expressing myeloid cells to shift them from a suppressive state that restricts anti-tumor immunity to a stimulatory state that may promote anti-tumor immunity. Blocking ILT2 also may reverse inhibition of ILT2-expressing lymphoid cells to further stimulate anti-tumor immune responses.

Clinical Development of NGM707

We are conducting an open-label Phase 1/2 clinical trial evaluating NGM707 as a monotherapy and in combination with pembrolizumab for the treatment of patients with advanced or metastatic solid tumors.

The ongoing Phase 1 Part 1b cohort evaluating NGM707 in combination with pembrolizumab was initiated in the second quarter of 2022. In January 2024, we released data from this cohort with a data cutoff date of November 6, 2023. As of the data cutoff date, we had enrolled 46 heavily pretreated patients across multiple indications. The combination of NGM707 and pembrolizumab was found to be generally well-tolerated at all four dose levels of NGM707. Treatment-related adverse events, or TRAEs, occurred in 41% of patients, with Grade 3 and above TRAEs occurring in 4% of patients. A maximum tolerated dose was not reached and the maximum administered dose was 1800 mg. Of 37 response-evaluable patients (those completing at least one on-treatment scan), across multiple indications there were four confirmed partial responses, including one pathological complete response and 12 patients with stable disease, representing an 11% overall response rate, or ORR, and a 43% disease control rate, or DCR. The pathological complete response patient had significant target lesion reduction that allowed subsequent surgical resection of all gross residual disease, resulting in a confirmed pathological complete response with no detectable active tumor cells and no detectable circulating tumor DNA. Moreover, three of the four patients with confirmed partial responses had active liver metastases at baseline that were fully or partially reduced. Of the eight response-evaluable patients with a diagnosis of microsatellite stable colorectal cancer, or MSS CRC,

there were two confirmed partial responses (including the one pathological complete response) and two patients with stable disease, representing a 25% ORR and a 50% DCR. In addition, preliminary evidence of myeloid reprogramming was seen in peripheral blood and in tumor biopsies consistent with the putative mechanism of NGM707.

The Phase 1 Part 1a cohort evaluating NGM707 as a monotherapy completed enrollment in 2023. In that cohort, NGM707 monotherapy appeared to be generally well tolerated at all dose levels. TRAEs occurred in 46% of the patients, with Grade 3 and above TRAEs occurring in 5% of patients. A maximum tolerated dose was not reached and the maximum administered dose was 1800 mg. As of the November 6, 2023 data cutoff date in the monotherapy cohort, there was one confirmed partial response and ten patients with stable disease out of 35 response-evaluable patients (those completing at least one on-treatment scan). Eight patients had reduced target lesion size, including a maximum decrease in one patient of 71%. Preliminary evidence of myeloid reprogramming was seen in peripheral blood and in tumor biopsies of patients receiving treatment in the monotherapy cohort consistent with the putative mechanism of NGM707.

Two Phase 2 expansion cohorts evaluating NGM707 in combination with pembrolizumab in specific tumor types were initiated in the first quarter of 2023. We are no longer enrolling in the Phase 2 expansion cohorts.

Enrollment in the Phase 1b cohort is projected to be complete in the second quarter of 2024. We anticipate providing an update in mid-2024 on the Phase 1 Part 1b cohort and planned next steps in the NGM707 program, including the potential of initiating additional cohorts, which may include MSS CRC patients. Clinical development of NGM707 beyond completing the Phase 1 Part 1b cohort, including initiating additional cohorts, will require us to obtain the additional capital necessary to conduct such development.

NGM707 Patent Portfolio

As of December 31, 2023, we owned one issued U.S. patent covering NGM707, and the product and related compositions of matter and methods of use are disclosed and claimed in other patent applications pending in the United States and in multiple jurisdictions outside of the United States. We expect that the current patent and any patent that may issue from any of the pending applications will not expire before 2041, excluding any patent term adjustments and any patent term extensions.

NGM707 Competition

We believe NGM707 is the most advanced candidate currently in clinical development targeting both ILT2 and ILT4. Other clinical stage programs targeting both ILT2 and ILT4 include ImmunOs Therapeutics AG, or ImmunOs', IOS-1002 and Adanate's ADA-011, both of which are in Phase 1 trials.

We are aware of nine other clinical-stage programs in development that target either ILT4 or ILT2. Seven of them are clinical stage anti-ILT4 programs from Merck, Concentra Biosciences LLC (formerly Jounce Therapeutics, Inc.), or Concentra, Immune-Onc Therapeutics, Inc., or Immune-Onc, Celldex Therapeutics, Inc., OncoResponse, Inc., Elpiscience Biopharmaceuticals USA, Inc. and Bristol-Myers Squibb. Merck's investigational anti-ILT4 therapeutic candidate, MK-4830, is currently in several Phase 2 studies. In late 2023, Concentra completed a Phase 1/2 study of its anti-ILT4 monoclonal antibody, JTX-8064. The others are in Phase 1 trials. We are aware of two clinical-stage anti-ILT2 programs in development: Biond Biologics Ltd., or Biond, has an antagonist antibody targeting ILT2, BND-22 (also known as SAR444881), which has been licensed by Sanofi, in a Phase 1/2 trial and Agenus Inc. has an antagonist antibody targeting ILT2, AGEN1571, in a Phase 1 trial.

We are aware of at least 20 preclinical-stage programs targeting ILT2, ILT4 or both ILT2 and ILT4.

Aldafermin: Engineered Analog of Human Hormone FGF19 for the Potential Treatment of PSC

Primary sclerosing cholangitis, or PSC, is a rare liver disease that irreparably damages the bile ducts, leading to bile acid dysregulation, which, ultimately, results in serious liver damage. PSC is characterized by inflammation and fibrosis of the bile ducts (hardening or narrowing of the bile duct walls), which obstructs the flow of bile in the liver. In the short term, bile acids accumulate in the liver, leading to cell damage, cirrhosis and recurrent cholangitis. Common symptoms include fatigue, pruritus (severe itching), jaundice, abdominal pain, depression and enlarged liver. In the long term, the bile acid accumulation can lead to loss of liver function, end-stage liver disease and cancer.

There are currently no FDA- or EU-approved therapies for PSC. Unfortunately, the consequences of PSC are severe when left untreated. Between 5-20% of PSC patients develop cholangiocarcinoma, the cancer of the bile duct. Moreover, one in two PSC patients require a liver transplant within 10-15 years from diagnosis. The only curative treatment is liver transplant; however, PSC recurs in up to 20% of transplant cases.

We have spent more than a decade discovering and developing product candidates that target various forms of cardio-metabolic and liver diseases, including PSC. Through our research, we have identified multiple hormonal pathways of interest and our product candidates, including aldafermin, stem from novel insights we have made in the regulation of bile acid synthesis and liver function. Aldafermin is an engineered analog of human hormone fibroblast growth factor 19, or FGF19, that is administered through a once-daily subcutaneous injection. Aldafermin is the first and only FGF19 analog in clinical development and is wholly-owned by us.

We have generated a broad collection of clinical data studying aldafermin in several indications that informed our decision to pursue the potential further clinical development of aldafermin as a treatment for PSC. Indications previously studied with aldafermin include, in addition to PSC, primary biliary cholangitis, or PBC, bile acid malabsorption, or BAM, and non-alcoholic steatohepatitis, or NASH. In December 2023, we received orphan drug designation from the FDA for aldafermin for the treatment of PSC.

Over 800 patients across multiple indications have been treated with aldafermin, which has repeatedly demonstrated powerful bile acid suppression in patients with PSC and NASH. As a result, we believe aldafermin may have the differentiated potential to directly address the underlying pathology of PSC and be well-tolerated. Unlike NASH patients, PSC patients had no statistically elevated cholesterol following daily exposure to aldafermin. We are continuing discussions with the FDA on the design of a potential registrational trial of aldafermin in PSC, including on the proposed utilization of a primary endpoint composed of surrogate biomarkers with the goal of obtaining accelerated approval from the FDA. We plan to continue working with the FDA to reach agreement on a trial design, with the goal of initiating trial enrollment by the end of 2024, contingent upon reaching agreement with the FDA on a trial design and obtaining the additional capital necessary to conduct the potential registrational trial.

Clinical Development of Aldafermin

In February 2018, we reported data from a randomized, double-blind, placebo-controlled Phase 2 study of aldafermin for the treatment of PSC. While this Phase 2 study did not meet its primary endpoint of a statistically significant reduction in alkaline phosphatase, an exploratory biomarker of PSC disease progression, from baseline to week 12, aldafermin demonstrated statistically significant improvements in biomarkers of hepatic injury and fibrosis, as well as statistically significant reductions in biomarkers of bile acid synthesis and serum bile acids, consistent with past studies of aldafermin in other liver diseases. The Phase 2 study met the secondary endpoints and was generally well tolerated in the study.

In May 2023, we announced positive results from the Phase 2b ALPINE 4 trial of aldafermin in patients with compensated cirrhosis (liver fibrosis stage 4 or F4) due to NASH. ALPINE 4 met its primary endpoint, with aldafermin 3 mg demonstrating a statistically significant reduction in Enhanced Liver Fibrosis, or ELF, score compared to placebo at 48 weeks of treatment. Although ALPINE 4 was not statistically powered for the secondary endpoint of histological fibrosis improvement of ≥1-stage (NASH Clinical Research Network, or CRN, criteria), we observed a dose-dependent trend in fibrosis improvement. In November 2023, we presented positive Phase 2b results from the ALPINE 4 trial of aldafermin in compensated cirrhosis (F4) due to NASH at AASLD The Liver Meeting.

Aldafermin Patent Portfolio

As of December 31, 2023, we owned 27 issued patents in the United States, as well as issued patents in more than 40 foreign countries, including various member states of the European Patent Office, or EPO, covering aldafermin, related compositions of matter and methods of use. We also own patent applications covering similar subject matter in the United States and multiple foreign jurisdictions including Europe. We expect the earliest issued patents in the United States to expire in 2032, excluding any patent term adjustments and any patent term extensions.

Aldafermin Competition in PSC

The competitive landscape in PSC includes investigational drugs at various stages of clinical development. Most advanced is Dr. Falk Pharma's NorUDCA, currently in Phase 3 trials in Europe. We are aware of eleven additional programs in earlier stage trials, from companies including Hepagene Therapeutics, Inc., Cascade Pharmaceuticals, Inc. Orbsen Therapeutics Ltd., Chemomab Therapeutics Ltd., Curome Biosciences Co., Pliant Therapeutics, Inc., or Pliant, Escient Pharmaceuticals, or Escient, Galmed Pharmaceuticals Ltd., GENFIT S.A., Mirum Pharmaceuticals, Inc., or Mirum, Ipsen S.A. and High Tide Therapeutics, Inc. Pliant has reported data from its Phase 2a clinical trial of 320 mg of integrin antagonist bexotegrast in PSC, showing positive safety and preliminary evidence of a reduction in liver fibrosis markers ELF and PRO-C3 relative to placebo at 12 weeks. Escient and Mirum are developing assets focused on PSC patients with moderate-to-severe pruritus, and both are in Phase 2 trials.

NGM120: GFRAL Antagonist for the Potential Treatment of Hyperemesis Gravidarum

Our scientists have made several discoveries related to growth differentiation factor 15, or GDF15, including identifying its cognate receptor glial cell-derived neurotrophic factor receptor alpha-like, or GFRAL. GFRAL is expressed in a specific region of the hindbrain and remains the only receptor for GDF15 identified to date. We have developed multiple product candidates targeting the GFRAL/GDF15 pathway, including NGM120, a GFRAL antagonist antibody.

GDF15 is secreted from injured or stressed tissues and contributes to appetite reduction and body weight loss. GDF15 through the GFRAL-expressing neurons, or GFRAL neurons, which are found exclusively in the area postrema and nucleus tractus solitarius of the brain stem. The area postrema, located outside of blood brain barrier, is a well-known chemoreceptor trigger zone for nausea and vomiting. GDF15 dosing has been shown to trigger taste aversion (nausea-related behavior) in mice and vomiting in tree shrews. Moreover, in a Phase 1 study of NGM395, one of our GDF15 analog product candidates that we investigated as an obesity treatment, there was evidence of dose-dependent increase in frequency and severity of nausea/vomiting in healthy volunteers, further suggesting that GDF15 plays a role in emesis.

Our preclinical research also suggests the central role of the GDF15/GFRAL pathway in promoting tumor-associated appetite suppression, metabolic regulation and immune modulation. *In vivo* screening of human genes shows that GDF15 expression leads to an outsized effect on weight loss and, in animal models, elevated serum levels of GDF15 are a regulator of immune function, metabolism and feeding. In addition, elevated serum levels of GDF15 have been shown to be associated with pregnancy, beta thalassemia, prolonged nutritional stress and deficits and other stressors.

Genetic and serological studies have linked GDF15/GFRAL to hyperemesis gravidarum, or HG. GDF15 levels have been shown to increase steadily in the first 12 weeks of pregnancy and, on average, are higher in women who experience HG in pregnancy. Research has further shown that women with GDF15 genetic variants associated with lower levels of GDF15 in a non-pregnant state are predisposed to HG.

HG is a severe condition that affects approximately 100,000 to 150,000 women in the United States each year. Characterized by intractable nausea and vomiting during pregnancy, which results in dehydration, debility, weight loss and malnutrition, HG takes a significant physical and psychosocial toll on patients. Consequently, HG can also lead to higher rates of fetal loss, preeclampsia, preterm birth, low birth weight and malnutrition for the fetus. HG patients may experience symptoms requiring hospitalization throughout the entire pregnancy and HG typically recurs in subsequent pregnancies. HG is the second leading cause of hospitalization in pregnancy (after preterm labor) and is one of the costliest pregnancy complications to treat. There are currently no FDA-approved therapies for this condition.

NGM120 is an antagonist antibody that binds to GFRAL and is designed to block the effects of elevated serum levels of GDF15. We designed NGM120 as a potent, humanized monoclonal antibody inhibitor of GFRAL with the potential for once-monthly or less frequent dosing. Preclinical studies suggest that NGM120 may prevent cisplatin-induced GDF15-mediated weight loss in rodents and reduce cisplatin-induced weight loss and emesis in a cynomolgus monkey model, suggesting that targeting GFRAL has the potential to ameliorate the metabolic and emetic effects caused by overstimulation of GFRAL neurons by excessive GDF15.

We discovered NGM120 while receiving funding from Merck as part of our research collaboration. NGM120 is now a wholly-owned program and we have the sole right, at our sole discretion, to independently research, develop and commercialize NGM120, at our sole expense, subject to the payment to Merck of low single-digit royalties on commercial sales of any resulting products. See “Licensing and Collaboration Arrangements—Merck Collaboration.”

Clinical Development of NGM120

We have previously studied NGM120 for the treatment of cancer and cancer-related cachexia. We conducted a Phase 1 study in healthy subjects and are completing a Phase 1/2 clinical trial to assess NGM120's effect on cancer and cancer-related cachexia in patients with select advanced solid tumors, metastatic pancreatic cancer and metastatic castration-resistant prostate cancer. To date, we have not detected a clear signal of response to NGM120 in the Phase 1/2 trial, and we do not plan to develop NGM120 further in oncology. However, given the compelling genetic and biological evidence supporting the hypothesis that GDF15 may play a direct role in HG, we are exploring the potential initiation of a Phase 2 proof-of-concept study of NGM120 for the treatment of HG by the end of 2024. We are in the process of producing a toxicology package to submit to regulatory authorities in Australia or the United Kingdom that we hope will support the potential initiation of that trial. In our clinical studies of NGM120 for the treatment of cancer and cancer-related cachexia, NGM120 was found to be generally well tolerated in the approximately 140 healthy volunteers and cancer patients that were treated.

NGM120 Patent Portfolio

As of December 31, 2023, we owned two issued patents in the United States, as well as nine issued foreign patents, covering NGM120 and related compositions of matter and methods of use. We also own pending patent applications covering similar subject matter in the United States and multiple jurisdictions outside of the United States. We expect that the current patents and any patent that may issue from any of the pending applications will not expire earlier than 2037, excluding any patent term adjustments and any patent term extensions.

NGM120 Competition

The current standard of care for nausea and vomiting in pregnancy is Diclegis, a combination of doxylamine (antihistamine) and pyridoxine (vitamin B6), which was approved by the FDA in 2013. There are no other approved therapies for HG or severe nausea and vomiting in pregnancy, although several classes of therapies are used off-label: antiemetics (e.g., ondansetron, granisetron), antihistamines (e.g., promethazine), gut motility stimulators (e.g., metoclopramide), steroids, antidepressants (e.g., mirtazapine) and anticonvulsants (e.g., gabapentin).

We are aware of two publicly disclosed programs targeting GFRAL, from Cantius Therapeutics, LLC and CSPC Pharmaceutical Group Limited, both of which are in preclinical development. There are three clinical stage programs we are aware of that target GDF15: Pfizer's ponsegromab is in Phase 2 trials in cancer cachexia and heart failure, CatalYm GmbH's, or CatalYm's, visugromab is in Phase 2 trials in multiple solid tumor indications and Aveo Oncology's, or Aveo's, AV-380 is in a Phase 1 trial in cancer cachexia. Kyinno Biotechnology and Leap Therapeutics, Inc. have preclinical programs targeting GDF15.

Additional Programs Currently Without Meaningful Resource Allocation

Due to the need to conserve capital and prioritize focused execution, the remainder of our pipeline includes programs whose further development is dependent on our ability to secure potential future BD Arrangements and, in the absence of such BD Arrangements, we are unlikely to advance development of these product candidates unless our portfolio prioritization changes and we are able to secure the additional capital necessary to fund such development. As a result, we are seeking BD Arrangements with third-party partners possessing sufficient resources and relevant domain expertise in the relevant therapeutic area in order to further clinical development of these programs. These programs include:

- NGM438 and NGM831, currently being studied in a Phase 1/2 trial in combination with pembrolizumab and described in more detail below.
- NGM621, a monoclonal antibody administered via intravitreal, or IVT, injection, which was engineered to potently bind to, and be a long-acting inhibitor of, complement C3 with the treatment goal of reducing the rate of disease progression in patients with geographic atrophy, or GA, secondary to age-related macular degeneration, or AMD. Our Phase 2 clinical trial which evaluated the efficacy and safety of NGM621 when given to patients with GA every four weeks or every eight weeks via IVT injections compared to sham control did not meet its primary endpoint of a statistically significant reduction in the rate of change in GA lesion area growth using slope analysis over 52 weeks of treatment with NGM621 versus sham.
- NGM313, an agonistic antibody that selectively activates fibroblast growth factor receptor 1c-beta-klotho, or FGFR1c/KLB, which regulates insulin sensitivity, blood glucose and liver fat and is administered every four weeks through a subcutaneous injection. In 2018, Merck licensed NGM313 and other FGFR1c/KLB agonists, but terminated its license rights in 2023 and returned the program to us.

NGM438 is an antagonist antibody that is designed to inhibit leukocyte-associated immunoglobulin-like receptor 1, or LAIR1, and thereby promote anti-tumor immune responses. NGM438 has the potential to potently block the binding of all collagens to LAIR1, including tumor-derived collagens. Collagens produced by the tumor stroma, meaning the non-malignant, non-immune components of the tumor, are believed to bind LAIR1 to create an immunosuppressive TME. The interaction of collagens from the tumor stroma with LAIR1 on immune cells represents a "stromal checkpoint" that restrains anti-tumor immune responses. Reinvigoration of these collagen-suppressed immune cells by blocking the binding of collagens to LAIR1 may address a key resistance mechanism that limits tumor responses to current immunotherapies.

NGM831 is an antagonist antibody that is designed to block the interaction of Immunoglobulin-like transcript 3, or ILT3 receptor, with fibronectin, as well as other cognate ligands. ILT3 is a fibronectin-binding inhibitory immune receptor that receives signals from the extracellular matrix to directly promote myeloid cell suppression. ILT3 is expressed on a variety of immune cells including tumor-associated myeloid cells, with particularly high expression on tolerogenic dendritic cells, or DCs, myeloid-derived suppressor cells and M2 macrophages. High ILT3 expression is associated with poor survival. Moreover, fibronectin has been shown to be upregulated in multiple cancers and associated with tumor progression. For tumors in which both ILT3 and fibronectin are upregulated, the ILT3-fibronectin signaling pathway may act as a "stromal checkpoint" to repress myeloid cell function and inhibit anti-tumor immunity. By inhibiting ILT3's interaction with fibronectin and its other ligands, we believe NGM831 has the potential to mobilize a patient's own immune system to fight tumors by shifting myeloid cells from a suppressive state to a stimulatory state and promoting anti-tumor activity.

In 2022, we initiated an open-label, Phase 1/1b clinical trial to evaluate NGM438 as a monotherapy and in combination with pembrolizumab for the treatment of patients with advanced or metastatic solid tumors. Both the Phase 1 Part 1a cohort evaluating NGM438 as a monotherapy and the Phase 1 Part 1b cohort evaluating NGM438 in combination with pembrolizumab have completed enrollment. In 2022, we also initiated an open-label Phase 1/1b clinical trial to evaluate NGM831 as a monotherapy and in combination with pembrolizumab for the treatment of patients with advanced or metastatic solid tumors. Both the Phase 1 Part 1a cohort evaluating NGM831 as a monotherapy and the Phase 1 Part 1b cohort evaluating NGM831 in combination with pembrolizumab have completed enrollment. In 2023, we initiated an open-label Phase 1 Part 1c dose finding cohort of that trial evaluating the triplet combination of NGM831, NGM438 and pembrolizumab. This cohort is anticipated to complete enrollment in the first half of 2024.

As of December 31, 2023, we did not own or have a license to any issued patent that covers NGM438. However, NGM438 and related compositions of matter and methods of use are disclosed and claimed in patent applications pending in the United States and in multiple jurisdictions outside of the United States. Any patent that may issue from these applications or any related applications that we file is expected to expire no earlier than 2041, excluding any patent term adjustments and any patent term extensions. As of December 31, 2023, we owned one issued U.S. patent covering NGM831, and the product and related compositions of matter and methods of use are disclosed and claimed in other patent applications pending in the United States and in multiple jurisdictions outside of the United States. The current patent and any patent that may issue from any of the pending applications are expected to expire no earlier than 2040, excluding any patent term adjustments and any patent term extensions.

We are aware of only two other anti-LAIR1 antibodies currently in Phase 1 clinical development by Immune-Oncs and NextCure, Inc., or NextCure, respectively. NextCure also has a Phase 1 product candidate in the clinic, a LAIR2 fusion protein designed to mimic the natural decoy effects of LAIR2, which binds to collagens and blocks the activity of LAIR1. We are aware of only one other antibody being pursued clinically for the treatment of solid tumors that is intended to block the interaction of Immunoglobulin-like transcript 3, or ILT3, with fibronectin, as well as other cognate ligands, which is a Phase 1 asset of Immune-Onc. However, there are other programs that target ILT3 currently in clinical development by Immune-Onc and Carbiogene Therapeutics Co. Ltd., and five additional preclinical anti-ILT3 candidates in development.

We have additional programs that are in various stages of development ranging from functional validation to preclinical development. Given the breadth of opportunities that have been, and may in the future be, produced by our discovery engine, we are also seeking BD Arrangements with third-party partners to progress, in whole or in part, the development of one or more of our preclinical programs.

Manufacturing

We do not own, and have no plans to establish, any manufacturing facilities. We currently use third-party contract development and manufacturing organizations or contract manufacturing organizations, which we refer to collectively as CMOs, to manufacture and supply all of the raw materials, drug substances and drug products for our

pipeline programs, including all the materials used in the clinical trials of our product candidates. We have established relationships with several CMOs, and the activities of our CMOs are overseen by an experienced group of employees and third-party consultants.

We plan to continue to rely on CMOs to manufacture commercial quantities of any products for which we successfully obtain regulatory approval, as well as to provide packaging, storage and distribution of any approved products. We have not entered into long-term clinical or commercial supply agreements with any of our CMOs. In addition, each of our product candidates relies on a single contract manufacturer for supplies of its drug substance and drug product.

Competition

The biopharmaceutical industry is characterized by intense competition and rapid innovation. Although we believe that we hold a strong position in research in certain areas of cancer and liver and metabolic diseases, our competitors may be able to develop other compounds or drugs that are able to achieve similar or better results. Our competitors include multinational pharmaceutical companies, specialized biotechnology companies, universities and other research institutions. Smaller or earlier-stage companies also may prove to be significant competitors, particularly through collaboration or partnering arrangements with large, established companies. We believe the key competitive factors that will affect the development and commercial success of our product candidates are their efficacy, safety and tolerability profile, and reliability.

There are many pharmaceutical companies, biotechnology companies, public and private universities and research organizations actively engaged in the research and development, or R&D, of products that may be competitive with our product candidates. A number of pharmaceutical companies, including AbbVie, Amgen, AstraZeneca, Bayer, Boehringer Ingelheim, Bristol-Myers Squibb, Eisai, Eli Lilly, Gilead, GlaxoSmithKline, Ipsen, Johnson & Johnson, Merck, Novartis, Novo Nordisk, Organon, Pfizer, Roche, Sanofi and Takeda, as well as large and small biotechnology companies such as 89Bio, Agenus, Akero, Alentis, AVEO (a LG Chem company), Biond, BriSTAR, Cantius, Carbiogene, Cascade Pharmaceuticals, CatalYm, Celldex, ChemomAb, Concentra, CSPC, Curome Biosciences, CymaBay Therapeutics, Dr. Falk Pharma, Elpiscience, Escient, Galmed, Genfit, Hepagene, High Tide Therapeutics, Immune-Onc, ImmunOs Therapeutics, Inventiva, Kyinno Biotechnology, Leap Therapeutics, Madrigal, Mirum, NextCure, OncoResponse, Orbsen Therapeutics, Pliant, Salix, Scholar Rock and Tizona, are pursuing the development or marketing of pharmaceuticals that target the same diseases that we are targeting. It is probable that the number of companies seeking to develop products and therapies for the treatment of cancer and liver and metabolic diseases will increase.

Many of these and other existing or potential competitors have substantially greater financial, technical, human and other resources than we have and may be better equipped to develop, manufacture and market technologically superior products. In addition, many of these competitors have significantly greater experience than we have in undertaking preclinical studies and human clinical trials of new pharmaceutical products and in obtaining regulatory approvals of human therapeutic products. Accordingly, our competitors may succeed in obtaining FDA approval for superior products or for other products that would compete with our product candidates. In addition, other technologies or products may be developed that have an entirely different approach or means of accomplishing the intended purposes of our products, which might render our technology and products noncompetitive or obsolete.

For more information regarding the competition that our key product candidates face, or may face, see the discussion of specific competition for each product candidate in "—Our Pipeline."

Intellectual Property

Our intellectual property is critical to our business and our success depends, in part, on our ability to obtain and maintain intellectual property protection for our product candidates, technology and know-how, to defend and enforce our intellectual property rights, in particular, our patent rights, to preserve the confidentiality of our trade secrets and to operate without infringing the proprietary rights of others.

We seek to protect the proprietary technology that we believe is important to our business through a variety of methods, including seeking and maintaining patents and patent applications intended to cover our product candidates, their compositions-of-matter, their methods of use and the processes for their manufacture and any other aspects of inventions that are commercially important to the success of our business. We seek to obtain domestic and international patent protection and, in addition to filing and prosecuting patent applications in the United States, we may file counterpart patent applications in additional countries where we believe such foreign filing is likely to be beneficial.

As of December 31, 2023, our patent portfolio includes over 600 patents and applications, including over 60 issued U.S. patents and over 20 pending U.S. patent applications covering our product candidates, certain aspects of our proprietary technology, and related inventions and improvements. Our patent portfolio also includes over 500 patents and patent applications in jurisdictions outside of the United States that, in many cases, are counterparts to our U.S. patents and patent applications. For more information regarding the patents and patent applications relating to certain of our pipeline programs, see the discussion of intellectual property protection for each such product candidate in "—Our Pipeline." The patent landscape surrounding our product candidates is crowded, and we do not know if our pending patent applications will be issued with the claims we are seeking or if our issued patents will withstand challenges from third parties.

Not all patent applications result in the issuance of patents. Patent applications in the United States and certain other jurisdictions are maintained in secrecy for 18 months or potentially longer, so public disclosure of discoveries via the publication of patent applications or in the scientific literature is often delayed. As a result, we cannot be certain of the priority of inventions covered by our patent applications and may be subject to claims of priority from third parties or the United States Patent and Trademark Office, or USPTO, against which we will need to defend ourselves.

In addition, the scope of claims that may be allowed in any granted patent may be significantly reduced from the coverage claimed in the initial patent application. Further, the scope of the claims in an issued patent may be reinterpreted and, in some cases, narrowed or even cancelled after issuance by courts upon review. In addition, many jurisdictions allow third parties to challenge issued patents in administrative proceedings that may result in further narrowing or cancellation of patent claims. As a result, even issued patents may not provide sufficient protection from competitors.

When patents are issued, the term of each individual patent will depend on the legal term for patents in the countries in which it is granted. In most countries, including the United States, the patent term is 20 years from the earliest claimed filing date of a non-provisional patent application in the applicable country. The actual term of any patent that may issue from the above-described patent applications claiming one of our product candidates could be longer than described above due to patent term adjustment or patent term extension, if available, or shorter if we are required to file terminal disclaimers.

Any changes we make to the composition, formulation, method of delivery or other attributes of our current and future product candidates to cause them to have what we view as more advantageous properties may not be covered by our existing patents and patent applications, and we may be required to file new applications and/or seek other forms of protection.

Even if patents are issued, if a third party engages in activities covered by valid claims of our patents, we may be required to engage in enforcement actions in the courts to enforce our patents. Not all enforcement proceedings are successful. We also must take care not to infringe the valid patents of third parties. Third-party patent rights that purport to cover our product candidates or their discovery, use or manufacture may require us to challenge their validity in court or administrative proceedings and prevail in such challenges, to alter our development or commercial strategy or our product candidates or their uses and manufacture, to obtain licenses to such patents and/or to stop certain activities altogether. We hold various licenses with third parties to their intellectual property, including those with Horizon Discovery Ltd. and, as described below, Lonza Sales AG, or Lonza, for the use of their cell lines. The patent positions of biotechnology companies like ours are generally uncertain and involve complex legal, scientific and factual questions. We may not obtain or maintain adequate patent protection for any of our programs and product candidates.

In addition to patent protection, we also rely on trademark registration, trade secrets, know-how, other proprietary information and continuing scientific innovation to develop and maintain our competitive position. We seek to maintain the confidentiality of proprietary information to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. As a part of these efforts, it is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of their respective relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. Our agreements with employees also provide that all inventions conceived by the employee in the course of employment with us or from the employee's use of our confidential information are our exclusive property, even after they are no longer our employees. Although we take these and other steps to safeguard our proprietary information and trade secrets, these agreements may be breached or third parties may independently develop substantially equivalent proprietary information and techniques

or otherwise gain access to our trade secrets or disclose our technology. Thus, we may not be able to meaningfully protect our proprietary information that is not otherwise protected by patent.

See “Risk Factors—Risks Related to Our Intellectual Property” for information regarding the risks related to our intellectual property.

Licensing and Collaboration Arrangements

Merck Collaboration

In 2015, we entered into a research collaboration, product development and license agreement with Merck, which, together with amendments made prior to June 30, 2021, is referred to as the Original Collaboration Agreement. The original research phase of the collaboration was for five years and was extended by Merck for an additional two years through March 2022. On June 30, 2021, we entered into an amended and restated research collaboration, product development and license agreement with Merck, or the Amended Collaboration Agreement, replacing the Original Collaboration Agreement and extending the research phase of the collaboration, but with a narrower scope than in the Original Collaboration Agreement. Under the Amended Collaboration Agreement, the research program term for certain cardiovascular or metabolic-, or CVM-, related programs will continue through March 31, 2024, unless the parties mutually agree to extend the research program term through March 31, 2026, in which case Merck would provide up to a total of $20.0 million in R&D funding during the additional two years of the CVM research program term. We do not expect the research program term to be extended.

In 2023, the R&D funding we received from Merck under the Amended Collaboration Agreement was significantly less compared to funding received in prior years. For the first half of 2024, we will receive minimal funding from Merck and we do not expect any funding at all from Merck thereafter. Although new CVM-related programs may be added to the collaboration if recommended by us and selected by Merck, we do not expect any new CVM-related programs to be added.

During the three-month period before the end of the research program term for the CVM-related programs, Merck has the right to review the product candidates from each applicable program and to elect to have R&D activities continue under the collaboration for an additional period, referred to as a Tail Period. If Merck makes such an election, which we do not expect it to do, then the applicable Tail Period would begin at the end of the research program term for the applicable program and would end on the earlier of achievement of the license option exercise point (as specified in the Amended Collaboration Agreement for each such candidate) or three years, except that in certain circumstances a Tail Period may continue beyond three years if the license option exercise point has not been achieved by such time. All R&D work on CVM-related programs during the applicable Tail Period, if any, would be conducted by Merck or its third-party contractors at Merck’s expense.

Under the Amended Collaboration Agreement, Merck retains license options to obtain an exclusive, worldwide license, on specified terms, to each collaboration compound (and its related compounds) that remains within the scope of the continuing collaboration for the CVM-related programs. Merck generally has a one-time right to exercise its license option for any product candidate when we or Merck achieve the specified license option exercise point. Upon Merck’s exercise of a license option for any CVM-related program, which we do not expect it to do, Merck would pay us an option exercise fee of $6.0 million and we would be eligible to receive a milestone payment of $10.0 million if Merck subsequently completes a proof-of-concept trial for a product candidate from such program.

If Merck exercises its license option to a product candidate and its related compounds, referred to as a Licensed Program, we would have the option to receive milestones and royalty payments or, in certain cases, prior to Merck initiating any Phase 3 clinical trial of such licensed compound, to co-fund development and participate in a global cost and profit share arrangement of up to 50%, with an additional option to co-detail any such licensed compound in the United States. If we do not elect to exercise our cost and profit share option for a particular licensed compound, we would be eligible to receive an aggregate of up to $469.0 million in milestone payments upon the achievement of specific clinical development and regulatory events, commercial milestone payments of up to $125.0 million and royalties from low-double digit to mid-teen percentages of worldwide net sales of such licensed compound.

Merck would be responsible, at its own cost, for all development and commercialization of product candidates from each Licensed Program, subject to our options to cost and profit share worldwide, and to co-detail those compounds in the United States as described above. If Merck does not exercise its license option with respect to a particular candidate and its related compounds within the applicable time period, in most instances we retain all rights to research, develop and commercialize that candidate and those compounds on a worldwide basis,

either alone or in partnership with a third party, subject to the payment to Merck of low single-digit royalties on commercial sales of any resulting products.

Under the Amended Collaboration Agreement, we also granted Merck a worldwide, exclusive right to conduct R&D on, and to manufacture, use and commercialize, small molecule compounds identified or developed by Merck that have specified activity against any target that we are researching or developing under the research program term of the collaboration. Merck's research license for its own small molecule program will become non-exclusive if Merck does not exercise its option to a product candidate against a target at its option exercise point, but Merck will retain an exclusive license to any small molecule compounds that it has already identified and developed. Merck has sole responsibility for R&D of any of these small molecule compounds, at its own cost. We are eligible to receive milestone and royalty payments on small molecule compounds that are developed by Merck under such a license from us.

In addition to the options and exclusive licenses that we granted or are obligated to grant to Merck, we have the following exclusivity obligations to Merck under the Amended Collaboration Agreement. During the applicable research program term and Tail Period, if any, for the CVM-related programs, we may not directly or indirectly research, develop, manufacture or commercialize, outside of our collaboration with Merck, any product with specified activity against any target that is being researched or developed under the applicable programs and, if Merck exercises its license option for a program, we may not directly or indirectly research, develop, manufacture or commercialize any product with specified activity against the target that is the subject of that Licensed Program for so long as Merck's license to it remains in effect. In addition, we are prohibited from directly or indirectly researching, developing or commercializing any product for the treatment of heart failure with preserved ejection fraction during the research program term for the CVM-related programs.

Pursuant to the Amended Collaboration Agreement, we have the right, in our sole discretion, to independently research, develop and commercialize the collaboration compounds known as NGM707, NGM120, NGM438 and NGM831, their related compounds and all other preclinical and research assets that we researched or developed under our original collaboration agreement with Merck but that were not included within the R&D scope of the Amended Collaboration Agreement, which are referred to as the released NGM compounds. Merck retained the right to receive royalties at low single-digit rates on the sales of any released NGM compounds that receive regulatory approval and, if we decide during a certain time period to engage in a formal partnering process for a released NGM compound or negotiations regarding a license or asset sale of a released NGM compound, we are obligated to notify Merck, provide Merck with certain information and engage in good faith, non-exclusive negotiations with respect to such released NGM compound with Merck at Merck's request.

After the research program term, Merck may terminate the overall Amended Collaboration Agreement for convenience upon written notice. Subject to certain limitations, Merck may partially terminate the Amended Collaboration Agreement for convenience as it relates to any Licensed Program or any of its rights to research and develop small molecule compounds.

Either we or Merck may terminate the Amended Collaboration Agreement with respect to a specific Licensed Program or any particular licensed small molecule compound if the other party is in material breach of its obligations regarding that specific program and fails to cure the breach within the specified cure period. If Merck terminates a Licensed Program as a result of our uncured material breach, then we would lose our option to participate in a global cost and profit share if not yet exercised as of the time of termination and lose our co-detailing option (whether or not exercised as of that time) for candidates arising from the relevant Licensed Program. If Merck terminates a licensed small molecule compound program for our uncured material breach, we would continue to receive the full amount of milestones and royalties we were otherwise eligible for with respect to the relevant small molecule compounds.

For additional information about our collaboration with Merck, see Note 5, "Research Collaboration and License Agreements—Merck," in our notes to the consolidated financial statements included in Part II, Item 8 of this Annual Report.

Lonza License

In October 2014, we entered into a Multi-Product License Agreement, or the Lonza License, with Lonza under which we obtained a worldwide, non-exclusive license to use Lonza's glutamine synthetase gene expression system, known as GS Xceed®, to manufacture and commercialize our proprietary products.

Pursuant to the Lonza License, we paid Lonza an upfront fee of £250,000. Upon the initiation of the first Phase 2 clinical trial, the first Phase 3 clinical trial and the first commercial sale of any product manufactured using GS Xceed®, we are required to pay Lonza one-time milestone payments of £100,000, £100,000 and £150,000,

respectively. We paid a one-time milestone payment to Lonza of £100,000 for each of the Phase 2 trial initiations for NGM313, NGM621 and NGM120. We are also required to pay low single-digit royalties to Lonza based on net sales of any product manufactured using GS Xceed®. Our royalty obligation to Lonza continues on a product-by-product basis until the later of the expiration of the last-to-expire licensed patent or ten years after the first commercial sale of the product. We are also required to pay an annual license fee to Lonza of up to £300,000 per product if a party other than Lonza, we, our affiliates or our strategic partners (including Merck or any potential future partners) manufactures certain product candidates for commercial activities. We are currently required to pay this fee for NGM313 and NGM120. In accordance with the Lonza License, for certain additional product candidates, we are instead required to pay an annual license fee to Lonza of £25,000 per product candidate prior to the initiation of clinical development, and following the initiation of clinical development, £100,000, £150,000 or £300,000 annually per product candidate, respectively, if such product candidate is in a Phase 1, Phase 2 and Phase 3 clinical trial.

The Lonza License continues until the expiration of the royalty term. We have the right to terminate the Lonza License upon written notice to Lonza. Each party may terminate the Lonza License for the other party's uncured material breach or bankruptcy. In addition, Lonza may terminate the Lonza License if we participate in the opposition or challenge of any Lonza patent or patent application licensed to us under the Lonza License.

Government Regulation

Product Approval in the United States

The FDA and other regulatory health authorities at federal, state and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring and post-approval reporting of biologics, such as those we are developing. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies and health authorities of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates.

The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, and local 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 following approval may subject an applicant to administrative actions or judicial sanctions. These actions and sanctions could include, among other actions, the FDA's refusal to approve pending applications, withdrawal of an approval, license revocation, a clinical hold, untitled or warning letters, voluntary or mandatory product recalls or market withdrawals, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement and civil or criminal fines or penalties. Any agency or judicial enforcement action could have a material adverse effect on our business, the market acceptance of our products and our reputation.

Preclinical and Clinical Development

Prior to beginning the first clinical trial with a product candidate, a sponsor must submit an investigational new drug application, or IND, to the FDA. An IND is a request for authorization from the FDA to administer an IND product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacology, pharmacokinetics and pharmacodynamic characteristics of the product; chemistry, manufacturing and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day period, raises concerns or questions regarding safety or conduct of the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with current Good Clinical Practices, or cGCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an institutional review board, or IRB, for each site proposing to

conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site and must monitor the study until completed.

The FDA, an IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some trials also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board or committee, which provides authorization for whether a trial may move forward at designated checkpoints based on access to certain data from the trial and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

For purposes of a biologics license application, or BLA, approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- ***Phase 1***—The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses and, if possible, to gain early evidence on effectiveness.
- ***Phase 2***—The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- ***Phase 3—***The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These are called Phase 4 studies and may be made a condition to approval of the BLA. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate and must finalize a process for manufacturing the product in commercial quantities in accordance with current Good Manufacturing Practices, or cGMP, requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, for biologics, must develop methods for testing the identity, strength, quality, purity and potency of the product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Submission and Review

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product for one or more indications. The submission of a BLA requires payment of a substantial application user fee to FDA, unless a waiver or exemption applies.

Once a BLA has been submitted, the FDA generally decides on the acceptance of the application for filing within 60 days of receipt. The FDA's goal is to review standard applications within ten months after it accepts the application for filing, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities comply with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with cGCPs. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information.

The FDA may issue an approval letter or a Complete Response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response letter will describe all deficiencies that the FDA has identified in the BLA. In issuing the Complete Response letter, the FDA may recommend actions that the applicant might take to place the BLA in condition for approval, including requests for additional information or clarification, completion of other significant and time-consuming requirements related to clinical trials, and/or conduct of additional preclinical studies or manufacturing activities. Even if such data and information are submitted, the FDA may determine that the BLA does not satisfy the criteria for approval. FDA approval of a BLA must be obtained before a biologic may be marketed in the United States. The FDA may delay or refuse approval of a BLA, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for specific indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with a Risk Evaluation and Mitigation Strategy, or REMS, to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-marketing studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization and may limit further marketing of the product based on the results of these post-marketing studies.

Expedited Programs

A sponsor may seek to develop and obtain approval of its product candidates under programs designed to accelerate the FDA review and approval of marketing applications for new drugs and biologics that meet certain criteria, such as the Fast Track program, priority review, accelerated approval, Breakthrough Therapy designation and Real-Time Oncology Review, or RTOR, Program.

Fast Track Designation

The FDA Fast Track program is intended to facilitate development and expedite review of new drugs and biologics that are intended to treat a serious or life-threatening disease or condition and that demonstrate potential to address an unmet medical need. For a Fast Track-designated product, there may be more frequent meetings and communication with the FDA, and early and frequent communication between the FDA and sponsor is encouraged throughout the entire development and review process. The FDA may consider sections of a BLA for review on a rolling basis if certain conditions are satisfied, including an agreement with the FDA on the proposed schedule for submission of portions of the application and the payment of applicable user fees before the FDA may initiate a review. The product may also be eligible for priority review and accelerated approval. The sponsor can request the FDA to designate the product for Fast Track status any time before receiving BLA approval, but ideally no later than the pre-BLA meeting.

Priority Review

Generally, the FDA follows a two-tiered system of review times, standard review and priority review. For a product that receives priority review designation, the FDA has the goal of acting on the marketing application within six months of the 60-day filing date, compared to ten months under standard review. However, the FDA does not always meet its PDUFA goal dates for standard and priority BLAs, and the review process is often extended by FDA requests for additional information or clarification. A priority review designation is applicable for products that, if approved, would be significant improvements in the safety or effectiveness of the treatment, diagnosis, or prevention of serious conditions when compared to marketed products. The FDA decides on the review designation for every application; however, an applicant may expressly request priority review. The FDA informs the applicant of a priority review designation within 60 days of the receipt of the original marketing application. If criteria are not met for priority review, 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 or medical standard for approval, or the quality of evidence necessary to support approval.

Accelerated Approval

In addition, the FDA may base accelerated approval for drugs and biologics for serious conditions that fill an unmet medical need on whether the drug or biologic has an effect on a surrogate or an intermediate clinical endpoint. A surrogate endpoint used for accelerated approval 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. Likewise, an intermediate clinical endpoint is a measure of a therapeutic effect that is considered reasonably likely to predict the clinical benefit of a product, such as an effect on irreversible morbidity and mortality, or IMM. The FDA bases its decision on whether to accept the proposed surrogate or intermediate clinical endpoint on the scientific support for that endpoint. In this regard, we are designing a potential registrational trial of aldafermin in PSC and continuing discussions with the FDA, including on the proposed utilization of a primary endpoint composed of surrogate biomarkers with the goal of obtaining accelerated approval. There is no guarantee that the FDA will accept our proposed primary endpoint, in which case we may abandon the development of aldafermin in PSC.

As a condition of accelerated approval, the FDA will generally require the sponsor to perform and provide regular updates to the agency on adequate and well-controlled post-marketing clinical studies to verify and describe the anticipated effect on IMM or other clinical benefit. Where confirmatory trials verify clinical benefit, the FDA will generally terminate the requirement. Approval of a product may be withdrawn or the labeled indication of the product changed, if trials fail to verify clinical benefit or do not demonstrate sufficient clinical benefit to justify the risks associated with the product, for example, if the product shows a significantly smaller magnitude or duration of benefit than was anticipated based on the observed effect on the surrogate endpoint. In addition, the FDA currently requires as a condition for accelerated approval the preapproval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

Breakthrough Therapy Designation

Additionally, a drug or biologic may be eligible for designation as a breakthrough therapy if the product is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening condition and preliminary clinical evidence indicates that the product 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 the FDA designates a breakthrough therapy, it may take actions appropriate to expedite the development and review of the application, which may include holding meetings with the sponsor and the review team throughout the development of the therapy; providing timely advice to, and interactive communication with, the sponsor regarding the development of the drug to ensure that the development program to gather the nonclinical and clinical data necessary for approval is as efficient as practicable; involving senior managers and experienced review staff, as appropriate, in a collaborative, cross-disciplinary review; assigning a cross-disciplinary project lead for the FDA review team to facilitate an efficient review of the development program and to serve as a scientific liaison between the review team and the sponsor; and considering alternative clinical trial designs when scientifically appropriate, which may result in smaller trials or more efficient trials that require less time to complete and may minimize the number of patients exposed to a potentially less efficacious treatment. Breakthrough Therapy designation comes with all of the benefits of Fast Track designation, which means that the sponsor may file sections of the BLA for review on a rolling basis if certain conditions are satisfied, including an agreement with the FDA on the proposed schedule for submission of portions of the application and the payment of applicable user fees before the FDA may initiate a review.

Real-Time Oncology Review (RTOR) Program

The RTOR program is for oncology product candidates that are likely to demonstrate substantial improvements over available therapy, which may include drugs previously granted Breakthrough Therapy designation for the same or other indications and candidates meeting other criteria for other expedited programs, such as Fast Track and priority review. Submissions for RTOR consideration should also have straightforward study designs and endpoints that can be easily interpreted (such as overall survival or progression free survival). Acceptance into the RTOR program does not guarantee or influence approvability of the application, which is subject to the usual benefit-risk evaluation by FDA reviewers, but the program allows FDA to review data earlier, before an applicant formally submits a complete application. The RTOR program does not affect FDA's PDUFA timelines.

Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or the time period for FDA review or approval may not be shortened. Furthermore, Fast Track designation, priority review, accelerated approval, Breakthrough Therapy designation and RTOR program acceptance do not change the standards for product approval.

Orphan Drug Designation

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

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusive approval (or exclusivity), which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity by means of greater effectiveness, greater safety or providing a major contribution to patient care or in instances of drug supply issues. Orphan drug exclusivity does not prevent FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application fee.

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

Pediatric Information and Pediatric Exclusivity

Under the Pediatric Research Equity Act, or PREA, certain BLAs and certain supplements to a BLA must contain data to assess the safety and efficacy of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of pediatric data or full or partial waivers. A sponsor who is planning to submit a marketing application for a drug that includes a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration must submit an initial Pediatric Study Plan, or PSP. The initial PSP must include an outline of the pediatric study or studies that the sponsor plans to conduct, including study objectives and design, age groups, relevant endpoints and statistical approach, or a justification for not including such detailed information, and any request for a deferral of pediatric assessments or a full or partial waiver of the requirement to provide data from pediatric studies along with supporting information. The FDA and the sponsor must reach an agreement on the PSP. A sponsor can submit amendments to an agreed-upon initial PSP at any time if changes to the pediatric plan need to be considered based on data collected from preclinical studies, early phase clinical trials and/or other clinical development programs.

A drug or biologic product can also obtain pediatric market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued “Written Request” for such a study.

Market Exclusivity under The Biologics Price Competition and Innovation Act of 2009, or BPCIA

Under the BPCIA, sponsors of new, licensed biological products approved through a BLA receive 12 years of “Reference Product Exclusivity.” FDA cannot license any 351(k) application for a biosimilar or interchangeable product that relies on the previously approved product as a reference for biosimilarity during this 12-year period. This Reference Product Exclusivity does not attach to molecules that are the “same” as a molecule previously approved for the same sponsor.

Post-Approval Requirements

Any products manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling

claims, are subject to prior FDA review and approval. There also are continuing user fee requirements, under which FDA assesses an annual program fee for each product identified in an approved BLA.

FDA regulations require that products be manufactured in specific approved facilities and in accordance with cGMP regulations. We rely, and expect to continue to rely, on third parties to produce clinical and commercial quantities of our products in accordance with cGMP regulations. These manufacturers must comply with FDA regulations that require, among other things, quality control and quality assurance, the maintenance of records and documentation and the obligation to investigate and correct any deviations from cGMP. FDA regulations also impose reporting requirements upon sponsors and their third-party manufacturers. Manufacturers and other entities involved in the manufacture and distribution of approved biologics are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP requirements and other laws, which impose certain procedural and documentation requirements upon sponsors and their third-party manufacturers. The discovery of violative conditions, including failure to conform to cGMP regulations, could result in enforcement actions, and the discovery of problems with a product after approval may result in restrictions on a product manufacturer or holder of an approved BLA, and, ultimately in a product recall. Biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements upon sponsors and their third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements upon sponsors and their third-party manufacturers.

The FDA may also place other conditions on approvals including the requirement for a REMS, to assure the safe use of the product. If the FDA concludes a REMS is needed, the sponsor of the BLA must submit a proposed REMS. The FDA will not approve the BLA without an approved REMS, if required. A REMS could include medication guides, physician communication plans or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescription or dispensing of products. Product approvals may be withdrawn for noncompliance with regulatory standards or if problems occur following initial marketing. The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in: revisions to the approved labeling to add new safety information, imposition of post-market studies or clinical studies to assess new safety risks, or imposition of distribution or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of a product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing product approvals;
- product seizure or detention, or refusal of the FDA to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses and misbranding. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective actions, including corrective advertising, and potential civil and criminal penalties, including monetary penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including investigation by federal and state authorities. Prescription drug promotional materials must be submitted to the FDA in conjunction with their first use or first publication (or thirty days in advance of their first use if approved via the accelerated approval pathway). Further, if there are any modifications to the drug or biologic, including changes in indications, labeling or manufacturing

processes or facilities, the applicant may be required to submit and obtain FDA approval of a new BLA or BLA supplement, which may require the development of additional data or preclinical studies and clinical trials.

Other U.S. Healthcare Laws and Compliance Requirements

In the United States, our current and future operations are subject to regulation by various federal, state and local authorities. For example, our clinical research, sales, marketing and scientific/educational grant programs may have to comply with the anti-fraud and abuse provisions of the Social Security Act, the federal Anti-Kickback Statute, the false claims laws, the privacy and security provisions of the Health Insurance Portability and Accountability Act, or HIPAA, and similar state laws, each as amended, as applicable.

The federal Anti-Kickback Statute prohibits, among other things, any person or entity, from knowingly and willfully offering, paying, soliciting or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any item or service reimbursable, in whole or in part, under Medicare, Medicaid or other federal healthcare programs. The term remuneration has been interpreted broadly to include anything of value. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution. The exceptions and safe harbors are drawn narrowly and practices that involve remuneration that may be alleged to be intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct *per se* illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Our practices may not in all cases meet all the criteria for protection under a statutory exception or regulatory safe harbor.

Additionally, the intent standard under the Anti-Kickback Statute was amended by the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively referred to as the ACA, to impose a stricter standard such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the ACA codified case law that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act, or FCA.

The federal false claims and civil monetary penalty laws, including the FCA, which imposes significant penalties and can be enforced by private citizens through civil *qui tam* actions, prohibit any person or entity from, among other things, knowingly presenting, or causing to be presented, a false or fraudulent claim for payment to, or approval by, the federal government, including federal healthcare programs, such as Medicare and Medicaid, knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government, or knowingly making a false statement to improperly avoid, decrease or conceal an obligation to pay money to the federal government. A claim includes “any request or demand” for money or property presented to the U.S. government.

HIPAA created additional federal criminal statutes that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors, willfully obstructing a criminal investigation of a healthcare offense and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Like the Anti-Kickback Statute, the ACA amended the intent standard for certain healthcare fraud statutes under HIPAA such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

Also, many states have similar, and typically more prohibitive, fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and its implementing regulations, imposes requirements on covered entities (including certain health care providers, health plans and health care clearinghouses, business associates and their covered subcontractors) relating to the privacy, security and transmission of individually identifiable health information. HIPAA may be enforced by several federal agencies as well as state attorneys general. In addition, many state laws govern the privacy and security of health information in specified circumstances, many of which differ from each other in significant ways, are often not preempted by HIPAA and may have a more prohibitive effect than HIPAA, thus complicating compliance efforts.

Our physician-administered products, if approved, may be eligible for coverage under Medicare through Medicare Part B. As a condition of receiving Medicare Part B reimbursement for a manufacturer's eligible drugs, the manufacturer is required to participate in other government healthcare programs, including the Medicaid Drug Rebate Program and the 340B Drug Pricing Program, and would be subject to those requirements as well.

In addition, many pharmaceutical manufacturers must calculate and report certain price reporting metrics to the government, such as average sales price and best price. Penalties may apply in some cases when such metrics are not submitted accurately and timely. Further, these prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States.

Additionally, the federal Physician Payments Sunshine Act, or the Sunshine Act, as amended, and its implementing regulations, require that certain manufacturers of drugs, devices, biological and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) report annually to CMS information related to certain payments or other transfers of value made or distributed to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), other health care professionals (such as physician assistants and nurse practitioners) and teaching hospitals, as well as information regarding ownership and investment interests held by physicians and their immediate family members.

In addition, many states also govern the reporting of such payments or other transfers of value, many of which differ from each other in significant ways, are often not preempted and may have a more prohibitive effect than the Sunshine Act, thus further complicating compliance efforts.

In order to distribute products commercially, we must comply with state laws that require the registration of manufacturers and wholesale distributors of drug and biological products in a state, including, in certain states, manufacturers and distributors who ship products into the state even if such manufacturers or distributors have no place of business within the state. Some states also impose requirements on manufacturers and distributors to establish the pedigree of product in the chain of distribution, including some states that require manufacturers and others to adopt new technology capable of tracking and tracing product as it moves through the distribution chain. Several states have enacted legislation requiring pharmaceutical and biotechnology companies to establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales, marketing, pricing, clinical trials and other activities and/or register their sales representatives, as well as to prohibit pharmacies and other healthcare entities from providing certain physician prescribing data to pharmaceutical and biotechnology companies for use in sales and marketing, and to prohibit certain other sales and marketing practices. Our activities are potentially subject to federal and state consumer protection and unfair competition laws.

The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. Ensuring business arrangements with third parties comply with applicable healthcare laws and regulations is a costly endeavor. If our operations are found to be in violation of any of the federal and state healthcare laws described above or any other current or future governmental regulations that apply to us, we may be subject to penalties, including without limitation, civil, criminal and/or administrative penalties, damages, fines, disgorgement, individual imprisonment, exclusion from participation in government programs, such as Medicare and Medicaid, injunctions, private *qui tam* actions brought by individual whistleblowers in the name of the government, refusal to allow us to enter into government contracts, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings, additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of noncompliance with these laws, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act, or FCPA, prohibits 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. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring us 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.

Environmental, Health and Safety Regulation

In addition to the foregoing, state and federal laws regarding safe working conditions, environmental protection and hazardous substances, including the Occupational Safety and Health Act, the Resource Conservancy and Recovery Act and the Toxic Substances Control Act, affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. We may incur significant costs to comply with such laws and regulations now or in the future. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and regulations and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws and regulations may affect our future operations.

European Union Development of Medicinal Products

In the European Economic Area, or EEA, which consists of the 27 Member States of the European Union, or the EU and the EU Member States, as well as Norway, Iceland and Liechtenstein, medicinal products can only be commercialized after a marketing authorization, or MA, has been granted by a competent regulatory authority. This is similar to the approach in the United States. Clinical trials in the EEA are currently regulated by Clinical Trials Regulation (EU) No 536/2014, or CTR, which entered into application on January 31, 2022. The regulation, which is directly applicable in all EEA countries, overhauls the previous system of approvals for clinical trials in the EU to simplify and streamline the approval of clinical trials in the EU.

European Union Review of Marketing Authorization and Approval

Depending on the type of product and its intended therapeutic indication, related MAs may be granted either by the European Commission at the EU level or by the competent authorities of EEA countries. An MA issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use, or CHMP, of the EMA, is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, advanced-therapy medicines such as gene-therapy, somatic cell-therapy or tissue-engineered medicines and medicinal products containing a new active substance indicated for the treatment of HIV, AIDS, cancer, neurodegenerative disorders, diabetes, autoimmune and other immune dysfunctions and viral diseases. The Centralized Procedure is optional, subject to the approval of the EMA, for products containing a new active substance not yet authorized in the EEA for the treatment of diseases other than those indicated above, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU.

National MAs, which are issued by the competent authorities of the EEA countries, and only cover their respective territory, are available for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in an EEA country, that National MA can be recognized in another EEA country through the Mutual Recognition Procedure. If the product has not received a National MA in any EEA country at the time of application for authorization, it can be approved simultaneously in various EEA countries through the Decentralized Procedure. Under the Decentralized Procedure, an identical dossier is submitted to the competent authorities of each of the EEA countries in which the MA is sought, one of which is selected by the applicant as the Reference Member State, or RMS. The competent authority of the RMS prepares a draft assessment report, a draft Summary of Product Characteristics, or SmPC, the document that provides information to physicians concerning the safe and effective use of the product, and a draft of the labeling and package leaflet, which are sent to the other EEA countries, referred to as the Concerned Member States, or CMSs, for their approval. If the CMSs raise no objections to the assessment, SmPC, labeling or packaging proposed by the RMS, the product is subsequently granted a National MA in the RMS and the Concerned Member States. The RMS or CMSs may only raise objections to authorization that are based on a potential serious risk to public health.

In the EEA, an MA, whether granted through the Centralized, Decentralized or Mutual Recognition Procedures, may be granted only to an MA applicant that is established within the EEA.

In principle, an MA has an initial validity of five years. The MA may be renewed after five years based on a re-evaluation of the risk-benefit balance by the EMA or by the competent authority of the EEA country in which the original MA was granted. The European Commission or the competent authorities of the EEA country may decide, on justified grounds relating to pharmacovigilance, to require one additional five-year period for the MA before it is definitively renewed. Once subsequently definitively renewed, the MA is valid for an unlimited period. Any MA that is not followed by the actual placing of the medicinal product on the EEA market (in case of Centralized Procedure

approvals), or on the market of the authorizing EEA country if applicable, within three years after authorization ceases to be valid (the so-called sunset clause).

Innovative products that target an unmet medical need and are expected to be of major public health interest may be eligible for several expedited development and review programs, such as the Priority Medicines, or PRIME, scheme, which provides incentives similar to the Breakthrough Therapy designation in the United States. In the EEA, a conditional MA may be granted by the European Commission through the Centralized Procedure in cases where all the required safety and efficacy data are not yet available. Eligible products must fulfill specific criteria and the conditional MA is subject to conditions to be fulfilled concerning generation of missing data or ensuring increased safety measures. It is valid for one year and must be renewed annually until all related conditions have been fulfilled. After this, the conditional MA may be converted to a normal MA.

An MA may also be granted "under exceptional circumstances" by the European Commission through the Centralized Procedure where the MA applicant can show that it is unable to provide comprehensive data on the efficacy and safety of the medicinal product under normal conditions of use even after the product has been authorized and subject to specific procedures after being introduced. These circumstances may arise in particular when the intended therapeutic indications are very rare and, based on the state of scientific knowledge at that time, it is not possible to provide comprehensive information, or when generating data may be contrary to generally accepted ethical principles. An applicant for authorization in exceptional circumstances is not subsequently required to provide the missing data. Although the MA "under exceptional circumstances" is granted definitively, the risk-benefit balance of the medicinal product is reviewed annually, and the MA will be withdrawn if the risk-benefit ratio is no longer favorable.

Data and Market Exclusivity

The EU legislation governing the grant of marketing authorizations for medicinal products also provides opportunities for data and market exclusivity related to MAs in certain circumstances. Upon grant of an MA, innovative medicinal products generally benefit from eight years of data exclusivity and ten years of market exclusivity. Data exclusivity, if granted, prevents regulatory authorities in the EEA from referencing the innovator's data to assess a biosimilar application for eight years from the date of authorization of the innovative product, after which a biosimilar application for MA can be submitted, and the innovator's data may be referenced. The market exclusivity period prevents a successful biosimilar applicant from commercializing its product in the EEA until ten years have elapsed from the initial MA of the innovator product in the EEA. The overall ten-year period may, occasionally, be extended for a further year to a maximum of eleven years if, during the first eight years of those ten years, the MA holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies. There is, however, no guarantee that our products will be considered by EU regulatory authorities to be a new biological entity. In such circumstances, our products, even if granted MA, may not qualify for data and market exclusivity.

Pediatric Development

Regulation (EC) No 1901/2006 provides that all applications for an MA for new medicinal products have to include the results of trials conducted in the pediatric population in compliance with a pediatric investigation plan, or PIP, agreed to with the EMA's Pediatric Committee, or PDCO. The PIP sets out the timing and measures proposed to generate data to support a pediatric indication of the medicinal product for which MA is being sought.

The PDCO can grant a deferral of the obligation to implement some or all of the measures provided in the PIP until there are sufficient data to demonstrate the efficacy and safety of the product in adults. The obligation to provide pediatric clinical trial data can be waived entirely by the PDCO when these data are not needed or appropriate because the product is likely to be ineffective or unsafe in children, the disease or condition for which the product is intended occurs only in adult populations, or when the product does not represent a significant therapeutic benefit over existing treatments for pediatric patients. Once the MA is obtained in all EEA countries and study results in compliance with the PIP are included in the product information, even when those results are negative, the product may be eligible for a six-month extension to certain patent protections or, in the case of orphan medicinal products, a two-year extension of orphan market exclusivity.

Orphan Designation

In the EU, Regulation (EC) No. 141/2000, as implemented by Regulation (EC) No. 847/2000, provides that a medicinal product can be designated as an orphan medicinal product by the European Commission if its sponsor can establish that: (i) the product is intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions; (ii) either (a) such conditions affect not more than 5 in 10,000 persons in the EU

when the application is made, or (b) the product, without the benefits derived from orphan status, would not generate sufficient return in the EU to justify the necessary investment in developing the medicinal product; and (iii) there exists no satisfactory authorized method of diagnosis, prevention or treatment of the condition that has been authorized in the EU, or even if such method exists, the product will be of significant benefit to those affected by that condition.

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

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

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

Post-Approval Requirements

Both MA holders and manufacturers of medicinal products are subject to comprehensive regulatory oversight by the EMA, the European Commission and/or the competent regulatory authorities of the individual EEA countries and regional authorities within those countries. Legislation adopted at the EU level, such as Directives, may be implemented differently by individual EEA countries. Examples of post-approval requirements include the obligation on the holder of an MA to comply with a range of regulatory requirements applicable to the manufacturing, marketing, promotion and sale of medicinal products, establish and maintain a pharmacovigilance system and appoint an individual qualified person for pharmacovigilance who is responsible for oversight of that system. Key obligations include expedited reporting of suspected serious adverse reactions and submission of periodic safety update reports, or PSURs. All new applicants for MA must include a risk management plan, or RMP, describing the risk management system that the company will put in place and documenting measures to prevent or minimize the risks associated with the product. The regulatory authorities may also impose risk-minimization measures or post-authorization obligations as a condition of the MA, which may include additional safety monitoring, more frequent submission of PSURs or the conduct of additional clinical trials or post-authorization safety studies.

Marketing of Medicinal Products in the EEA

In the EEA, the advertising and promotion of medicinal products are subject to both EU law and the national law of individual EEA countries governing promotion of medicinal products, interactions with physicians and other healthcare professionals, misleading and comparative advertising and unfair commercial practices. Although general requirements for advertising and promotion of medicinal products are established at the EU level, the details are governed by rules developed in individual EEA countries and can differ from one country to another. Examples of regulatory obligations include the requirement that promotional materials and advertising in relation to medicinal products comply with the product's SmPC as approved by the competent authorities in connection with an MA. Promotion materials and advertising may also require approval by competent authorities in certain EEA

countries. Promotional activity that does not comply with the SmPC is considered off-label and is prohibited in the EU. Direct-to-consumer advertising of prescription medicinal products is also prohibited in the EU.

Marketed products in the EEA are subject to substantial continuing regulation. This includes, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution and advertising and promotion of the product. For example, the provision of benefits or advantages to physicians to induce or encourage the prescription, recommendation, endorsement, purchase, supply, order or use of medicinal products is prohibited in the EEA. The provision of benefits or advantages to physicians is governed by national laws, including national anti-bribery laws, national sunshine rules, regulations, industry self-regulation codes or professional codes of conduct and related national implementing laws. Payments made to physicians in certain EEA countries must also be publicly disclosed, and agreements with physicians may be subject to prior notification and approval by the physician's employer, his or her competent professional organization and/or the regulatory authorities of the individual EEA countries. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines or imprisonment.

Regulation in the United Kingdom Following Brexit

The United Kingdom's, or UK's, withdrawal from the EU on January 31, 2020, commonly referred to as Brexit, has changed the regulatory relationship between the UK and the EU. The Medicines and Healthcare products Regulatory Agency, or MHRA, is now the UK's standalone regulator for medicinal products and medical devices. Great Britain (England, Scotland and Wales) is now a third country to the EU. Northern Ireland will, with regard to EU regulations, continue to follow the EU regulatory rules for now.

The UK regulatory framework in relation to clinical trials is governed by the Medicines for Human Use (Clinical Trials) Regulations 2004, as amended, which is derived from the Clinical Trials Directive, as implemented into UK national law through secondary legislation. On January 17, 2022, the MHRA launched an eight-week consultation on reframing the UK legislation for clinical trials, and which aimed to streamline clinical trials approvals, enable innovation, enhance clinical trials transparency, enable greater risk proportionality, and promote patient and public involvement in clinical trials. The UK Government published its response to the consultation on March 21, 2023, confirming that it would bring forward changes to the legislation. These resulting legislative amendments will determine how closely the UK regulations will align with the CTR. In October 2023, the MHRA announced a new Notification Scheme for clinical trials which enables a more streamlined and risk-proportionate approach to initial clinical trial applications for Phase 4 and low-risk Phase 3 clinical trial applications.

Marketing authorizations in the UK are governed by the Human Medicines Regulations (SI 2012/1916), as amended. Since January 1, 2021, an applicant for the EU centralized procedure marketing authorization can no longer be established in the UK. As a result, since this date, companies established in the UK cannot use the EU centralized procedure and instead must follow one of the UK national authorization procedures or one of the remaining post-Brexit international cooperation procedures to obtain a marketing authorization to market products in the UK. All existing EU marketing authorizations for centrally authorized products were automatically converted or grandfathered into UK marketing authorization, effective in Great Britain only, free of charge on January 1, 2021, unless the marketing authorization holder opted-out of this possibility. Northern Ireland currently remains within the scope of EU authorizations in relation to centrally authorized medicinal products. Accordingly, until the Windsor Framework is implemented in Northern Ireland on January 1, 2025, products falling within the scope of the EU centralized procedure can only be authorized through UK national authorization procedures in Great Britain.

The MHRA has also introduced changes to national marketing authorization procedures. This includes introduction of procedures to prioritize access to new medicines that will benefit patients, including a 150-day assessment route, a rolling review procedure and the International Recognition Procedure. Since January 1, 2024, the MHRA may rely on the International Recognition Procedure, or IRP, when reviewing certain types of marketing authorization applications. This procedure is available for applicants for marketing authorization who have already received an authorization for the same product from a reference regulator. These include the FDA, the EMA and national competent authorities of individual EEA countries. A positive opinion from the EMA and CHMP, or a positive end of procedure outcome from the mutual recognition or decentralized procedures, are considered to be authorizations for the purposes of the IRP.

There is no pre-marketing authorization orphan designation for medicinal products in the UK. Instead, the MHRA reviews applications for orphan designation in parallel to the corresponding marketing authorization application. The criteria are essentially the same as those in the EU but have been tailored for the market. This includes the criterion that prevalence of the condition in Great Britain, rather than the EU, must not be more than five in 10,000. Upon the grant of a marketing authorization with orphan status, the medicinal product will benefit

from up to ten years of market exclusivity from similar products in the approved orphan indication. The start of this market exclusivity period will be set from the date of first approval of the product in Great Britain.

Privacy and Data Security Laws and Compliance Obligations

In the ordinary course of our business, we may process personal or sensitive data (including health-related data, such as data related to oncology, retinal disease and liver and metabolic disease, as part of our clinical trial and drug discovery activities). Accordingly, we are, or may become, subject to numerous obligations, including U.S. federal, state and local, as well as foreign, data privacy and security laws, regulations, guidance and industry standards, and other legal obligations related to privacy and data security. The regulatory framework with respect to data privacy and security is stringent and constantly evolving. For example, in addition to laws such as HIPAA that govern the processing of health information, we are or may become subject to numerous other data privacy and security laws and legal obligations, which may include laws such as the Federal Trade Commission Act, the California Consumer Privacy Act of 2018, or CCPA, the California Privacy Rights Act of 2020, or CPRA, and similar laws enacted or proposed in other states in the United States, the EU's General Data Protection Regulation 2016/679, or EU GDPR, and the EU GDPR as it forms part of UK law by virtue of section 3 of the European Union (Withdrawal) Act 2018, or UK GDPR, together referred to as the GDPR. Additionally, we are, or may become, subject to various U.S. federal and state consumer protection laws which require us to publish statements that accurately and fairly describe how we handle personal data and choices individuals may have about the way we handle their personal data.

These laws and obligations impose on subject entities extensive, costly and complex compliance obligations, which may conflict or be inconsistent with one another, and violations may result in significant fines, penalties and other adverse consequences. The CCPA and GDPR are examples of the increasingly stringent and evolving regulatory frameworks related to personal data processing that may increase our compliance obligations and exposure for any noncompliance. For example, the CCPA imposes obligations on covered businesses to provide specific disclosures related to a business's collecting, using and disclosing personal data and to respond to certain requests from California residents related to their personal data. Also, the CCPA provides for civil penalties and a private right of action for data breaches which may include an award of statutory damages. In addition, the CPRA, effective January 1, 2023, expanded the CCPA to, among other things, give California residents the ability to limit use of certain sensitive personal data, establish restrictions on personal data retention, expand the types of data breaches that are subject to the CCPA's private right of action and establish a new California Privacy Protection Agency to implement and enforce the new law.

Foreign data privacy and security laws (including but not limited to the GDPR) impose significant and complex compliance obligations on entities that are subject to those laws, including companies established outside the EEA and/or the UK that process personal data in connection with the offering of goods or services to data subjects in the EEA/UK or the monitoring of the behavior of data subjects in the EEA. These obligations include: limiting personal data processing to only what is necessary for specified, explicit and legitimate purposes; establishing a legal basis for personal data processing; appointing a data protection officer in certain circumstances; facilitating data subject requests; conducting data protection impact assessments in certain circumstances; limiting the collection and retention of personal data; implementing and maintaining appropriate technical and organizational safeguards for personal data; notifying certain personal data breaches to the relevant supervisory authorities and affected individuals; and appointing a representative in the EU and/or the UK.

See "Risk Factors—Risks Related to Our Business and Industry" for additional information about the privacy and data security risks we may face, including in relation to the laws and regulations to which we are or may become subject.

Rest of the World Regulation

For other countries outside of the EU, United Kingdom and the United States, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. Additionally, clinical trials must be conducted in accordance with cGCP requirements, the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki. Failure to comply with applicable foreign laws and regulatory requirements may result in, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products and operating restrictions.

Additional Laws and Regulations Governing International Operations

If we further expand our operations outside of the United States, we must dedicate additional resources to comply with numerous laws and regulations in each jurisdiction in which we plan to operate, in addition to the FCPA

as described above. For example, the UK Bribery Act of 2010 applies to companies that carry on all or part of their business in the UK, and prohibits bribing another person or being bribed, bribing a foreign public official with the intent to influence and obtain or retain business or an advantage, and failure by a commercial party to prevent bribery, including where the prohibited conduct or its effects occurred entirely outside the UK.

Compliance with the FCPA and anti-corruption and anti-bribery laws in other countries is expensive and difficult, particularly in countries in which corruption is a recognized problem. In addition, the FCPA presents particular challenges in the pharmaceutical industry because, in many countries, hospitals are operated by the government and doctors and other hospital employees are considered foreign officials. Certain payments to hospitals in connection with clinical trials and other work have been deemed to be improper payments to government officials and have led to FCPA enforcement actions.

Various laws, regulations and executive orders also restrict the use and dissemination outside of the United States, or the sharing with certain non-U.S. nationals, of information classified for national security purposes, as well as certain products and technical data relating to those products. If we expand our presence outside of the United States, it will require us to dedicate additional resources to comply with these laws, and these laws may preclude us from developing, manufacturing or selling certain products and product candidates outside of the United States, which could limit our growth potential and increase our development costs.

The failure to comply with laws governing international business practices may result in substantial civil and criminal penalties and suspension or debarment from government contracting. The SEC also may suspend or bar issuers from trading securities on U.S. exchanges for violations of the FCPA's accounting provisions.

Coverage, Pricing and Reimbursement

In the United States and in foreign markets, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the extent to which third-party payors provide coverage and establish adequate reimbursement levels for such products. In the United States, third-party payors include federal and state healthcare programs, private managed care providers, health insurers and other organizations. Adequate coverage and reimbursement from governmental healthcare programs, such as Medicare and Medicaid in the United States, and commercial payors are critical to new product acceptance.

Coverage and reimbursement by a third-party payor may depend upon a number of factors, including the third-party payor's determination that use of a therapeutic is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Coverage may also be more limited than the purposes for which the product is approved by the FDA or comparable foreign regulatory authorities. Reimbursement may impact the demand for, or the price of, any product for which we obtain regulatory approval.

Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical products, therapies and services, in addition to questioning their safety and efficacy. Obtaining reimbursement for our products may be particularly difficult because of the higher prices often associated with branded drugs and drugs administered under the supervision of a physician. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products. Obtaining coverage and reimbursement approval of a product from a government or other third-party payor is a time-consuming and costly process that could require us to provide to each payor supporting scientific, clinical and cost-effectiveness data for the use of our product on a payor-by-payor basis, with no assurance that coverage and adequate reimbursement will be obtained. A payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. 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. If reimbursement is not available or is available only at limited levels, we may not be able to successfully commercialize any product candidate that we successfully develop.

Different pricing and reimbursement schemes exist in other countries. In the EU, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some EU Member States may approve a

specific price for a product, or they may instead adopt a system of direct or indirect controls on the profitability of the company placing the product on the market.

Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed. In addition, to obtain reimbursement or pricing approval, some of these countries may require the completion of studies that compare the cost effectiveness of a particular product candidate to currently available therapies. This Health Technology Assessment, or HTA, process is the procedure according to which the assessment of the public health impact, therapeutic impact and the economic and societal impact of use of a given medicinal product in the national healthcare systems of the individual country is conducted. The outcome of HTA regarding specific medicinal products will often influence the pricing and reimbursement status granted to these medicinal products by the competent authorities of individual EU Member States. In December 2021, Regulation No 2021/2282 on Health Technology Assessment, or HTA Regulation, was adopted. The HTA Regulation is intended to boost cooperation among EU Member States in assessing health technologies, including new medicinal products, and providing the basis for cooperation at EU level for joint clinical assessments in these areas. When it enters into application in 2025, the HTA Regulation will be intended to harmonize the clinical benefit assessment of HTA across the European Union. In light of the fact that the United Kingdom has left the EU, Regulation No 2021/2282 on HTA will not apply in the United Kingdom. However, the MHRA is working with UK HTA bodies and other national organizations, such as the Scottish Medicines Consortium, or SMC, the National Institute for Health and Care Excellence, or NICE, and the All-Wales Medicines Strategy Group, to introduce new pathways supporting innovative approaches to the safe, timely and efficient development of medicinal products. Other member states allow companies to fix their own prices for medicines but monitor and control prescription volumes and issue guidance to physicians to limit prescriptions. The downward pressure on health care costs has become intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

The marketability of any product candidates 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, emphasis on managed care, the increasing influence of health maintenance organizations and additional legislative changes in the United States have increased, and we expect will continue to increase, the pressure on healthcare pricing. The downward pressure on the rise in healthcare costs in general, particularly prescription medicines, medical devices and surgical procedures and other treatments, has become very intense. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Before products become available to patients in the EEA, they are generally subject to decisions on pricing and reimbursement by the applicable authorities in an EEA country. Key criteria to determine the reimbursement status and pricing of a product may include the product's therapeutic value, medical need, safety and cost effectiveness. Obtaining pricing and reimbursement approval of a product from a government is a time-consuming and costly process, and significant uncertainty exists as to the pricing and reimbursement status of any product candidates for which we may seek marketing approval in the EEA. Our ability to commercialize any such products successfully in the EEA will depend, in part, on the outcome of these decisions.

In many EU Member States periodically review their reimbursement procedures for medicinal products, which could have an adverse impact on reimbursement status. We expect that legislators, policymakers and healthcare insurance funds in the EU Member States will continue to propose and implement cost-containing measures, such as lower maximum prices, lower or lack of reimbursement coverage and incentives to use cheaper, usually generic, products as an alternative to branded products, and/or branded products available through parallel import to keep healthcare costs down.

Legislators, policymakers and healthcare insurance funds in the EU and the UK may continue to propose and implement cost-containing measures to keep healthcare costs down. These measures could include limitations on the prices we would be able to charge for product candidates that we may successfully develop and for which we may obtain regulatory approval or the level of reimbursement available for these products from governmental authorities or third-party payors. Further, an increasing number of EU and other foreign countries use prices for medicinal products established in other countries as "reference prices" to help determine the price of the product in their own territory. Consequently, a downward trend in prices of medicinal products in some countries could contribute to similar downward trends elsewhere.

Healthcare Reform

In the United States and some foreign jurisdictions, there have been, and continue to be, several legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of product candidates, restrict or regulate post-approval activities and affect the ability to profitably sell product candidates for which marketing approval is obtained. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

The ultimate content, timing or effect of any healthcare reform legislation on the U.S. healthcare industry is unclear. For example, on August 16, 2022, President Biden signed the Inflation Reduction Act of 2022, or the IRA, into law, which among other things, (1) directs the U.S. Department of Health and Human Services, or HHS, to negotiate the price of certain single-source drugs and biologics covered under Medicare and (2) imposes rebates under Medicare Part B and Medicare Part D to penalize price increases that outpace inflation. These provisions will take effect progressively starting in fiscal year 2023. On August 29, 2023, HHS announced the list of the first ten drugs that will be subject to price negotiations, although the Medicare drug price negotiation program is currently subject to legal challenges. It is unclear how the IRA will be implemented but is likely to have a significant impact on the pharmaceutical industry.

Further, in March 2010, the ACA was signed into law and has substantially changed healthcare financing and delivery by both governmental and private insurers. Among the ACA provisions of importance to the pharmaceutical and biotechnology industries are those governing enrollment in federal 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 and annual fees based on pharmaceutical companies' share of sales to federal healthcare programs.

There have been legal and political challenges to certain aspects of the ACA. For example, former President Trump signed several executive orders and other directives designed to delay, circumvent or loosen certain requirements mandated by the ACA. On June 17, 2021, the U.S. Supreme Court dismissed a challenge on procedural grounds that argued the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress. However, the ACA may be subject to judicial or Congressional challenges in the future. Additionally, on January 28, 2021, President Biden issued an executive order instructing 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. The IRA, among other things, extends enhanced subsidies for individuals purchasing health insurance coverage in ACA marketplaces through plan year 2025 and eliminates the "donut hole" under the Medicare Part D program beginning in 2025 by significantly lowering the beneficiary maximum out-of-pocket cost through a newly established manufacturer discount program.

We anticipate that the ACA, if substantially maintained in its current form, will continue to result in additional downward pressure on coverage and the price that we receive for any approved product, and could harm our business. Any reduction in reimbursement from Medicare and other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our products.

Further legislation or regulation could be passed that could harm our business, financial condition and results of operations. Other legislative changes have been proposed and adopted since the ACA was enacted. Aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect beginning on April 1, 2013, will stay in effect through 2032 unless additional Congressional action is taken.

Additionally, there has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several U.S. congressional inquiries, presidential executive orders and proposed and enacted federal legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer-patient programs and reform government program reimbursement methodologies for drugs. For example, in July 2021, the Biden administration released an executive order, "Promoting Competition in the American Economy," with multiple provisions aimed at prescription drugs. In response to President Biden's executive order, on September 9, 2021, the United States Department of Health and Human Services, or HHS, released a Comprehensive Plan for Addressing High Drug Prices that outlines principles for drug pricing reform and

sets out a variety of potential legislative policies that Congress could pursue as well as potential administrative actions HHS can take to advance these principles. Further, the Biden administration released an additional executive order on October 14, 2022, directing HHS to submit a report on how the Center for Medicare and Medicaid Innovation can be further leveraged to test new models for lowering drug costs for Medicare and Medicaid beneficiaries. In response to the Biden administration's October 2022 executive order, on February 14, 2023, HHS released a report outlining three new models for testing by the Centers for Medicare & Medicaid Services, or CMS, Innovation Center which will be evaluated on their ability to lower the cost of drugs, promote accessibility, and improve quality of care. It is unclear whether the models will be utilized in any health reform measures in the future. Further, on December 7, 2023, the Biden administration announced an initiative to control the price of prescription drugs through the use of march-in rights under the Bayh-Dole Act. On December 8, 2023, the National Institute of Standards and Technology published for comment a Draft Interagency Guidance Framework for Considering the Exercise of March-In Rights which for the first time includes the price of a product as one factor an agency can use when deciding to exercise march-in rights. While march-in rights have not previously been exercised, it is uncertain if that will continue under the new framework. It is unclear whether this executive order or similar policy initiatives will be implemented in the future. Individual states in the United States have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. For example, on January 5, 2024, the FDA approved Florida's Section 804 Importation Program, or SIP, proposal to import certain drugs from Canada for specific state healthcare programs. It is unclear how this program will be implemented, including which drugs will be chosen, and whether it will be subject to legal challenges in the United States or Canada. Other states have also submitted SIP proposals that are pending review by the FDA. Any such approved importation plans, when implemented, may result in lower drug prices for products covered by those programs.

Human Capital

Our team of talented scientists and industry professionals is the foundation of our company and fuels our historical and prospective achievements for patients. We consider the intellectual capital of our employees to be an essential driver of our business and key to our future opportunities. As of December 31, 2023, we had 138 employees, of which approximately 97 (70%) were engaged in R&D activities, 52 hold Ph.D. and/or M.D. degrees and an additional 31 hold a master's or other postgraduate degree. Every NGM Bio team member plays a vital role in furthering our goals and impacting our progress towards fully realizing our mission to develop transformative therapies for patients.

To succeed in our mission, we must attract, recruit, retain, develop and motivate qualified clinical, nonclinical, scientific, manufacturing, regulatory, management and other personnel needed to support our business and operations. We recruit for talent in the biotechnology and pharmaceutical industry in the San Francisco Bay Area, which is in one of the most competitive and highest cost labor markets in the United States and periodically experiences higher turnover rates than other industries. We maintain a comprehensive dashboard of measurements, including recruitment productivity, diversity, equity and inclusion metrics, employee engagement scores, total rewards benchmarking, participation rates and satisfaction scores for internal training, turnover rates and exit interview results, to guide our human capital management efforts.

We believe that we can best address competitive challenges by enhancing the reputation of NGM Bio as a great place to work, which includes nurturing our workplace culture, providing competitive compensation and benefits programs and supporting employee career development and related management training. To that end, we continue to invest resources and energy into being an employer of choice – attracting and engaging individuals who are innovative, curious, driven, diligent, collaborative and of the highest integrity and ethics. Some of our key efforts in this area and management of our human capital assets generally are described here.

Compensation and Benefits

Our compensation philosophy is to provide pay and benefits that are competitive in the biotechnology and pharmaceutical industry where we compete for talent. We monitor our compensation programs closely and review them throughout the year to provide what we consider a very competitive mix of compensation and health, welfare and retirement benefits for all our employees. Our compensation package for all employees includes market-competitive base salaries, eligibility for annual performance bonuses and equity grants. Our benefits programs include company-sponsored medical, dental and vision health care coverage, life and AD&D insurance, a 401(k) plan with a matching employer contribution, paid time off and family leave and an employee stock purchase plan, among others benefits. Every year, we undertake a detailed review of our compensation by position and level and

make adjustments necessary to ensure that we continue to provide competitive compensation. Our hiring practices and annual compensation reviews are designed to ensure fairness in pay equity across gender and ethnicity among similar roles and responsibilities throughout our organization, after accounting for legitimate business factors that can explain differences, such as performance, time at grade level, education and tenure. To comply with the California's Pay Transparency law (SB 1162), beginning January 1, 2023, we publish pay ranges in all job postings and we proactively provide existing employees with the salary range for their positions. In addition, our efforts extend beyond pay equity to include fairness in gender and ethnic representation at all levels in the organization.

Diversity, Equity and Inclusion

We believe that a diverse, equitable and inclusive workplace is key to our long-term success. As of December 31, 2023, NGM Bio employed 79 women (57%) and 59 men (43%), and 85 (62%) of our employees are non-white, including 15 (11%) that are from traditionally underrepresented groups. Our leadership, including employees at or above the vice president level and members of our board of directors, includes 53% women and 26% who are non-white. To champion our efforts in this area, a cross-functional team of employees continues to drive our diversity, equity and inclusion initiatives that have focused on awareness and understanding; diverse candidate pipelines; community outreach; advocacy and career advancement; and business impact. Our efforts, which began in 2020 with a focus on anti-Black racism, have included mandatory unconscious bias and discrimination training, an employee-led diversity page on our intranet updated monthly with fresh content, voluntary participation in a program to encourage allyship, guest speaker programs on diversity, equity and inclusion, or DEI, topics, and conducting a survey to understand employee sentiment around race-related issues to establish a baseline for tracking future progress. We implemented an internship program targeted to students from underrepresented minorities and adopted specific quantitative efforts to provide NGM Bio with a diverse candidate pipeline and more diverse interview panels. In addition to internal efforts, our research employees volunteer to teach elementary school students various topics in biology.

In 2022, we engaged an external consultant with expertise in DEI to help conduct an assessment to understand where improvements could be made in our culture to drive equitable outcomes and foster an inclusive environment, with a particular focus on women scientists. The assessment included cross-organizational interviews, focus group discussions, a detailed review of our policies, programs and business norms, an all-employee inclusion survey and a review of organizational diversity metrics to determine what are the barriers to success and advancement of women and underrepresented groups. The project identified three areas of action that are being shared across NGM Bio, and we began implementing the recommendations in 2023, conducting inclusive leadership training and developing inclusive meeting norms. In addition, we support an employee-led employee resource group, N-GAGE (NGM Gathers to Advance Gender Equity). Since its inception, N-GAGE has supported the DEI assessment, created community spaces for engagement and discussions on current topics disproportionately affecting women, and incubated a company-wide mentorship and professional enrichment program.

Communication and Engagement

We believe that part of what sets NGM Bio apart from other companies is our culture and our focus on providing timely and transparent communications and creating a strong sense of belonging and inclusiveness. We engage in many traditions and celebrations that contribute to what makes NGM Bio a special place to work: monthly themed happy hours; weekly group lunch programs, often with employee-led lunch-and-learns with scientific and other updates of interest; quarterly all-hands' meetings; regular coffee chats or other gatherings for small groups with our CEO and other members of senior management; and events including a summer family picnic, Thanksgiving potluck and holiday white elephant party, among many others. We survey our employees each year to measure their level of engagement at NGM Bio. These surveys provide rich feedback each year that helps us to continue to grow our culture and strive to make NGM Bio a great place to work.

Health, Wellness and Safety

We continue to offer services to promote our employees' whole health and wellness, including an on-site gym, external support from our employee assistance program and mental wellness and health advocacy services.

None of our employees is subject to a collective bargaining agreement or represented by a trade or labor union. We consider our relations with our employees to be good.

Corporate and Available Information

We were incorporated in Delaware in December 2007 and commenced operations in 2008. Our principal executive offices are located at 333 Oyster Point Blvd., South San Francisco, CA 94080-7014, and our telephone number is (650) 243-5555. Our website address is http://www.ngmbio.com.

We file with or furnish electronically to the SEC annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act. We make copies of these reports available free of charge through the “SEC Filings” tab on the “Investors & Media” page of our website as soon as reasonably practicable after we file with or furnish them to the SEC.

Information contained on or accessible through our website is not incorporated into, and does not form a part of, this Annual Report or any other report or document we file with the SEC, and any references to our website are intended to be inactive textual references only.

Item 1A. Risk Factors.

An investment in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below before deciding whether to make an investment decision with respect to our common stock. You should also refer to the other information contained in this Annual Report on Form 10-K, or Annual Report, including in Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and in our consolidated financial statements and related notes, as well as our other filings with the U.S. Securities and Exchange Commission, or SEC. Our business, financial condition, results of operations, stock price and prospects could be materially and adversely affected by any of these risks or uncertainties. In any such case, the trading price of our common stock could decline, and you could lose all or part of your investment. We caution you that the risks, uncertainties and other factors referred to below and elsewhere in this Annual Report may not contain all of the risks, uncertainties and other factors that may affect our future results and operations. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations and the market price of our common stock. Moreover, new risks will emerge from time to time. It is not possible for our management to predict all risks.

On February 25, 2024, we entered into an Agreement and Plan of Merger, or the Merger Agreement, with Atlas Neon Parent, Inc., or Parent, and Atlas Neon Merger Sub, Inc., a wholly-owned subsidiary of Parent, or Merger Sub. The Merger Agreement provides for, among other things, (i) the acquisition of the Company by Parent through a cash tender offer, or the Offer, by Merger Sub for each issued and outstanding share of our common stock for $1.55 per share, or the Offer Price, and (ii) the merger of Merger Sub with and into the Company, or the Merger, with the Company surviving the Merger. The Merger Agreement, the Offer and the Merger are described in more detail under "Pending Transactions Contemplated by the Merger Agreement" in Part I, Item 1 of this Annual Report.

If the Merger is effected, our common stock will be delisted from The Nasdaq Global Select Market and we will be privately held. During the pendency of the Merger, we may be subject to certain risks and uncertainties as more fully described below under the heading "Risks Related to the Offer and the Merger." If the Merger is not consummated for any reason, we will remain subject to the other risks and uncertainties described below.

Risks Related to the Offer and the Merger

The Offer and the Merger are subject to a number of conditions beyond our control. Failure to complete the Offer and the Merger within the expected time frame, or at all, could have a material adverse effect on our business, operating results, financial condition and our stock price.

The Offer and the Merger are subject to a number of conditions beyond our control, including: (i) that the number of shares of our common stock validly tendered and not validly withdrawn, represents at least a majority of our common stock then outstanding owned by the Unaffiliated Stockholders as of the expiration of the Offer; (ii) the accuracy of our representations and warranties contained in the Merger Agreement (subject to certain exceptions and qualifications described in the Merger Agreement and except, generally, for any inaccuracies that have not had a Company Material Adverse Effect (as defined in the Merger Agreement)); (iii) our performance in all material respects of its obligations under the Merger Agreement and (iv) the other conditions set forth in Exhibit A to the Merger Agreement. The obligations of Parent and Merger Sub to consummate the Offer and the Merger under the Merger Agreement are not subject to a financing condition.

We cannot predict whether or when the conditions to the Offer will be satisfied. If one or more of the conditions are not satisfied, and as a result, we do not complete the Offer and the Merger, we would remain liable for significant transaction costs, and the focus of our management would have been diverted from advancing our three key development opportunities, in each case without realizing any benefits of the Offer and the Merger. Any disruptions to our business resulting from the announcement and pendency of the Offer and the Merger, including any adverse changes in our relationships with our business partners, suppliers and employees, could continue or accelerate in the event that we fail to consummate the Offer and the Merger.

Our stock price may also fluctuate significantly based on announcements by Parent, other third parties, or us regarding the Offer and the Merger or based on market perceptions of the likelihood of the satisfaction of the Minimum Tender Condition (as defined in the Merger Agreement) or other conditions to the consummation of the Offer and the Merger outside of our control, such as a governmental entity enacting a legal restraint or prohibition that that prevents or prohibits the Offer or the Merger. Such announcements may lead to perceptions in the market that the Offer and the Merger may not be completed, which could cause our stock price to fluctuate or decline.

If we do not consummate the Offer and the Merger, our stock price may decline significantly from the current market price, which may reflect a market assumption that the Offer and the Merger will be consummated.

The occurrence of any of these events could have a material adverse effect on our business, operating results and financial condition and could cause a decline in our stock price.

The Merger Agreement contains provisions that could discourage a potential competing acquirer.

The Merger Agreement provides that, upon the terms and subject to the conditions thereof, NGM and its representatives cannot directly or indirectly solicit, initiate or knowingly encourage or knowingly facilitate discussions with third parties regarding other proposals to acquire or combine with NGM, and we are subject to restrictions on our ability to respond to any such proposal. In the event that we receive an acquisition proposal from a third party, we must notify Parent of such proposal and negotiate in good faith with Parent prior to terminating the Merger Agreement or effecting a change in the recommendation of our Board and the Special Committee of the Board to our stockholders with respect to the Offer and Merger. The Merger Agreement also contains certain termination rights for Parent and us and further provides that, upon termination of the Merger Agreement under specified circumstances, including certain terminations in connection with an alternative business combination transaction as permitted by the terms of the Merger Agreement, we will be required to pay Parent a termination fee of $2.0 million. These provisions could discourage a potential third-party acquirer that might have an interest in acquiring all or a significant portion of our common stock from considering or proposing that acquisition, even if it were prepared to pay consideration with a higher per share cash or market value than the Offer Price proposed to be received or realized in the transaction. These provisions also might result in a potential third-party acquirer proposing to pay a lower price to our stockholders than it might otherwise have proposed to pay due to the added expense of the termination fee that may become payable in certain circumstances. If the Merger Agreement is terminated and we determine to seek another business combination, we may not be able to negotiate a transaction with another party on terms comparable to, or better than, the terms of the Offer and Merger.

While the Offer and the Merger are pending, we are subject to business uncertainties and contractual restrictions that limit our ability to pursue financing or BD Arrangements and could disrupt our business, and the Offer and the Merger may impair our ability to attract and retain qualified employees or retain and maintain relationships with our suppliers and other business partners.

Whether or not the Offer and the Merger are consummated, the Offer and the Merger may disrupt our current plans and operations, which could have an adverse effect on our business and financial condition. The pendency of the Offer and the Merger will also divert much of management's attention and our resources from addressing ongoing financing needs and may divert management's attention and resources from our ongoing business and operations and our employees. In addition, the pending Offer and the Merger, as well as the related prior public announcement by The Column Group, LP of its intent to explore and evaluate a potential acquisition of the Company, makes it more difficult to retain qualified employees while the Offer and the Merger are pending or in the event that we are unable to consummate the Offer or the Merger within the expected time frames or at all. If key personnel depart because of such uncertainties, our business and results of operations may be adversely affected.

In addition, pending consummation of the Offer and the Merger, the Merger Agreement generally requires us to operate in the ordinary course of business consistent with past practice and restricts us from taking certain actions with respect to our business and financial affairs without Parent's consent. Such restrictions will be in place until either the Offer and the Merger are consummated or the Merger Agreement is terminated. These restrictions could restrict our ability to pursue or prevent us from pursuing attractive business or fundraising opportunities (if any) that arise prior to the consummation of the Offer and the Merger. For example, our ability to raise additional capital through the issuance of equity securities, incur indebtedness or pursue collaboration, out-licensing, partnership or other business development arrangements, or BD Arrangements, are generally restricted without Parent's consent during the pendency of the Offer and the Merger. For these and other reasons, the pendency of the Offer and the Merger could adversely affect our business, operating results and financial condition.

As a clinical stage biotechnology company, our operations consume substantial amounts of cash, and we need significant additional capital to finance our operations and pursue our strategy. During the pendency of the Merger, restrictions on our ability to deploy our cash resources or raise additional cash could impede the progress of our clinical programs. These restrictions will remain in place until the consummation or earlier termination of the Merger Agreement. As a result, we may be subject to these restrictions until June 15, 2024, which is the date after which we or Parent may terminate the Merger Agreement if the Merger has not already occurred, or later, should we and the Parent choose not to terminate the Merger Agreement at such time. In addition, if the Merger is not consummated, we may face increased difficulties raising capital and may need to significantly delay, scale back or

discontinue development of, or abandon some or all of, our product candidates, or scale back or discontinue our discovery research efforts.

Stockholder litigation could prevent or delay the consummation of the Offer and the Merger or otherwise negatively impact our business, operating results and financial condition.

We may incur additional costs in connection with the defense or settlement of any future stockholder litigation in connection with the Offer and the Merger. Any such future litigation may adversely affect our ability to complete the Offer and the Merger. We could incur significant costs in connection with any such litigation, including costs associated with the indemnification of our directors and officers. Furthermore, one of the conditions to the consummation of the Offer and the Merger is the Legal Restraints condition (as defined in the Merger Agreement), such as, for example, if there is a legal prohibition imposed by a governmental entity preventing or prohibiting the consummation of the Merger then in effect. Consequently, if a plaintiff were to secure injunctive or other relief prohibiting, delaying or otherwise adversely affecting our ability to complete the consummation of the Offer and the Merger, then such injunctive or other relief may prevent the consummation of the Offer or the Merger within the expected time frames or at all.

We may become involved in securities class action litigation due to the Offer and the Merger that could divert management's attention and harm our business, and adversely affect our ability to consummate the Offer and the Merger within the expected time frame or at all.

In the past, securities class action litigation has often followed certain significant business transactions, such as the sale of a company or announcement of any other strategic transaction, or the announcement of negative events, such as negative results from clinical trials. These events may also result in investigations by the SEC. We may be subject to such litigation or investigation even if no wrongdoing has occurred. Litigation and investigations are usually expensive and divert management's attention and resources, which could adversely affect our business and cash resources and our ability to consummate the Offer and the Merger within the expected time frame or at all.

Our executive officers and directors may have interests in the Offer and the Merger that are different from, or in addition to, those of our stockholders generally.

Our executive officers and directors may have interests in the Offer and the Merger that are different from, or are in addition to, those of our stockholders generally, including the acceleration of equity awards in connection with the Merger and potential severance payments. Such interests of our directors and executive officers are set forth in further detail in the Schedule 14D-9 filed by NGM with the SEC on March 8, 2024.

In particular, David V. Goeddel, Ph.D. and William J. Rieflin entered into the Rollover Agreement (as defined in the Merger Agreement) on the date of the Merger Agreement, and David J. Woodhouse, Ph.D. entered into a joinder to the Rollover Agreement on March 6, 2024. Dr. Goeddel is a Managing Partner of The Column Group and our lead independent director. Mr. Rieflin is the Non-executive Chairman of our board of directors. Dr. Woodhouse is our Chief Executive Officer and a member of our board of directors. In addition, Roger M. Perlmutter, M.D., Ph.D., a member of our board of directors, is a Science Partner with The Column Group. The interests of Dr. Goeddel, Dr. Perlmutter, Mr. Rieflin and Dr. Woodhouse may not coincide with the interests of our other stockholders, particularly as it relates to The Column Group, the Offer and the Merger.

We have incurred, and will continue to incur, direct and indirect costs as a result of the Offer and the Merger.

We have incurred, and will continue to incur, significant costs and expenses, including fees for professional services and other transaction costs, in connection with the Offer and the Merger, including costs that we may not currently expect. We must pay substantially all of these costs and expenses whether or not the transaction is completed. If the Merger Agreement is terminated under specified circumstances, including certain terminations in connection with a Superior Company Proposal transaction (as defined in the Merger Agreement), we will be required to pay to Parent a termination fee equal to $2.0 million.

Risks Related to Our Financial Condition and Capital Needs

We have incurred net losses every year since our inception and have no meaningful source of revenue. We expect to continue to incur significant operating losses and may never become profitable.

We have no products approved for commercial sale and have not generated any revenue from product sales to date. As a result, we are not profitable and have incurred losses in each year since commencing

operations. Our net losses were $142.4 million, $162.7 million and $120.3 million for the years ended December 31, 2023, 2022 and 2021, respectively. As of December 31, 2023, we had an accumulated deficit of $724.0 million.

We expect to continue to incur significant research and development, or R&D, and other expenses related to our ongoing operations for the foreseeable future, particularly to fund R&D of, and, if warranted, to seek regulatory approvals for, our product candidates. We incurred substantial net operating losses in 2023 and expect to continue to incur significant operating losses in 2024 and over the next several years as our research, development, manufacturing, preclinical studies, clinical trial and related activities continue. We expect our accumulated deficit will also increase in future periods. The size of our future net losses will depend, in part, on the amount of our expenses and our ability to generate revenue. In this regard, we will receive minimal funding from Merck Sharp & Dohme LLC, or Merck, through the first half of 2024 under the amended and restated research collaboration, product development and license agreement we entered into with Merck on June 30, 2021, or the Amended Collaboration Agreement, and we do not expect any funding thereafter from Merck. Accordingly, the Amended Collaboration Agreement is no longer a source of any meaningful revenue for us and we otherwise have no alternative sources of revenue in place.

Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

In addition, we will not be able to generate product revenue unless and until one of our product candidates successfully completes clinical trials, receives regulatory approval and is successfully commercialized. As our most advanced product candidate within our key priorities for clinical development is only in Phase 2 development, we do not expect to receive product revenue from our product candidates for a number of years, if ever.

Our ability to generate any product revenue from our current or future product candidates also depends on a number of additional factors, including our ability or the ability of any potential future third-party partner to:

- successfully complete research and clinical development of current and future product candidates and obtain regulatory approval for those product candidates;
- establish and maintain supply and manufacturing relationships with third parties, and ensure adequate, scaled up and legally compliant manufacturing of bulk drug substances and drug products to maintain sufficient supply;
- launch and commercialize any product candidates for which marketing approval is obtained, if any, and, if launched independently by us without a partner, successfully establish a sales force and marketing and distribution infrastructure;
- demonstrate the necessary safety data (and, if accelerated approval is obtained, verify the clinical benefit) post-approval to ensure continued regulatory approval;
- obtain coverage and adequate product reimbursement from third-party payors, including government payors, for any approved products;
- achieve market acceptance for any approved products;
- establish, maintain, protect and enforce our intellectual property rights; and
- attract, hire and retain qualified personnel.

Because of the numerous risks and uncertainties associated with pharmaceutical product development, including that our product candidates may not advance through development or be approved for commercial sale, we are unable to predict if or when we will generate product revenue or achieve or maintain profitability.

Even if we successfully complete development and regulatory processes for any product candidates that we take forward, we anticipate incurring significant costs associated with launching and commercializing any approved products. If we fail to become profitable or do not sustain profitability on a continuing basis, we may be unable to continue our operations at planned levels and be forced to reduce or cease our operations.

We have minimal committed external funding for our development efforts and will need to rely on our own financial resources and our ability to raise additional capital in order to further our development efforts.

We do not have any committed external source of funds, other than pursuant to the Amended Collaboration Agreement with Merck. Under the Amended Collaboration Agreement, the research program term for certain minimal cardiovascular or metabolic-, or CVM-, related programs will continue through March 31, 2024, unless the parties mutually agree to extend the research program term through March 31, 2026, in which case Merck would provide up to a total of $20.0 million in R&D funding during the additional two years of the CVM program research

program term. We do not expect the research program term will be extended. We expect to receive minimal funding from Merck in the first half of 2024 and we do not expect any funding at all from Merck thereafter.

Other than our Amended Collaboration Agreement with Merck, we are not party to any agreements that could provide us with future revenue. Accordingly, we will need to devote a substantial amount of our own financial resources to our R&D programs. As a result, in order to advance our current and potential future product candidates through development and to regulatory approval and commercialization, we need to raise significant additional capital and/or we will need to enter into BD Arrangements to obtain funding or other resources for one or more of our wholly-owned programs. Neither may be possible and, as a result, we may need to significantly delay, scale back or discontinue development of or abandon some or all of our product candidates, or scale back or discontinue our discovery research efforts, any of which could have a material adverse effect on our business, operating results and prospects, or we may be required to cease operations altogether. For example, we will need to raise significant additional capital in order to conduct any potential registrational trial of aldafermin in primary sclerosing cholangitis, or PSC. In addition, clinical development of NGM707 beyond completing the Phase 1 Part 1b cohort, including initiating additional cohorts, which may include MSS CRC patients, will require us to obtain the additional capital necessary to conduct such development. Moreover, further development of certain of our product candidates, such as NGM438, NGM831, NGM621 and NGM313, is dependent on our ability to secure future BD Arrangements and, in the absence of such BD Arrangements, we are unlikely to advance development of such product candidates unless our portfolio prioritization changes and we are able to secure the additional capital necessary to fund such development.

We need significant additional capital to proceed with development and commercialization of our current and potential future product candidates and our other operations. We may not be able to access sufficient capital on acceptable terms, if at all, and, as a result, we may need to significantly delay, scale back or discontinue development of or abandon some or all of our product candidates, or scale back or discontinue our discovery research efforts, any of which could have a material adverse effect on our business, operating results and prospects, or we may be required to cease operations altogether.

Our operations have consumed substantial amounts of cash since inception, and we need substantial additional capital to finance our operations and pursue our strategy, both in the short and the long term, and the amount of funding we will need depends on many factors, including:

- the initiation, progress, timing, delays, costs and results of preclinical studies and clinical trials for our current and future product candidates;
- the outcome, timing and cost of seeking and obtaining regulatory approvals from the United States Food and Drug Administration, or FDA, and comparable foreign health authorities, including the potential for such authorities to require that we perform more studies than those that we currently expect or to change their requirements on studies that had previously been agreed to;
- the cost to establish, maintain, expand, enforce and defend the scope of our intellectual property portfolio, including the amount and timing of any payments we may be required to make, or that we may receive, in connection with licensing, preparing, filing, prosecuting, defending and enforcing any patents or other intellectual property rights;
- the cost and timing of selecting, auditing and potentially validating a manufacturing site for later-stage clinical and commercial-scale manufacturing;
- the effect of products that may compete with our product candidates or other market developments;
- market acceptance of any approved product candidates, including product pricing and product reimbursement by third-party payors;
- whether Merck exercises its option to license any preclinical candidates from our CVM-related programs at the license option exercise point as specified in the Amended Collaboration Agreement for each such candidate, which we do not expect Merck to do;
- whether Merck terminates the research program term of the collaboration under pre-specified circumstances set forth in the Amended Collaboration Agreement or terminates any future licensed program, such as Merck's decision to terminate its license for NGM313 and its related compounds;
- the cost of potentially acquiring, licensing or investing in additional businesses, products, product candidates and technologies; and
- the cost of establishing sales, marketing and distribution capabilities for any of our product candidates for which we may receive regulatory approval and that we determine to commercialize ourselves or in collaboration with partners.

At December 31, 2023, we had $144.2 million in cash, cash equivalents and short-term marketable securities. We believe that our existing cash, cash equivalents and short-term marketable securities will be sufficient to fund our operations for at least one year from the date this Annual Report is filed. We have based these estimates on plans and assumptions that may prove to be insufficient or inaccurate (for example, with respect to anticipated costs, timing or success of certain activities), and we could utilize our available capital resources sooner than we currently expect. These estimates do not include entering into BD Arrangements or receiving funds through debt or equity financing activities and, as a result, unless we significantly lower our use of cash, we may no longer have sufficient cash, cash equivalents and short-term marketable securities to fund our operations for more than one year at the end of future reporting periods. In addition, our forecast of the time period 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 as a result of a number of factors, including the factors discussed elsewhere in this “Risk Factors” section.

Additionally, in July 2022, we entered into an operating lease agreement, or the 2024 Lease Agreement, for our existing corporate office and laboratory space at 333 Oyster Point Boulevard, South San Francisco, California. The initial term of the 2024 Lease Agreement commenced on January 1, 2024 and expires on December 31, 2033. We do not expect to fully occupy our existing space for the foreseeable future, which could negatively impact our financial results given the fixed costs associated with the lease.

On June 7, 2023, we entered into Amendment No. 1, or the Amendment, to the Open Market Sales Agreement℠, or the Sales Agreement, with Jefferies LLC, or Jefferies, and we refer to the Sales Agreement as amended as the Amended Sales Agreement. In connection with the Amendment, we filed a new shelf registration statement on Form S-3 which the SEC declared effective on August 4, 2023. The Amended Sales Agreement provides for the issuance and sales of shares of our common stock having an aggregate offering price of up to $100.0 million through or to Jefferies.

We plan to finance our future cash needs through public or private equity or debt offerings, including under the Amended Sales Agreement, BD Arrangements or a combination of these potential financing sources. Additional capital may not be available in sufficient amounts, on reasonable terms or when we need it, if at all. The global economy, including credit and financial markets, has experienced extreme volatility and disruptions, including, among other things, severely diminished liquidity and credit availability, declines in economic growth, supply chain shortages and disruptions, increases in inflation rates, elevated interest rates and uncertainty about economic stability. Increased inflation may result in increased operating costs (including labor costs) and may affect our operating budgets. In addition, the U.S. Federal Reserve has raised, and may further raise, interest rates in response to concerns about inflation. Elevated interest rates, especially if coupled with reduced government spending and volatility in financial markets, may further increase economic uncertainty and heighten these risks. Additionally, public health crises and ongoing global geopolitical conflicts have created extreme volatility in the global capital markets and are expected to have further global economic consequences, including disruptions of the global supply chain and energy markets.

Moreover, the closures of Silicon Valley Bank, or SVB, and other banks in early 2023 have resulted in broader financial institution liquidity risk and concerns. Although we incurred no losses as a result of the closure of SVB or other banks, future adverse developments with respect to specific financial institutions or the broader financial services industry may lead to market-wide liquidity shortages that could materially harm our business and financial condition. In this regard, we continue to maintain our cash at SVB and other banks, often in balances that exceed the current FDIC insurance limits, and the failure of any bank in which we deposit our funds could reduce the amount of cash we have available for our operations or delay our ability to access such funds. Any such failure may increase the possibility of a sustained deterioration of financial market liquidity, or illiquidity at clearing, cash management and/or custodial financial institutions. In the event we have a commercial relationship with a bank that has failed or is otherwise distressed, we may experience delays or other issues in meeting our financial obligations. If other banks and financial institutions fail or become insolvent in the future in response to financial conditions affecting the banking system and financial markets, our ability to access our cash, cash equivalents and investments, including transferring funds, making payments or receiving funds may be threatened and our ability to raise additional capital could be substantially impaired, any of which could materially and adversely affect our business and financial condition. In any event, if the financial market disruptions and economic slowdown deepen or persist, we may not be able to access additional capital on favorable terms, or at all, which could negatively affect our financial condition and our ability to pursue our business strategy.

If adequate funds are not available from public or private equity or debt offerings on acceptable terms, in order to continue the development of our product candidates we may need to:

- seek strategic alliances for R&D programs when we otherwise would not, at an earlier stage than we would otherwise desire or on terms less favorable than might otherwise be available; or
- enter into BD Arrangements that could require us to relinquish, or license, on potentially unfavorable terms, our rights to intellectual property, product candidates or products that we otherwise would develop or seek to commercialize ourselves.

In this regard, we will need to raise significant additional capital in order to conduct any potential registrational trial of aldafermin in PSC. In addition, clinical development of NGM707 beyond completing the Phase 1 Part 1b cohort evaluating NGM707 in combination with pembrolizumab, including initiating additional cohorts, will require us to obtain the additional capital necessary to conduct such development. There is no guarantee that we will be able to raise sufficient additional capital in order to progress these key priorities in the event the Offer and the Merger are not consummated, in which case, our business, operating results and prospects will be materially and adversely affected, or we may be required to cease operations altogether.

Moreover, due to the need to conserve capital and prioritize focused execution, we are seeking BD Arrangements with third-party partners with sufficient resources and relevant domain expertise in order to further the clinical development, if any, of NGM438, NGM831, NGM621 and NGM313. Further development of these programs is dependent on our ability to secure potential future BD Arrangements. However, we may not be able to enter into such BD Arrangements on acceptable terms, if at all. We face significant competition in seeking appropriate partners. Whether we would reach a definitive agreement for a BD Arrangement will depend, among other things, upon the potential partner's evaluation of the subject product candidate and its market opportunity, our assessment of the partner's resources and expertise and the terms and conditions of the potential BD Arrangement. In the absence of such BD Arrangements for these programs, we are unlikely to be able to advance their development unless our portfolio prioritization changes and we are able to secure the additional capital necessary to fund such development. For more information, see the risk factor titled "*While the Offer and the Merger are pending, we are subject to business uncertainties and contractual restrictions that limit our ability to pursue financing or BD Arrangements and could disrupt our business, and the Offer and the Merger may impair our ability to attract and retain qualified employees or retain and maintain relationships with our suppliers and other business partners*."

We are also restricted under our existing Amended Collaboration Agreement with Merck, and may be restricted under future BD Arrangements, from entering into additional agreements on certain terms with potential partners. For example, under the current terms of the Amended Collaboration Agreement, we may not directly or indirectly research, develop, manufacture or commercialize, except pursuant to the Amended Collaboration Agreement, any medicine or product candidate that modulates a target then subject to the collaboration with specified activity. In addition, under the Amended Collaboration Agreement, we are prohibited from, directly or indirectly, researching, developing or commercializing any product for the treatment of heart failure with preserved ejection fraction during the research program term for the CVM-related programs. We also may be required to pay a low single-digit royalty on sales of certain product candidates that received funding from Merck and, if we decide, during a specified time period, to engage in partnering, licensing or asset sale negotiations regarding certain of such product candidates, we are obligated to notify Merck, provide Merck with certain information and engage in good faith, non-exclusive negotiations with respect to such product candidates. Such obligations may hamper our ability to successfully enter into BD Arrangements for such programs with parties other than Merck.

We may not be able to raise adequate additional capital or negotiate potential future BD Arrangements on a timely basis, on acceptable terms or at all. If we are unable to do so, we may need to significantly delay, scale back or discontinue development of or abandon some or all of our product candidates, or scale back or discontinue our discovery research efforts, any of which could have a material adverse effect on our business, operating results and prospects, or we may be required to cease operations altogether.

Raising additional capital may cause dilution to our existing stockholders, lead to restrictions on our operations or require us to relinquish rights to our product candidates or intellectual property.

If we raise additional funds by issuing equity securities, our stockholders may experience dilution. Debt financing, if available, may involve restrictive covenants. Any debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders. Our ability to raise capital may be adversely impacted by the trading prices of our common stock given our stock price performance over the past year. Furthermore, any securities that we may issue may have rights senior to those of our common stock and could contain covenants or protective rights that would lead to restrictions on our operations and potentially impair our competitiveness, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business.

Risks Related to Our Dependence on Third Parties

We expect to depend in the future on BD Arrangements with third-party partners for the development and commercialization of our product candidates and for revenue. If we are unable to secure those BD Arrangements on beneficial terms, if at all, or if any such future arrangements are not successful, we may not be able to capitalize on the market potential of our product candidates or continue their development.

Pursuing BD arrangements has been and is expected to continue to be a key component of our strategy, and we are seeking BD Arrangements with third-party partners to progress, in whole or in part, the development of one or more of our product candidates. While we will consider BD Arrangements to advance development of our programs, the further development of certain programs, including NGM438, NGM831, NGM621 and NGM313, is dependent on our ability to secure potential future BD Arrangements for these programs. Due to the need to conserve capital and prioritize focused execution and unless our portfolio prioritization changes, if we are unable to secure BD Arrangements for these programs on beneficial terms, if at all, we are unlikely to be able to advance their development unless our portfolio prioritization changes and we are able to secure the additional capital necessary to fund such development. We may discontinue or abandon any or all of our programs altogether, in which case we will not realize any return on our investments in these programs. Even if we are successful in entering into any BD Arrangements with third-party partners for our programs, we will likely have limited control over the amount and timing of resources that our partners dedicate to the development or commercialization of the applicable product candidates. Our ability to generate revenue from any such arrangement will depend on the specific financial terms we reach with any partner, as well as each of our partners' abilities to successfully perform the functions assigned to them in such arrangement towards developing, seeking regulatory approval for and commercializing our product candidates.

BD Arrangements involving our product candidates pose risks to us, including the following:

- Partners have significant discretion in determining the efforts and resources that they will apply to these arrangements. For example, under the terms of the collaboration with Merck, if Merck exercises its option to acquire an exclusive license for any CVM-related preclinical candidate that remains within the scope of the collaboration, our ability to influence the resources Merck devotes to such candidate are substantially reduced until such time, if any, that we exercise our right to participate in a cost and profit share arrangement. Even after any exercise of the right to participate in a cost and profit share arrangement, our ability to influence Merck would be limited.
- Partners might opt not to pursue development and commercialization of our product candidates or not to continue or renew development or commercialization programs based on clinical trial results, changes in the partner's strategic focus or available funding or external factors, such as an acquisition that diverts resources or creates competing priorities.
- Partners may delay clinical trials, provide insufficient funding for a clinical trial program, request the suspension or termination of a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing.
- Partners could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the partners believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours.
- A partner with marketing and distribution rights might not commit sufficient resources to the marketing and distribution of our product candidates.
- Partners might not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation.
- Disputes may arise between the partners and us that result in the delay or termination of the research, development or commercialization of our product candidates or that result in costly litigation or arbitration that diverts management attention and resources.
- We may lose certain valuable rights under circumstances identified in our BD Arrangements, including if we undergo a change in control.
- BD Arrangements might be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates.
- BD Arrangements might not lead to development or commercialization of product candidates in the most efficient manner, or at all. If a present or future partner of ours were to be involved in a business

combination, the continued pursuit of and emphasis on our product development or commercialization program under such arrangement could be delayed, diminished or terminated.

With certain exceptions, we may not generally pursue potential future BD Arrangements for our programs during the pendency of the Offer and the Merger. For more information, see the risk factor titled "*While the Offer and the Merger are pending, we are subject to business uncertainties and contractual restrictions that limit our ability to pursue financing or BD Arrangements and could disrupt our business, and the Offer and the Merger may impair our ability to attract and retain qualified employees or retain and maintain relationships with our suppliers and other business partners*."

We may not be able to obtain and maintain the relationships with third parties that are necessary to develop, commercialize and manufacture some or all of our product candidates.

In addition to our dependence on any potential future partners, we expect to depend on other third parties, including contract research organizations, or CROs, clinical data management organizations, clinical investigators, contract manufacturing organizations/contract development and manufacturing organizations, or CMOs, and other third-party partners and service providers to support our discovery efforts, to formulate product candidates, to conduct our clinical trials and certain aspects of our research and preclinical studies, to manufacture clinical and commercial-scale quantities of our drug substances and drug products and to market, sell and distribute any products we successfully develop and for which we obtain regulatory approval. Any problems we experience with any of these third parties could delay our research efforts or the development, manufacturing or commercialization of our product candidates or any future products, which could harm our results of operations. For more information, see the risk factors titled *"We rely completely on CMOs for the manufacture of our product candidates, and we are subject to many manufacturing risks, any of which could substantially increase our costs and limit supply of our product candidates and any future products"* and *"We have no experience in sales, marketing and distribution and may have to enter into agreements with third parties to perform these functions, which could prevent us from successfully commercializing our product candidates."*

We cannot guarantee that we or, as applicable, any of our partners will be able to successfully negotiate agreements for, and maintain relationships with, third-party partners and service providers on favorable terms, if at all. If we or any of our partners are unable to obtain and maintain these agreements, we may not be able to clinically develop, formulate, manufacture, obtain regulatory approvals for or commercialize our product candidates, which will, in turn, adversely affect our business. If we or any of our partners need to enter into alternative arrangements, it would delay our product development and, if applicable, commercialization activities and such alternative arrangements may not be available on terms acceptable to us.

We expect to continue to expend substantial management time and effort to enter into relationships with third parties and, if we successfully enter into such relationships, to manage these relationships. In addition, our reliance on these third parties for R&D activities reduces our control over these activities but does not relieve us of our responsibilities. For example, we remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. However, we cannot control the amount or timing of resources these third parties will devote to our R&D programs, product candidates or potential product candidates, and we cannot guarantee that these parties will fulfill their obligations to us under these arrangements in a timely fashion, if at all. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical trials or other R&D activities in accordance with regulatory requirements, we will not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize any approved products. In addition, we base our expense accruals related to clinical trials on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and CROs that conduct and manage clinical trials on our behalf and, if their estimates are not accurate, it could negatively affect the accuracy of our financial statements.

Any agreements we have or may enter into with third-party partners and service providers may give rise to disputes regarding the rights and obligations of the parties. Disagreements could develop over contract interpretation, rights to ownership or use of intellectual property, the scope and direction of R&D, the approach for regulatory approvals or commercialization strategy. We are conducting research programs in a range of therapeutic areas, and our pursuit of these opportunities could result in conflicts with the other parties to these agreements that may be developing or selling pharmaceuticals or conducting other activities in these same therapeutic areas. Any disputes or commercial conflicts could lead to the termination of our agreements, delay progress of our product development programs, compromise our ability to renew agreements or obtain future agreements, lead to the loss of intellectual property rights, result in increased financial obligations for us or result in costly and time-consuming arbitration or litigation.

In addition, we are less knowledgeable about the reputation and quality of third-party contractors in countries outside of the United States where we conduct discovery research or preclinical and clinical development and manufacturing of our product candidates and, therefore, we may not choose the best parties for these relationships.

We rely completely on CMOs for the manufacture of our product candidates, and we are subject to many manufacturing risks, any of which could substantially increase our costs and limit supply of our product candidates and any future products.

We have limited process development capabilities and require the services of third-party CMOs to provide additional process development and manufacturing capabilities. We do not have, and we do not currently plan to acquire or develop, the facilities or capabilities to manufacture bulk drug substance or filled drug product for use in clinical trials or commercialization. As a result, we rely completely on CMOs, which entails risks to which we would not be subject if we manufactured product candidates or products ourselves, including risks related to reliance on third parties for availability of drug product to use in our clinical trials and for regulatory compliance and quality assurance with respect to such drug product, the possibility of breach of the manufacturing agreement by third parties because of factors beyond our control (including a failure to manufacture our product candidates or any products we may eventually commercialize in accordance with our specifications) and the possibility of termination or nonrenewal of agreements by third parties, based on their own business priorities, at a time that is costly or damaging to us.

Our product candidates are biologics, and the manufacture of biologic products is complex, highly regulated and requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. As a result, the manufacture of our product candidates is subject to many risks, including the following, some of which we have experienced:

- product loss or other negative consequences due to contamination, equipment failure, improper installation or operation of equipment, vendor or operator error, shortages of qualified personnel or improper delivery or storage conditions;
- difficulties with production costs and yields, quality control, product stability and quality assurance testing, including challenges related to bioanalytical method development and the qualification and implementation of those methods for release testing, which can delay availability of clinical trial materials;
- unexpected quality control results during stability program execution that may lead to shorter than anticipated shelf-life or drug expiry, resulting in the need to manufacture additional batches or present other risks to our clinical supply chain;
- the negative consequences of failure to comply with strictly enforced federal, state and foreign regulations;
- minor deviations from normal manufacturing processes, which have in the past and may in the future result in reduced production yields, product defects and other supply disruptions;
- the presence of microbial, viral or other contaminants discovered in our product candidates or in the manufacturing facilities in which they are made, which can necessitate closure of facilities for an extended time period to investigate and eliminate the contamination;
- the negative consequences of our CMOs' failure to qualify upon an audit by regulatory authorities, by us or by our collaborators;
- our CMOs' changing strategies and business priorities, including as a result of changes in ownership, which can affect the availability of facilities where we intend to manufacture our product candidates; and
- our CMOs or their manufacturing facilities being adversely affected by labor, raw material and component shortages, turnover of qualified staff or financial difficulties of their owners or operators, including as a result of the effects of financial market disruptions and economic slowdowns, or by disease outbreaks, epidemics, pandemics, natural disasters, power failures, local political unrest or other factors.

For example, a CMO that produces aldafermin drug product was inspected by the FDA in 2022 and 2023 and received multiple critical Form 483 observations on its aseptic fill/finish GMP operations. If the CMO fails to address the FDA's concerns to the agency's satisfaction through the CMO's corrective actions, the CMO may receive additional warnings and, if we were to seek regulatory approval of aldafermin, any product that is manufactured on an affected line may not be qualified by the FDA, which could delay regulatory timelines significantly. Furthermore, the CMO recently announced a pending acquisition by an independent pharmaceutical entity. The potential impact on our longer-term ability to manufacture with this CMO is unknown at this time and may

result in the need to perform a tech transfer to an alternate location, potentially increasing cost, delaying timelines and increasing program risks.

We, our CMOs, any future collaborators and their contract manufacturers could be subject to periodic unannounced inspections by the FDA, competent authorities of EU Member States or other comparable foreign regulatory authorities, to monitor and ensure compliance with cGMP. Despite our efforts to audit and verify regulatory compliance, one or more of our third-party manufacturing vendors may be found on regulatory inspection by the FDA, competent authorities of EU Member States or other comparable foreign regulatory authorities to be noncompliant with cGMP regulations. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including shutdown of the third-party vendor or invalidation of drug product lots or processes, fines, injunctions, civil penalties, delays, suspension, variation or withdrawal of approvals, license revocation, seizures or recalls of product candidates or drugs, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our products, if approved, and significantly harm our business, financial condition, results of operations and prospects.

We cannot ensure that issues relating to the manufacture or testing of our product candidates, such as those described above, will not occur or continue to occur in the future and if we or our CMOs experience any such issues there could be a shortage of drug substance or drug product for use in our clinical trials, which could delay clinical and regulatory timelines significantly and have an adverse effect on our business.

In addition, to date our product candidates have been manufactured by CMOs solely for preclinical studies and relatively small clinical trials. We intend to continue to use CMOs for these purposes, and for the supply of larger quantities that may be required to conduct accelerated or expanded early clinical trials or larger, later clinical trials and for commercialization if we advance any of our product candidates through regulatory approval and to commercialization. These manufacturers may not have sufficient manufacturing capacity and may not be able to scale up the production of drug substance or drug product in the quantities we need and at the level of quality required in a timely or effective manner, or at all. In particular, there is increased competition in the biotechnology industry for CMO manufacturing slots and other capabilities generally, which has had, and may continue to have, a negative impact on the availability of manufacturing capacity and therefore our ability to supply clinical trial materials for planned, ongoing or expanded clinical trials. Industry drug shortages, especially in prefilled syringe products such as GLP-1 agonists, may have a knock-on effect for clinical pipeline products we produce that use similar syringe components or utilize syringe fill/finish manufacturing lines.

The transfer of our small-scale manufacturing processes to CMOs for scale up and validation and any later scale up and validation of the manufacturing process in the CMOs' facilities to manufacture larger quantities, involve difficult and complex processes. We may not be successful in transferring our production system to a CMO, either because it is unable to implement the process successfully in its facilities or for other reasons. Later scale-up activities are also difficult and costly and entail risks such as process reproducibility, stability, consistency and other technical challenges. If we are unable to adequately validate or scale up the manufacturing processes for our product candidates, we would need to undertake a transfer to another third party and repeat the manufacturing validation process, which can be expensive and time-consuming and could delay the initiation or completion of our clinical trials.

Similarly, we or our CMOs may make changes to our product candidates' manufacturing processes at various points in product development for many reasons, including scaling up, facility fit, raw material or component availability, decreasing costs or timing of production, improving processing robustness and reliability, decreasing processing times or others. Such changes require further validation and may have unintended consequences, which could include causing our product candidates to perform differently when administered in clinical trials and affecting clinical trial results. In some circumstances, we may be required to perform comparability or other studies to demonstrate that the product used in earlier clinical trials or at earlier stages of a trial are comparable to the product we intend to use in later trials or later stages of an ongoing trial. These efforts are expensive and there is no assurance that they will be successful, which could impact our ability to continue or initiate clinical trials in a timely manner, or at all.

Any future adverse developments affecting manufacturing operations or the scale up or validation of manufacturing processes for our product candidates may result in shipment delays, lot failures, clinical trial delays or discontinuations, or, if we are commercializing products, inventory shortages, product withdrawals or recalls or other interruptions in supply. We may also have to record inventory write-offs and incur other charges and expenses for drug substance or drug product that fails to meet specifications or cannot be used before its expiration date. In addition, for out of specification materials, we may need to undertake costly remediation efforts or manufacture new batches at considerable cost and time delays or, in the longer run, seek more expensive manufacturing alternatives.

We also have a single source of supply for most of our product candidates, including the drug substances used in manufacturing them. Single sourcing minimizes our leverage with our CMOs, who may take advantage of our reliance on them to increase the pricing of their manufacturing services or require us to change our intended manufacturing plans based on their strategies and priorities. Single sourcing also imposes a risk of interruption or delays in supply in the event of manufacturing, quality or compliance difficulties and/or other difficulties in timely supplying us with materials. We have in the past, and we may in the future, experience supply-related delays that would adversely affect our ability to commence first-in-human testing of product candidates on our anticipated timing. Moreover, we do not currently have arrangements in place for redundant supply for drug substance or drug product. If one of our suppliers fails or refuses to supply us for any reason or we otherwise choose to engage a new supplier for one or more of our product candidates, including a second source supplier to mitigate the risks of single-source supply, it would take a significant amount of time and cost to implement and execute the necessary technology transfer to, and qualification of, a new supplier. The FDA or comparable foreign health authority must approve manufacturers of drug substance and drug product. If there are any delays in qualifying new suppliers or facilities or a new supplier is unable to meet the requirements of the FDA or comparable foreign health authority for approval, there could be a shortage of drug substance or drug product for use in clinical trials with respect to the affected product candidates which would adversely affect our ability to continue and complete clinical trials on our anticipated timing or at all.

Our product candidates use certain raw materials for their production, such as reagents that support cell growth, purification materials and testing and manufacturing supplies. Some of these materials only have a single supplier and are purchased as necessary without a long-term supply agreement in place. If our CMOs are required to obtain an alternative source of certain raw materials and components, additional testing, validation activities and regulatory approvals may be required, which may negatively impact manufacturing and other development timelines. For example, in 2021, one of our CMOs experienced shortages of the specific cell culture media used to manufacture one of our products due to global supply chain challenges and, while we have been successful in obtaining a replacement product, these types of substitutions may require additional and unplanned testing, qualification or validation activities. Any significant delay in the acquisition or decrease in the availability of these materials, components or other items, or failure to successfully qualify or validate alternative materials or components, could considerably delay the manufacture of our product candidates, which could adversely impact the timing or completion of any ongoing and planned trials or the timing of regulatory approvals, if any, of our product candidates.

In addition, our CMOs' facilities and operations have been adversely affected by labor, raw material and component shortages, high turnover of staff and difficulties in hiring trained and qualified replacement staff and the operations of our CMOs may be requisitioned, diverted or allocated by U.S. or foreign government orders such as under emergency, disaster and civil defense declarations in connection with the COVID-19 pandemic or otherwise.

Some of our product candidates are currently solely manufactured at a facility in Lithuania. Following Russia's invasion of Ukraine in February 2022, the response from the United States and its allies has included both significant sanctions and NATO's deployment of additional military forces to Eastern Europe, including to Lithuania. The ongoing conflict between Russia and Ukraine and the retaliatory measures taken or that may be taken by the United States, NATO and others, including significant sanctions against Russia, create global security concerns and regional instability, including due to the possibility of expanded regional or global conflict, and are likely to continue to have short-term and likely longer-term negative impacts on regional and global economies, any or all of which could disrupt our supply chain and adversely affect our ability to conduct ongoing and future clinical trials of our product candidates and our ability to raise capital on favorable terms.

Any further delays or interruptions in the supply of clinical trial material could delay the completion or initiation of our clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require us to commence new clinical trials at additional expense, terminate ongoing clinical trials or abandon planned clinical trials or expansions or accelerations of clinical trials completely.

We have no experience in sales, marketing and distribution and may have to enter into agreements with third parties to perform these functions, which could prevent us from successfully commercializing our product candidates.

We currently have no sales, marketing or distribution capabilities. To commercialize our product candidates, we must either develop our own sales, marketing and distribution capabilities or make arrangements with third parties to perform these services for us. If we decide to market any of our products on our own, we will have to commit significant resources to developing a marketing and sales force and supporting distribution capabilities. If we decide to enter into arrangements with third parties for performance of these services, we may find that they are not

available on terms acceptable to us, or at all. If we are not able to establish and maintain successful arrangements with third parties or build our own sales and marketing infrastructure, we may not be able to commercialize our product candidates, which would adversely affect our business, operating results and prospects.

Risks Related to Our Business and Industry

Our product candidates must undergo rigorous clinical trials before seeking regulatory approvals, and clinical trials may be delayed, suspended or terminated at any time for many reasons, any of which could delay or prevent regulatory approval and, if approval is granted, commercialization of our product candidates.

All of our product candidates are subject to rigorous and extensive clinical trials before we can seek regulatory approval from the FDA and comparable foreign health authorities such as the European Commission. Clinical trials may be delayed, suspended or terminated at any time for reasons including but not limited to:

- ongoing discussions with the FDA or comparable foreign health authorities regarding the scope or design of our clinical trials, such as our discussions with the FDA regarding the design of the PSC registrational trial and whether we will be successful producing a toxicology package to support the potential initiation of a Phase 2 proof-of-concept trial of NGM120 in patients with hyperemesis gravidarum, or HG;
- delays in obtaining, or the inability to obtain, required approvals from institutional review boards and ethics committees or other governing entities at clinical trial sites selected for participation in our clinical trials;
- delays in patient enrollment and other key trial activities, including as a result of the significant competition for recruiting patients with cancer in clinical trials and difficulty recruiting pregnant women to participate in clinical trials of NGM120 in HG;
- delays in reaching agreement on acceptable terms with prospective CROs and the failure of CROs, testing laboratories and other third parties to satisfy their contractual duties to us or meet expected deadlines;
- deviations from the trial protocol by clinical trial sites and investigators, or failures to conduct the trial in accordance with regulatory requirements;
- lower than anticipated retention rates of participants in clinical trials, including patients dropping out due to side effects or disease progression;
- failure of enrolled patients to complete treatment or to return for post-treatment follow-up;
- for clinical trials in selected patient populations, delays in identification and auditing of central or other laboratories and the transfer and validation of assays or tests to be used to identify selected patients and test any patient samples;
- implementation of new, or changes to, guidance or interpretations from the FDA or comparable foreign health authorities with respect to approval pathways for product candidates we are pursuing, such as with respect to the proposed utilization of a primary endpoint composed of surrogate biomarkers with the goal of obtaining accelerated approval for aldafermin for the treatment of PSC;
- the need to repeat clinical trials as a result of inconclusive or negative results, poorly executed testing or changes in required endpoints;
- insufficient supply or deficient quality of drug substance, drug product or other clinical trial material necessary to conduct our clinical trials, as well as delays in the testing, validation, manufacturing and delivery to clinical trial sites of such material;
- withdrawal of clinical trial sites or investigators from our clinical trials for any reason, including as a result of changing standards of care or the ineligibility of a site to participate in our clinical trials;
- unfavorable FDA or comparable foreign health authority inspection or review of a clinical trial site or records of any clinical or preclinical investigation;
- drug-related adverse effects or tolerability issues experienced by participants in our clinical trials;
- changes in government regulations or administrative actions;
- lack of adequate funding to continue the clinical trials, particularly given our need to obtain additional capital in order to continue clinical development of NGM707 beyond completing the Phase 1 Part 1b cohort, including initiating additional cohorts, and to conduct a registrational trial of aldafermin in patients with PSC;
- our ability to hire and retain key R&D personnel; or
- the placement of a clinical hold on a trial by the FDA or comparable foreign health authorities.

We cannot guarantee that we will be able to successfully accomplish required regulatory and/or manufacturing activities or all of the other activities necessary to initiate and complete clinical trials in a timely fashion, if at all. As a result, our preclinical studies and clinical trials may be extended, delayed or terminated, and we may be unable to obtain regulatory approvals or successfully commercialize our products. For example, we may need to conduct additional toxicology studies not currently planned in order to produce a toxicology package to support the potential initiation of a Phase 2 proof-of-concept trial of NGM120 in patients with HG. We also have only limited experience in conducting late-stage clinical trials required to obtain regulatory approval. In any event, we do not know whether any of our clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all.

Our product development costs will increase if we experience delays in clinical testing. Significant clinical trial delays could also shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do, which would impair our ability to successfully commercialize our product candidates and may harm our business, results of operations and prospects. Our or our partners' inability to timely complete clinical development could result in additional costs to us or impair our ability to generate product revenue or development, regulatory, commercialization and sales milestone payments and royalties on product sales.

If clinical trials of our product candidates fail to produce positive results or to demonstrate safety and efficacy to the satisfaction of the FDA or comparable health authorities or sufficient to demonstrate differentiation from other approved therapies or therapies in development, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

Our product candidates are in early stages of development, with our most advanced product candidate within our key priorities for clinical development only in Phase 2 development. Before obtaining marketing approval from health authorities for the sale of our product candidates, we or our partners must conduct extensive preclinical studies and clinical trials to demonstrate the safety and efficacy of the product candidates in humans. Preclinical studies and clinical trials are expensive, take several years to complete and may not yield results that support further clinical development or product approvals. The design of a clinical trial can determine whether its results will support approval of a product, and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. Because we have limited experience designing clinical trials, we may be unable to design and execute a clinical trial to support regulatory approval.

In addition, there is a high failure rate for drugs and biologic products proceeding through clinical trials and failure can occur at any stage of testing. For example, despite the results of preclinical and Phase 1 studies of NGM621, our Phase 2 CATALINA clinical trial evaluating NGM621 in patients with geographic atrophy, or GA, secondary to advanced macular degeneration, or AMD, did not meet its primary endpoint. Similarly, our Phase 2b ALPINE 2/3 trial evaluating aldafermin in patients with nonalcoholic steatohepatitis liver fibrosis stage 2 or 3, or F2/F3 NASH, did not meet its primary endpoint and, as a result, we decided to suspend further development of aldafermin in patients with F2/F3 NASH, allowing for the reallocation of resources to advancing our other programs.

Moreover, if we or a future partner seek accelerated approval for one of our product candidates based on a surrogate endpoint, the FDA may not accept such endpoint, may require additional studies or analysis or may not approve our product candidate on an accelerated basis, or at all. For example, we are designing a potential registrational trial of aldafermin in PSC and continuing discussions with the FDA, including on the proposed utilization of a primary endpoint composed of surrogate biomarkers with the goal of obtaining accelerated approval. There is no guarantee that the FDA will accept our proposed primary endpoint, in which case we may abandon the development of aldafermin in PSC.

Further, we expect that certain of our current product candidates will, and future product candidates may, require chronic administration. The need for chronic administration increases the risk that participants in our clinical trials will fail to comply with our dosing regimens. If participants fail to comply, we may not be able to generate clinical data in our trials acceptable to the FDA or comparable foreign health authorities. The need for chronic administration also increases the risk that our clinical drug development programs may not uncover all possible adverse events that patients who take our products may eventually experience. The number of patients exposed to treatment with, and the average exposure time to, our product candidates in clinical development programs may be inadequate to detect rare adverse events or chance findings that may only be detected once our products are administered to more patients and for longer periods of time.

We may also not be successful in generating clinical data sufficient to differentiate our product candidates from other products in the same therapeutic area. If our competitors' products are, or are perceived to be, more

effective, more convenient, less costly or safer than our products, or we are unable to demonstrate differentiation in any of those factors, we may not be able to achieve a competitive position in the market. For more information, refer to the risk factor titled "*We face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than us."*

In addition, data obtained from preclinical and clinical activities are subject to varying interpretations, which may delay, limit or prevent regulatory approval. In any event, it is impossible to predict when or if any of our product candidates will prove safe and effective in humans or will receive regulatory approval. If we are unable to successfully discover, develop or enable our partners to develop drugs that regulatory authorities deem effective and safe in humans, we will not have a viable business.

Success in preclinical studies or earlier-stage clinical trials may not be indicative of results in future clinical trials.

To date, the data supporting our drug discovery and development programs are derived from laboratory and preclinical studies and earlier-stage clinical trials. Owing in part to the complexity of biological pathways, when used to treat human patients, our product candidates might not demonstrate the biochemical and pharmacological properties we anticipate based on laboratory studies or earlier-stage clinical trials, and they may interact with human biological systems or other drugs in unforeseen, ineffective or harmful ways. Success in preclinical studies and earlier-stage clinical trials does not ensure that later clinical trials will generate the same results or otherwise provide adequate data to demonstrate the effectiveness and safety of our product candidates. In this regard, the data supporting our drug discovery and development programs are derived from laboratory and preclinical studies, and future clinical trials in humans may show that one or more of our product candidates are not safe and effective, in which event we may need to abandon development of such product candidates. In fact, many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in preclinical studies and earlier-stage clinical trials. Preliminary data and interim results from clinical trials may not be predictive of final results. For example, despite the results of preclinical and Phase 1 studies of NGM621, our Phase 2 CATALINA clinical trial evaluating NGM621 in patients with GA secondary to AMD did not meet its primary endpoint. Similarly, in spite of the results we had obtained in our Phase 1 trials of aldafermin and in our first Phase 2 trial, in May 2021, we announced that our Phase 2b ALPINE 2/3 trial evaluating aldafermin in patients with F2/F3 NASH did not meet its primary endpoint. For more information, refer to the risk factor titled "*If clinical trials of our product candidates fail to produce positive results or to demonstrate safety and efficacy to the satisfaction of the FDA or comparable health authorities or sufficient to demonstrate differentiation from other approved therapies or therapies in development, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates."* There can be no assurance that any clinical testing of our product candidates will be successful or will otherwise be supportive of continued development and/or regulatory approvals of such product candidates.

In addition, some of our earlier-stage clinical trials involve small patient populations, sometimes at single sites, and the results of these clinical trials may be subject to substantial variability and may not be indicative of either future interim results or final results. As a general matter, there is also a substantial risk that Phase 3 trials with larger numbers of patients and/or longer durations of therapy will fail to replicate efficacy and safety results observed in earlier clinical trials.

Our product candidates may cause undesirable side effects or adverse events or have other properties or safety risks, which could delay or prevent continued clinical development or their regulatory approval or limit the commercial profile of any approved label.

Adverse events, undesirable side effects or similar safety issues caused by our product candidates could cause us or health authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign health authorities. Additional clinical trials may be required to further evaluate the safety profile of our product candidates. Patients in certain of our ongoing or planned clinical trials, particularly patients with cancer, often enter our trials with significant comorbidities or advanced life-threatening illness and/or are treated in the trial with our product candidate in combination with other medications, including, in cancer patients, chemotherapy or other approved cancer treatments. As a result, patients in our clinical trials can be expected to experience some adverse events, including death, or side effects that are not or may not be related to treatment with our product candidates. Nonetheless, the occurrence of adverse events or side effects, whether or not related to our product candidates, could impact the success of our clinical trials.

Patients experienced, and we reported, serious adverse events, or SAEs, in the treatment arms of completed trials of NGM313, NGM621 and aldafermin. We expect that patients in our clinical trials, including those that are sham- or placebo-controlled with some patients not receiving study drug, will continue to experience adverse events and SAEs and we will continue to monitor those SAEs for any signals of concern regarding the safety and tolerability of our product candidates. For example, cancer patients enrolled in our solid tumor oncology clinical trials suffer from advanced life-threatening illness and have experienced, and we expect will continue to experience, SAEs and other adverse events, which may or may not be drug-related. If patients in any of our clinical trials experience a high or unacceptable severity and prevalence of side effects, including particularly SAEs, it could affect patient recruitment or the ability of enrolled patients to complete their treatment in a clinical trial, it may result in a regulatory authority putting a clinical hold on the clinical trial or it may result in failure to obtain regulatory approval for our product candidates or product liability claims.

Our product candidates are protein or antibody therapeutics. Protein and antibody therapeutics can sometimes induce host immune responses that can cause the production of anti-drug antibodies, or ADAs. In some cases, ADAs have no effect. In other cases, ADAs may neutralize the effectiveness of the product candidate, can require that higher doses be used to obtain a therapeutic effect or can cross react with substances naturally occurring in a subject's body, which can cause unintended effects, including potential impacts on efficacy and adverse events. If we determine that ADAs are causing safety or efficacy concerns when using any of our product candidates, we may need to delay or halt clinical trials of our product candidates and the affected product candidates may never obtain regulatory approval. We cannot provide assurance that the detection of ADAs will not be higher than we have observed historically or that observed rates will not later be found to limit drug exposure or cause adverse safety events, or that the detection of ADAs will not otherwise result in the non-approvability of any of our product candidates.

Future results of our trials could reveal a high and unacceptable severity and prevalence of side effects, SAEs, ADAs, safety issues or other negative or otherwise unexpected characteristics. The occurrence of those issues could affect patient recruitment or the ability of enrolled patients to complete their treatment in a clinical trial, result in failure to obtain regulatory approval for our product candidates or product liability claims or impact market acceptance of our products. Any of these occurrences could materially and adversely affect our business, financial condition and prospects.

We may not successfully identify new product candidates to expand our development pipeline.

The success of our business over the longer term depends upon our ability to identify and validate new potential protein and antibody therapeutics. Research programs to identify new product candidates require substantial technical, financial and human resources, and our research methodology may not successfully identify medically relevant protein or antibody therapeutics to be developed as product candidates. In addition, our drug discovery efforts often identify and select novel, untested proteins in the particular disease indication we are pursuing, which we may fail to validate after further research work. Moreover, our research efforts may initially show promise in discovering potential new protein and antibody therapeutics yet fail to yield product candidates for clinical development for multiple reasons. For example, potential product candidates may, on further study, be shown to have inadequate efficacy, harmful side effects, suboptimal drug profiles or other characteristics suggesting that they are unlikely to be commercially viable products. Our inability to successfully identify additional new product candidates to advance into clinical trials could have a material adverse effect on our business, operating results and prospects.

We may fail to select or capitalize on the most scientifically, clinically and commercially promising or profitable product candidates.

We have limited technical, managerial and financial resources to determine which of our product candidates should proceed to initial clinical trials, later-stage clinical development and potential commercialization. We may make incorrect determinations in allocating resources among these product candidates. Our decisions to allocate our R&D, management and financial resources toward particular product candidates or therapeutic areas may not lead to the development of viable commercial products and may divert resources from better opportunities. For example, our pipeline programs in development include product candidates in solid tumor oncology, and we had previously been focusing the majority of our execution efforts and resources on these programs. Several of our early trials in solid tumor oncology did not show sufficiently promising results to support further investment at this time, and, as a result, we have redirected our focus to targeted oncology indications for NGM707 and for a new indication, HG, for NGM120. We have also redirected our clinical development efforts for aldafermin away from NASH to PSC. However, our new areas of focus may be unsuccessful and may never lead to the development of

viable commercial products. Similarly, our decisions to delay or terminate certain drug development programs to concentrate our resources elsewhere may be incorrect and could cause us to miss valuable opportunities.

We must attract and retain highly skilled employees in order to succeed. If we are not able to retain our current senior management team, or to continue to attract and retain qualified scientific, technical and business personnel, our business will suffer.

To succeed, we must recruit, retain, manage and motivate qualified clinical, scientific, technical and management personnel and we face significant competition for experienced personnel. If we do not succeed in attracting and retaining qualified personnel, particularly at the management level, it could adversely affect our ability to execute our business plan and harm our operating results. In 2023, we announced a restructuring of our workforce, reducing our existing headcount by approximately 33%, that our founder, Dr. Jin-Long Chen, resigned from the Board and his position as Chief Scientific Officer, that Siobhan Nolan Mangini was stepping down as Chief Financial Officer and President, and that Jean-Frédéric Viret, Ph.D. was appointed as our new Chief Financial Officer. These significant changes have caused additional attrition of employees and may cause further attrition of employees, including senior management, and negatively affect employee morale. Additionally, as we are operating our business with fewer employees, including fewer members of senior management, the loss of a significant number of our remaining employees or of any of our current executive officers could result in a significant loss in the knowledge and experience that we, as an organization, possess and could cause significant delays, or outright failure, in the development and further commercialization of our product candidates.

There is intense competition for qualified personnel, including management, in the technical fields in which we operate, and we may not be able to attract and retain qualified personnel necessary for the successful research, development and future commercialization, if any, of our product candidates. We recruit for talent in the biotechnology and pharmaceutical industry in the San Francisco Bay Area, which is one of the most competitive and highest cost labor markets in the United States and periodically experiences higher turnover rates than other industries.

Many of the other pharmaceutical companies that we compete against for qualified personnel have greater financial and other resources, different risk profiles and a longer history in the industry than we do. They also may provide more diverse opportunities and better chances for career advancement. Some of these characteristics may be more appealing to high-quality candidates than what we have to offer. See also the risk factor titled "*While the Offer and the Merger are pending, we are subject to business uncertainties and contractual restrictions that limit our ability to pursue financing or BD Arrangements and could disrupt our business, and the Offer and the Merger may impair our ability to attract and retain qualified employees or retain and maintain relationships with our suppliers and other business partners*." If we experience higher than expected employee attrition rates, it could have a negative impact on our productivity. If we are unable to attract and retain high-quality personnel, the rate and success with which we can discover and develop product candidates and our business will be limited.

We face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than us.

The biopharmaceutical industry is intensely competitive and subject to rapid and significant technological change. Our competitors include multinational pharmaceutical companies, specialized biotechnology companies and universities and other research institutions. A number of pharmaceutical and biotechnology companies are pursuing the development or marketing of pharmaceuticals that seek to treat the same diseases that we are pursuing with our most advanced product candidates. Some of these pharmaceuticals in development are active, or seek to be active, against the same targets that our product candidates are engineered to effect. It is probable that the number of companies seeking to develop products and therapies that compete with our product candidates will increase. Many of our competitors have substantially greater financial, technical, human and other resources than we do and may be better equipped to develop, manufacture and market technologically superior products. In addition, many of these competitors have significantly greater experience than we have in undertaking preclinical studies and human clinical trials of new pharmaceutical products and in obtaining regulatory approvals of human therapeutic products. Accordingly, our competitors may succeed in obtaining FDA approval and approval or marketing authorization from comparable health authorities such as the European Commission for superior products or for other products that would compete with our product candidates. Many of our competitors have established distribution channels and commercial infrastructure to support the commercialization of their products, whereas we have no such channel or capabilities. In addition, many competitors have greater name recognition and more extensive collaboration or partnering relationships. Smaller and earlier-stage companies may also prove to be significant competitors, particularly through collaboration or partnering arrangements with large, established companies.

Our competitors may obtain regulatory approval of their products more rapidly than us or may obtain patent protection or other intellectual property rights that limit our ability to develop or commercialize our product candidates. Our competitors may also develop drugs that are more effective, more convenient, more widely used and less costly or have a better safety profile than our products and these competitors may also be more successful than us in manufacturing and marketing their products. If we are unable to compete effectively against these companies, then we may not be able to commercialize our product candidates or achieve a competitive position in the market. These companies also compete with us in recruiting and retaining qualified scientific, management and commercial personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Although we believe there are no FDA- or European Commission-approved therapies that specifically target the signaling pathways that our current product candidates are designed to modulate or inhibit, there are numerous currently approved or otherwise widely used therapies for treating the same diseases or indications for which our product candidates may be useful. Some of these therapies act through mechanisms similar to our product candidates or are well-established therapies or products widely accepted by physicians, patients and third-party payors. Some of these drugs are branded and subject to patent protection, and others are available on a generic basis. Insurers and other third-party payors may also encourage the use of generic products or specific branded products. We expect that if our product candidates are approved, they will be priced at a significant premium over competitive generic products, including branded generic products. This may make it difficult for us to differentiate our products from currently approved therapies, which may adversely impact our business strategy. In addition, many companies are developing new therapeutics, and we cannot predict what the standard of care will be as our product candidates progress through clinical development. For more information regarding the competition that our most advanced product candidates face, or may face, see the discussion of specific competition for each product candidate in “Business-Our Pipeline” in this Annual Report.

Our product candidates may not achieve adequate market acceptance among physicians, patients, healthcare payors and others in the medical community necessary for commercial success.

Demonstrating the safety and efficacy of our product candidates and obtaining regulatory approvals will not guarantee future revenue. Even if our product candidates receive regulatory approval, they may not gain adequate market acceptance among physicians, patients, healthcare payors and others in the medical community. The degree of market acceptance of any of our approved product candidates will depend on a number of factors, including:

- the efficacy and safety profile of the product candidate as demonstrated in clinical trials;
- the timing of market introduction of the product candidate, as well as competitive products;
- the clinical indications for which the product candidate is approved;
- acceptance of the product candidate as a safe and effective treatment by physicians and patients;
- the actual and perceived advantages of the product candidate over alternative treatments, including any similar generic treatments;
- the viewpoints of influential physicians with respect to the product candidate;
- the inclusion or exclusion of the product candidate from treatment guidelines established by various physician groups;
- the cost of treatment relative to alternative treatments;
- our pricing and the availability of coverage and adequate reimbursement by third parties and government authorities as described in the risk factor titled “*Even if we obtain approval to market our products, these products may become subject to unfavorable pricing regulations, reimbursement practices from third-party payors or healthcare reform initiatives in the United States and abroad, which could harm our business*”;
- the relative convenience and ease of administration;
- the frequency and severity of adverse events;
- the effectiveness of sales and marketing efforts; and
- any unfavorable publicity relating to the product candidate.

For example, aldafermin is administered via a once-daily subcutaneous injection, which may negatively impact market acceptance of an approved aldafermin product, if any. In addition, refer to the risk factor titled *“Our product candidates may cause undesirable side effects or adverse events or have other properties or safety risks, which could delay or prevent continued clinical development or their regulatory approval or limit the commercial profile of any approved label*." If any product candidate is approved but does not achieve an adequate level of

acceptance by such parties, we may not generate or derive sufficient revenue from that product candidate and may not become or remain profitable.

Even if we obtain approval to market our products, these products may become subject to unfavorable pricing regulations, reimbursement practices from third-party payors or healthcare reform initiatives in the United States and abroad, which could harm our business.

The regulations that govern pricing and reimbursement for new drug products vary widely from country to country. In the United States, there has been increasing executive, legislative and enforcement interest with respect to drug pricing practices. There have been U.S. congressional inquiries, presidential executive orders and proposed and enacted legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs and reform government program reimbursement methodologies for drugs. We expect that the healthcare reform measures that have been adopted and may be adopted in the future in the United States may result in more rigorous coverage criteria and additional downward pressure on the price that we receive for any approved product and could seriously harm our future revenues. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our products.

In many regions outside of the United States, including the European Union, or EU, Japan and Canada, the pricing of prescription drugs is already controlled by the government and some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after regulatory approval for the product is granted. As a result, we might obtain marketing approval for a product in a particular country, but then be subject to price regulations that delay or limit our commercial launch of the product, possibly for lengthy time periods, which could negatively impact the revenue we generate from the sale of the product in that particular country.

In approving the sale price for a marketed drug, many countries outside of the United States implement health technology assessment, or HTA, procedures that use formal economic metrics such as cost effectiveness to determine prices, coverage and reimbursement of new therapies. These assessments are increasingly implemented in established and emerging markets and could require us to compile additional data comparing the cost-effectiveness of our products to other available therapies. Efforts to generate additional data for the HTA process could involve additional expenses which may substantially increase the cost of commercializing and marketing our products outside the United States. Regulatory agencies may also determine that the pricing for our products should be based on prices of other commercially available drugs for the same disease, rather than allowing us to market our products at a premium as new drugs. Adverse pricing limitations, either before or after initial approvals, may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain marketing approval. If we are unable to maintain favorable pricing status in EU member states or other countries that represent significant markets, our anticipated revenue from and growth prospects for our products from those regions could be negatively affected.

In many countries outside the United States, government-sponsored healthcare systems are the primary payors for drugs. With increasing budgetary constraints and/or difficulty in understanding the value of medicines, governments and payors in many countries are applying a variety of measures to exert downward price pressure and we expect that legislators, policy makers and healthcare insurance funds in the EU member states will continue to propose and implement cost cutting measures. These measures include mandatory price controls, price referencing, therapeutic-reference pricing, increases in mandates, incentives for generic substitution and biosimilar usage, government-mandated price cuts, limitations on coverage of target population and introduction of volume caps.

Our commercial success also depends on coverage and adequate reimbursement of our product candidates by third-party payors, which may be difficult or time-consuming to obtain, may be limited in scope and may not be obtained in all jurisdictions in which we may seek to market our products. Governments and private insurers closely examine medical products to determine whether they should be covered by reimbursement and, if so, the level of reimbursement that will apply. Government authorities and other third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular drugs. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for drug products. We cannot be sure that coverage and reimbursement will be available for any product that we or our partners commercialize and, if reimbursement is available, what the level of reimbursement will be. Coverage and reimbursement may impact the demand for, or the price of, any product

candidate for which we or our partners obtain regulatory approval. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we and our partners may not be able to successfully commercialize any product candidate for which marketing approval is obtained.

We cannot predict the likelihood, nature or extent of healthcare reform initiatives that may arise from future legislation or administrative action. 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.

Our international operations may expose us to business, regulatory, political, operational, financial, pricing and reimbursement risks associated with doing business outside of the United States.

Our business is subject to risks associated with conducting business internationally. Some of our suppliers and clinical trial sites are located outside of the United States. Furthermore, if we or any future partner succeeds in developing any of our product candidates, we intend to market them in the EU and other jurisdictions in addition to the United States. If approved, we or any future partner may hire sales representatives and conduct physician and patient association outreach activities outside of the United States. Doing business internationally involves a number of challenges and risks, including but not limited to:

- multiple, conflicting and changing laws and regulations, such as privacy and data protection regulations, tax laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- failure by us to obtain and maintain regulatory approvals for the use of our products in various countries;
- rejection or qualification of foreign clinical trial data by the competent authorities of other countries;
- delays or interruptions in the supply of clinical trial material resulting from any events affecting raw material or component supply or manufacturing capabilities abroad;
- additional potentially relevant third-party patent rights;
- complexities and difficulties in obtaining, maintaining, protecting and enforcing our intellectual property;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple payor reimbursement regimes, government payors or patient self-pay systems;
- limits on our ability to penetrate international markets;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of inflation and local and regional financial crises on demand and payment for our products and exposure to foreign currency exchange rate fluctuations;
- natural disasters, political, geopolitical and economic instability, including wars such as the conflict between Russia and Ukraine, terrorism and political unrest, disease outbreaks, epidemics and pandemics, boycotts, curtailment of trade and other business restrictions; and
- regulatory and compliance risks that relate to anti-corruption compliance and record-keeping that may fall within the purview of the U.S. Foreign Corrupt Practices Act, its accounting provisions or its anti-bribery provisions or provisions of anti-corruption or anti-bribery laws in other countries.

Any of these factors could harm our ongoing international clinical operations and supply chain, as well as any future international expansion and operations and, consequently, our business, financial condition, prospects and results of operations.

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

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we or our partner commercializes any resulting products. This risk is heightened in regard to the potential Phase 2 proof-of-concept study of NGM120 for the treatment of HG given the highly vulnerable potential patient population involved. Product liability claims may be brought against us by subjects enrolled in our clinical trials, patients, healthcare providers or others using, administering or selling our products. If we cannot successfully defend ourselves against claims that our product candidates or products that we may develop caused injuries, we could incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or products that we may develop;
- termination of clinical trial sites or entire trial programs;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards to trial subjects or patients;
- loss of revenue;
- diversion of management and scientific resources from our business operations; and
- the inability to commercialize any products that we may develop.

Our clinical trial liability insurance coverage may not adequately cover all liabilities that we may incur. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise. Our inability to obtain product liability insurance at an acceptable cost or to otherwise protect against potential product liability claims could prevent or delay the commercialization of any products or product candidates that we develop. We intend to expand our insurance coverage for products to include the sale of commercial products if we obtain marketing approval for our product candidates in development, but we may be unable to obtain commercially reasonable product liability insurance for any products approved for marketing. Large judgments have been awarded in class action lawsuits based on drugs that had unanticipated side effects. If we are sued for any injury caused by our products, product candidates or processes, our liability could exceed our product liability insurance coverage and our total assets. Claims against us, regardless of their merit or potential outcome, may also generate negative publicity or hurt our ability to obtain physician endorsement of our products or expand our business.

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

Healthcare providers, including physicians, and third-party payors will play a primary role in the recommendation and prescription of any product candidates for which we or our partner obtains marketing approval. Our arrangements with healthcare providers, third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we research, market, sell and distribute our products for which we or our partner obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations, include the following:

- the federal Anti-Kickback Statute prohibits persons from, among other things, knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, the referral of an individual for the furnishing or arranging for the furnishing, or the purchase, lease or order, or arranging for or recommending purchase, lease or order, of any good or service for which payment may be made under a federal healthcare program, such as Medicare and Medicaid;
- the federal False Claims Act, or FCA, imposes criminal and civil penalties, including through civil whistleblower or *qui tam* actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- the federal Health Insurance Portability and Accountability Act, or HIPAA, imposes criminal liability for knowingly and willfully executing a scheme to defraud any healthcare benefit program, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense or knowingly and willfully making false statements relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and its implementing regulations, or HITECH, also imposes obligations on certain covered entity healthcare providers, health plans and healthcare clearinghouses, and their business associates that perform certain services involving the use or disclosure of individually identifiable health information as well as their covered subcontractors, including mandatory contractual terms, with respect to safeguarding the privacy, security, processing and transmission of individually identifiable health information;

- the federal Physician Payments Sunshine Act, as amended, and its implementing regulations, requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the HHS information related to "payments or other transfers of value" made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), other health care professionals (such as physician assistants and nurse practitioners) and teaching hospitals, as well as information regarding ownership and investment interests held by physicians and their immediate family members; and
- analogous state and foreign laws and regulations, such as state and foreign anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state and foreign laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers; state and local laws requiring the registration of pharmaceutical sales representatives; state and foreign laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers, marketing expenditures or pricing; and state and foreign laws that govern the privacy and security and other processing of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, additional regulatory oversight, litigation, imprisonment, exclusion from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. If any of the physicians or other healthcare providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, that person or entity may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

Outside the United States, interactions between pharmaceutical companies and health care professionals are also governed by strict laws, such as national anti-bribery laws of EU member states, national sunshine rules, regulations, industry self-regulation codes of conduct and physicians' codes of professional conduct. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines or imprisonment.

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

Disease outbreaks, epidemics and pandemics in regions where we have clinical trial sites or other business operations could adversely affect our business, including by causing significant disruptions in our operations and/or in the operations of third-party manufacturers and CROs upon whom we rely. Disease outbreaks, epidemics and pandemics have negative impacts on our ability to initiate new clinical trial sites, to enroll new patients and to maintain existing patients who are participating in our clinical trials, which may include increased clinical trial costs, longer timelines and delay in our ability to obtain regulatory approvals of our product candidates, if at all. For example, our ability to attract additional clinical trial sites and principal investigators to conduct our clinical trials and to conduct the necessary clinical trial site initiation procedures was impacted by COVID-19 quarantines, shelter-in-place and similar restrictions imposed by federal, state and local governments. In addition, during the COVID-19 pandemic, we experienced, from time to time, a slower pace of clinical site initiation and clinical trial enrollment and a higher subject dropout rate than originally anticipated in certain of our clinical trials, which we believe may have been due to factors such as the vulnerability of our studied patient populations, site staff shortages, clinical trial site suspensions, reallocation of medical resources and the challenges of working remotely due to shelter-in-place and similar government orders and guidelines, among other factors.

General supply chain issues may be exacerbated during disease outbreaks, epidemics and pandemics and may also impact the ability of our clinical trial sites to obtain basic medical supplies used in our trials in a timely fashion, if at all. In addition, our CMOs' facilities and operations were adversely affected by labor, raw material and component shortages, high turnover of staff and difficulties in hiring trained and qualified replacement staff during the COVID-19 pandemic. These difficulties resulted in some delays in early development timelines and we could experience more significant disruptions to our supply chain and operations as a result of disease outbreaks, epidemics or pandemics in the future. If our CMOs are required to obtain an alternative source of certain raw

materials and components, for example, additional testing, validation activities and regulatory approvals may be required which can also have a negative impact on timelines. Any associated delays in the manufacturing and supply of drug substance and drug product for our clinical trials could adversely affect our ability to conduct ongoing and future clinical trials of our product candidates on our anticipated development timelines. Likewise, the operations of our third-party manufacturers may be requisitioned, diverted or allocated by U.S. or foreign government orders such as under emergency, disaster and civil defense declarations in connection with future disease outbreaks, epidemics or pandemics. For example, early in the COVID-19 pandemic, our aldafermin drug product CMO advised us that it could be required under orders of the U.S. government to allocate manufacturing capacity to the manufacture or distribution of COVID-19 vaccines. If any of our CMOs or raw materials or components suppliers become subject to acts or orders of U.S. or foreign government entities to allocate or prioritize manufacturing capacity, raw materials or components to the manufacture or distribution of vaccines or medical supplies needed to test or treat patients in a disease outbreak, epidemic or pandemic, this could delay our clinical trials, perhaps substantially, which could materially and adversely affect our business.

To the extent the effects of any future disease outbreak, epidemic or pandemic adversely affect our business and results of operations, it also may have the effect of heightening many of the other risks and uncertainties described elsewhere in this "Risk Factors" section.

Risks Related to Regulatory Approvals

The regulatory approval processes of the FDA and comparable foreign health authorities are lengthy and inherently unpredictable. Our inability to obtain regulatory approval for our product candidates would substantially harm our business.

Currently, none of our product candidates has received regulatory approval and we do not expect our product candidates to be commercially available for several years, if at all. The time required to obtain approval from the FDA and comparable foreign health authorities is unpredictable but typically takes many years following the commencement of preclinical studies and clinical trials and depends upon numerous factors, including the substantial discretion of the health authorities. In addition, approval policies, regulations or the type and amount of preclinical and clinical data necessary to gain approval may change during the course of a product candidate's development and may vary among jurisdictions. It is possible that none of our existing or future product candidates will ever obtain regulatory approval.

Our product candidates could fail to receive regulatory approval from the FDA or a comparable foreign health authority for many reasons, including:

- disagreement with the design or implementation of our clinical trials;
- failure to demonstrate that a product candidate is safe and effective for its proposed indication;
- failure of results of clinical trials to meet the level of statistical significance required for approval;
- failure to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- disagreement with our interpretation of data from preclinical studies or clinical trials;
- the insufficiency of data collected from clinical trials to support the submission and filing of a biologics license application, or BLA, or other submission or to obtain regulatory approval;
- failure to obtain approval of the manufacturing processes or facilities of third-party manufacturers with whom we contract for clinical and commercial supplies;
- unfavorable quality review or audit/inspection findings; or
- changes in the approval policies or regulations that render our preclinical and clinical data insufficient for approval.

The FDA or a comparable foreign health authority may require more information, including additional preclinical or clinical data, to support approval, which may delay or prevent approval and commercialization, or we may decide to abandon the development program for other reasons. If we obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may grant accelerated approval or conditional marketing authorization based on a surrogate endpoint and contingent on the successful outcome of costly post-marketing confirmatory clinical trials or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. In this regard, we are designing a potential registrational trial of aldafermin in PSC and continuing discussions with the FDA, including on the proposed utilization of a primary endpoint composed of

surrogate biomarkers with the goal of obtaining accelerated approval. There is no guarantee that the FDA will accept our proposed primary endpoint, in which case, we may abandon the development of aldafermin in PSC.

If we or a future partner seek accelerated approval for one of our product candidates, such as aldafermin in PSC, based on a surrogate endpoint, the FDA may not accept such endpoint, may require additional studies or analysis or may not approve our product candidate on an accelerated basis, or at all. In addition, if full approval is granted for another product in the same indication for which we are seeking accelerated approval for one of our product candidates, the accelerated approval pathway may no longer be available to us or a future partner for our product candidate.

Our failure to obtain health authority approval in foreign jurisdictions would prevent us from marketing our product candidates outside the United States.

If we or our partners succeed in developing any products, we intend to market them in the EU and other foreign jurisdictions in addition to the United States. In order to market and sell our products in other jurisdictions, we must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ substantially from that required to obtain FDA approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, we must secure product pricing and reimbursement approvals before health authorities will approve the product for sale in that country. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. Further, clinical trials conducted in one country may not be accepted by health authorities in other countries and regulatory approval in one country does not ensure approval in any other country, while a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory approval process in others. If we fail to obtain approval of any of our product candidates by health authorities in another country, we will be unable to commercialize our product in that country, and the commercial prospects of that product candidate and our business prospects could decline.

Even if our product candidates receive regulatory approval, they may still face future development and regulatory difficulties.

Even if we obtain regulatory approval for a product candidate, it would be subject to ongoing requirements by the FDA and comparable foreign health authorities governing the manufacture, quality control, further development, labeling, packaging, storage, distribution, safety surveillance, import, export, advertising, promotion, recordkeeping and reporting of safety and other post-market information. The FDA and comparable foreign health authorities will continue to closely monitor the safety profile of any product even after approval. If the FDA or comparable foreign health authorities become aware of new safety information after approval of any of our product candidates, they may require labeling changes or establishment of a Risk Evaluation and Mitigation Strategy, or REMS, or similar strategy, impose significant restrictions on a product's indicated uses or marketing or impose ongoing requirements for potentially costly post-approval studies or post-market surveillance. Failure to comply with any related obligations may result in the suspension, variation or withdrawal of an obtained approval and in civil and/or criminal penalties. Receipt of approval for narrower indications than sought, restrictions on marketing through a REMS or similar strategy imposed in an EU member state or other foreign country, or significant labeling restrictions or requirements in an approved label such as a boxed warning, could have a negative impact on our ability to recoup our R&D costs and to successfully commercialize that product, any of which could materially and adversely affect our business, financial condition, results of operations and growth prospects. In any event, if we are unable to comply with our post-marketing obligations imposed as part of the marketing approvals in the United States, the EU, or other countries, our approval may be varied, suspended or revoked, product supply may be delayed and our sales of our products could be materially adversely affected.

In addition, manufacturers of drug substance and drug products and their facilities are subject to continual review and periodic inspections by the FDA and comparable foreign health authorities for compliance with current Good Manufacturing Practices, or cGMP, regulations. If we or a regulatory authority discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory authority may impose restrictions on that product, the manufacturing facility or us, including requiring recall or withdrawal of the product from the market or suspension of manufacturing. If we or the manufacturing facilities for our product candidates fail to comply with applicable regulatory requirements, or if our product candidates are found to cause undesirable or unacceptable side effects, a regulatory authority may:

- issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings about such product;
- mandate modifications to promotional materials or require us to provide corrective information to healthcare practitioners;
- require that we conduct and complete post-marketing studies;
- require us to enter into a consent decree, which can include imposition of various fines, reimbursements for inspection costs, required due dates for specific actions and penalties for noncompliance;
- seek an injunction or impose civil or criminal penalties or monetary fines;
- suspend marketing of, withdraw or vary regulatory approval of or initiate a recall of such product;
- suspend any ongoing clinical trials;
- refuse to approve pending applications or supplements to applications filed by us;
- suspend or impose restrictions on operations, including costly new manufacturing requirements; or
- seize or detain products or refuse to permit the import or export of products.

The occurrence of any event or penalty described above may inhibit our ability to commercialize our products and generate revenue.

Advertising and promotion of any product candidate that obtains approval in the United States will be heavily scrutinized by the FDA, Department of Justice, HHS, Office of Inspector General, state attorneys general, members of Congress and the public. Violations, including promotion of our products for unapproved (or off-label) uses, are subject to enforcement letters, inquiries and investigations and civil and criminal sanctions by the government. Additionally, comparable foreign health authorities, public prosecutors, industry associations, healthcare professionals and other members of the public will heavily scrutinize advertising and promotion of any product candidate outside of the United States.

In the United States, engaging in the impermissible promotion of our products for off-label uses can subject us to false claims litigation under federal and state statutes, which can lead to civil and criminal penalties and fines and agreements that materially restrict the manner in which a company promotes or distributes drug products. These false claims statutes include the federal FCA, which allows any individual to bring a lawsuit against a pharmaceutical company on behalf of the federal government alleging submission of false or fraudulent claims, or causing to present such false or fraudulent claims, for payment by a federal program such as Medicare or Medicaid. If the government prevails in the lawsuit, the individual will share in any fines or settlement funds. Since 2004, these FCA lawsuits against pharmaceutical companies have increased significantly in volume and breadth, leading to several substantial civil and criminal settlements regarding certain sales practices promoting off-label drug uses involving fines in excess of $1 billion. This growth in litigation has increased the risk that a pharmaceutical company will have to defend a false claim action, pay settlement fines or restitution, agree to comply with burdensome reporting and compliance obligations and be excluded from Medicare, Medicaid and other federal and state healthcare programs. If we do not lawfully promote our approved products, we may become subject to such litigation and, if we do not successfully defend against such actions, those actions may have a material adverse effect on our business, financial condition and results of operations.

In the EU, the advertising and promotion of medicinal products are subject to both EU and EU member state laws governing promotion of medicinal products, interactions with physicians and other healthcare professionals, misleading and comparative advertising and unfair commercial practices. Although general requirements for advertising and promotion of medicinal products are established under EU directives, the details are governed by regulations in each member state and can differ from one country to another. For example, applicable laws require that promotional materials and advertising in relation to medicinal products comply with the product's Summary of Product Characteristics, or SmPC, as approved by the competent authorities in connection with a marketing authorization. The SmPC is the document that provides information to physicians concerning the safe and effective use of the product. Promotional activity that does not comply with the SmPC is considered off-label and is prohibited in the EU. Promotion materials and advertising may also require approval by competent authorities in certain European Economic Area, or EEA, countries. Direct-to-consumer advertising of prescription medicinal products is also prohibited in the EU.

Failure to comply with EU, EU member state, and other country laws that apply to the conduct of clinical trials, manufacturing approval, marketing authorization of medicinal products and marketing of such products, both before and after grant of a marketing authorization, or with other applicable regulatory requirements, may result in administrative, civil or criminal penalties. These penalties could include delays or refusal to authorize the conduct of

clinical trials, or to grant marketing authorization, product withdrawals and recalls, product seizures, suspension, withdrawal or variation of the marketing authorization, total or partial suspension of production, distribution, manufacturing or clinical trials, operating restrictions, injunctions, suspension of licenses, fines and criminal penalties. In addition, legislation adopted at the EU level may be implemented differently by individual EU member states. These regulations, and their differing implementations in EU member states, increase our legal and financial compliance costs and may make some activities more time-consuming and expensive.

Even if we are able to obtain regulatory approvals for any of our product candidates, if they exhibit harmful side effects after approval, our regulatory approvals could be revoked or otherwise negatively impacted.

Even if we receive regulatory approval for any of our product candidates, we will have tested them in only a small number of patients during our clinical trials. If an application for marketing is approved for any of our product candidates and more patients begin to use our product, new risks and side effects associated with our products may be discovered. As a result, health authorities may revoke their approvals. Additionally, we may be required to conduct additional clinical trials, make changes in labeling of our product, reformulate our product or make changes and obtain new approvals for our and our suppliers' manufacturing facilities for our product candidates. Equivalent obligations could be imposed by the foreign health authorities. We might have to withdraw or recall our products from the marketplace. We may also experience a significant drop in the potential sales of our product if and when regulatory approvals for such product are obtained, experience harm to our reputation in the marketplace or become subject to lawsuits, including class actions. Any of these results could decrease or prevent any sales of our approved product or substantially increase the costs and expenses of commercializing and marketing our product.

Risks Related to Our Intellectual Property

Our success depends in significant part upon our ability to obtain and maintain intellectual property protection for our products and technologies.

Our success depends in significant part on our ability and the ability of our current or future licensors, licensees, partners or collaborators to establish and maintain adequate intellectual property covering the product candidates that we plan to develop. In addition to taking other steps designed to protect our intellectual property, we have applied for, and intend to continue applying for, patents with claims covering our technologies, processes and product candidates when and where we deem it appropriate to do so. However, the patent prosecution process is expensive and time-consuming, and we and our current or future licensors, licensees, partners or collaborators may not be able to prepare, file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we or our current or future licensors, licensees, partners or collaborators will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection for them. Pending and future patent applications filed by us or our current or future licensors, licensees, partners or collaborators may not result in patents being issued that protect our technology or product candidates, or products resulting therefrom, in whole or in part, or that effectively prevent others from commercializing competitive technologies and products.

We have filed numerous patent applications both in the United States and in certain foreign jurisdictions to obtain patent rights to our inventions, with claims directed to compositions-of-matter, methods of use, formulations, combination therapy and other technologies relating to our product candidates. There can be no assurance that any of these patent applications will issue as patents or, for those applications that do mature into patents, whether the claims of the patents will exclude others from making, using or selling our product or product candidates, or products or product candidates that are substantially similar to ours. In countries where we have not and do not seek patent protection, third parties may be able to manufacture and sell products that are substantially similar or identical to our products or product candidates without our permission, and we may not be able to stop them from doing so.

Similar to other biotechnology companies, our patent position is generally highly uncertain and involves complex legal and factual questions. In this regard, we cannot be certain that we or our current or future licensors, licensees, partners or collaborators were the first to make an invention, or the first inventors to file a patent application claiming an invention in our owned or licensed patents or pending patent applications. In addition, even if patents are issued, given the amount of time required for the development, testing and regulatory review of our product candidates, any patents protecting such candidates might expire before or shortly after the resulting products are commercialized. Moreover, the laws and regulations governing patents could change in unpredictable ways that could weaken the ability of us and our current or future licensors, licensees, partners or collaborators to obtain new patents or to enforce existing patents and patents we may obtain in the future. In any event, the issuance, scope, validity, enforceability and commercial value of our patent rights and those of our current or future

licensors, licensees, partners or collaborators are highly uncertain and may not effectively prevent others from commercializing competitive technologies and products.

In some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain or enforce the patents, covering technology that we license from or license to third parties and may be reliant on our current or future licensors, licensees, partners or collaborators to perform these activities, which means that these patent applications may not be prosecuted, and these patents may not be enforced, in a manner consistent with the best interests of our business. If our current or future licensors, licensees, partners or collaborators fail to establish, maintain, protect or enforce such patents and other intellectual property rights, such rights may be reduced or eliminated. If our current or future licensors, licensees, partners or collaborators are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised.

In addition, the legal protection afforded to inventors and owners of intellectual property in countries outside of the United States may not be as broad or effective as that in the United States and we may be unable to acquire and enforce intellectual property rights outside the United States to the same extent as in the United States, if at all. Accordingly, our efforts, and those of our licensors, licensees, partners or collaborators, to enforce intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license.

We do not currently own or have a license to any issued patents that cover our NGM438 product candidate, although NGM438 is disclosed and claimed in pending U.S. non-provisional and international applications. Our NGM707 and NGM831 product candidates are each covered by one issued U.S. patent, and our NGM621 product candidate is covered by two issued U.S. patents, although the product and related compositions of matter and methods of use are disclosed and claimed in other pending U.S. non-provisional and/or national stage applications in particular foreign countries. The patent landscape surrounding all of our product candidates is crowded, and there can be no assurance that we will be able to secure patent protection that would adequately cover such product candidates, that we will obtain sufficiently broad claims to be able to prevent others from selling competing products or that we will be able to protect and maintain any patent protection that we initially secure.

Any changes we make to our product candidates to cause them to have what we view as more advantageous properties may not be covered by our existing patents and patent applications, and we may be required to file new patent applications and/or seek other forms of protection for any such altered product candidates. The patent landscape surrounding the technology underlying our product candidates is crowded, and there can be no assurance that we would be able to secure patent protection that would adequately cover an alternative to any of our product candidates.

We may be unable to obtain intellectual property rights or technologies necessary to develop and commercialize our product candidates.

Several third parties are actively researching and seeking and obtaining patent protection in the fields of cancer, liver and metabolic diseases and CVM-related diseases, including heart failure, and there are issued third-party patents and published third-party patent applications in these fields. The patent landscape around our product candidates is complex, and we are aware of several third-party patents and patent applications containing claims directed to compositions of matter, methods of use and related subject matter, some of which pertain, at least in part, to subject matter that might be relevant to our product candidates. However, we may not be aware of all third-party intellectual property rights potentially relating to our product candidates and technologies.

Depending on what patent claims ultimately issue and how courts construe the issued patent claims, as well as the ultimate formulation and method of use of our product candidates, we may need to obtain a license to practice the technology claimed in such patents. There can be no assurance that such licenses will be available on commercially reasonable terms, or at all. If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing rights to third-party intellectual property rights we have, we might be unable to develop and commercialize one or more of our product candidates, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

We could lose the ability to continue the development and commercialization of our products or product candidates if we breach any license agreement related to those products or product candidates.

Our commercial success depends upon our ability, and the ability of our current and future licensors, licensees, partners and collaborators, to develop, manufacture, market and sell our products and product candidates and use our proprietary technologies without infringing the proprietary rights of third parties. A third party

may hold intellectual property rights, including patent rights that are important or necessary to the development of our products. As a result, we are a party to a number of technology and patent licenses that are important to our business, and we expect to enter into additional licenses in the future. If we fail to comply with the obligations under these agreements, including payment and diligence obligations, our licensors may have the right to terminate these agreements. In the event of a termination of these agreements, we may not be able to develop, manufacture, market or sell any product that is covered by these agreements or to engage in any other activities necessary to our business that require the freedom-to-operate afforded by the agreements, or we may face other penalties under the agreements. For example, we are party to license agreements with multiple vendors, including our licenses with Horizon Discovery Ltd. and Lonza Sales AG, under which we license cell lines and other technology used to produce multiple product candidates. We require prior consent from some of these vendors to grant sub-licenses under these agreements. Therefore, these vendors may be able to prevent us from granting sub-licenses to third parties, which could affect our ability to use certain desired manufacturers in order to manufacture our product candidates. In the event of a termination of our license agreements, our ability to manufacture or develop any product candidates covered by these agreements may be limited or halted unless we can develop or obtain the rights to technology necessary to produce these product candidates.

Any of the foregoing could materially adversely affect the value of the product or product candidate being developed under any such agreement. Termination of these agreements or reduction or elimination of our rights under these agreements may result in our having to negotiate new or amended agreements, which may not be available to us on equally favorable terms, or at all, or cause us to lose our rights under these agreements, including our rights to intellectual property or technology important to our development programs.

We may become involved in lawsuits or other proceedings to protect or enforce our intellectual property, which could be expensive, time-consuming and unsuccessful and have a material adverse effect on the success of our business.

Third parties may infringe patents or misappropriate or otherwise violate intellectual property rights owned or controlled by us or our current or future licensors, licensees, partners or collaborators. In the future, it may be necessary to initiate legal proceedings to enforce or defend these intellectual property rights, to protect trade secrets or to determine the validity or scope of intellectual property rights that are owned or controlled by us or our current or future licensors, licensees, partners or collaborators. Litigation could result in substantial costs and diversion of management resources, which could harm our business and financial results.

If we or our current or future licensors, licensees, partners or collaborators initiated legal proceedings against a third party to enforce a patent covering a product candidate, the defendant could counterclaim that such patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the United States Patent and Trademark Office, or USPTO, or made a misleading statement during prosecution. In an infringement or declaratory judgment proceeding, a court may decide that a patent owned by or licensed to us or our current or future licensors, licensees, partners or collaborators is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that the patent does not cover the technology in question. An adverse result in any litigation proceeding could put one or more of the patents at risk of being invalidated, narrowed, held unenforceable or interpreted in such a manner that would not preclude third parties from entering the market with competing products.

Third parties may initiate legal proceedings against us or our current or future licensors, licensees, partners or collaborators to challenge the validity or scope of intellectual property rights we own or control. For example, generic or biosimilar drug manufacturers or other competitors or third parties may challenge the scope, validity or enforceability of patents owned or controlled by us or our current or future licensors, licensees, partners or collaborators. These proceedings can be expensive and time-consuming, and many of our adversaries may have the ability to dedicate substantially greater resources to prosecuting these legal actions than us. Accordingly, despite our efforts, we or our current or future licensors, licensees, partners or collaborators may not be able to prevent third parties from infringing upon or misappropriating intellectual property rights we own, control or have rights to, particularly in countries where the laws may not protect those rights as fully as in the United States.

There is a risk that some of our confidential information could be compromised by disclosure during litigation because of the substantial amount of discovery required. Additionally, many foreign jurisdictions have rules of discovery that are different than those in the United States and that may make defending or enforcing our patents extremely difficult. There also could be public announcements of the results of hearings, motions or other interim

proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of shares of our common stock.

Third-party pre-issuance submission of prior art to the USPTO, opposition, derivation, revocation, reexamination, *inter partes* review or interference proceedings, or other pre-issuance or post-grant proceedings, as well as other patent office proceedings or litigation in the United States or other jurisdictions brought by third parties against patents or patent applications owned or controlled by us or our current or future licensors, licensees, partners or collaborators, may be necessary to determine the inventorship, priority, patentability or validity of these patents or patent applications. An unfavorable outcome could leave our technology or product candidates without patent protection and allow third parties to commercialize our technology or product candidates without payment to us. Additionally, potential licensees, partners or collaborators could be dissuaded from collaborating with us to license, develop or commercialize current or future product candidates if the breadth or strength of protection provided by our patents and patent applications is threatened. Even if we successfully defend such litigation or proceeding, we may incur substantial costs and it may distract our management and other employees.

Third parties may initiate legal proceedings against us alleging that we infringe their intellectual property rights or we may initiate legal proceedings against third parties to challenge the validity or scope of the third-party intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Third parties may initiate legal proceedings against us or our current or future licensors, licensees, partners or collaborators alleging that we infringe their intellectual property rights. Alternatively, we may initiate legal proceedings to challenge the validity or scope of intellectual property rights controlled by third parties, including in oppositions, interferences, revocations, reexaminations, *inter partes* review or derivation proceedings before the USPTO or its counterparts in other jurisdictions. In this regard, we are aware of several third-party patents and patent applications containing claims directed to compositions of matter, methods of use and related subject matter, some of which pertain, at least in part, to subject matter that might be relevant to our product candidates. These proceedings can be expensive and time-consuming, and many of our adversaries may have the ability to dedicate substantially greater resources to prosecuting these legal actions than us.

In addition, we may be subject to claims that we or our employees have used or disclosed confidential information or intellectual property, including trade secrets or other proprietary information, of any such employee's former employer, or that third parties have an interest in our patents as an inventor or co-inventor. Likewise, we and our current or future licensors, licensees, partners or collaborators may be subject to claims that former employees, partners, collaborators or other third parties have an interest in our owned or in-licensed patents, trade secrets or other intellectual property as an inventor or co-inventor. Litigation may be necessary to defend against these claims.

Even if we believe third-party intellectual property claims are without merit, there is no assurance that a court would find in our favor on questions of infringement, validity, enforceability or priority. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity in favor of the granted third-party patent. This is a high burden, requiring us to present clear and convincing evidence as to the invalidity of any such U.S. patent claim.

An unfavorable outcome in any such proceeding could require us and our current or future licensors, licensees, partners or collaborators to cease using the related technology or developing or commercializing the product or product candidate, or to attempt to license rights to it from the prevailing party, which may not be available on commercially reasonable terms, or at all. Additionally, we could be found liable for monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could materially harm our business.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States, even in jurisdictions where we do pursue patent protection. Consequently, we may not be able to prevent third parties from practicing our or our licensors' inventions in all countries outside the United States, even in jurisdictions where we or our licensors do pursue patent protection. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own competing products and, further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected.

The complexity and uncertainty of European patent laws have increased in recent years. In Europe, the new unitary patent system that came into effect in 2023 would significantly impact European patents, including those granted before the introduction of such a system. Under the unitary patent system, European 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, or UPC. As the UPC is a new court system, there is no precedent for the court, increasing the uncertainty of any litigation. Patents that remain 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 who are signatories to the UPC. We cannot predict with certainty the long-term effects of any potential changes.

Risks Related to Ownership of Our Common Stock

We have in the past and may in the future fail to continue to meet the listing standards of Nasdaq, and as a result our common stock may be delisted, which could have a material adverse effect on the liquidity of our common stock.

Our common stock currently trades on The Nasdaq Global Select Market. The Nasdaq Stock Market LLC, or Nasdaq, has requirements that a company must meet in order to remain listed on Nasdaq. On December 1, 2023, we received a letter from the Listing Qualifications Staff, or the Nasdaq Staff, of Nasdaq notifying us that for the last 30 consecutive business days, the bid price of our common stock had closed below $1.00 per share, the minimum closing bid price required by Nasdaq's continued listing requirements. The notification had no immediate effect on the listing of our common stock on The Nasdaq Global Select Market. In accordance with Nasdaq requirements, we had a period of 180 calendar days, or until May 29, 2024, or the Compliance Date, to regain compliance with the minimum bid price requirement. On January 18, 2024, we received a letter from Nasdaq notifying us that the closing bid price of our common stock had been at $1.00 per share or greater for 10 consecutive business days, from January 2, 2024 to January 17, 2024, and accordingly, we had regained compliance with Nasdaq Listing Rule 5450(a)(1). There can be no assurance that we will continue to meet the minimum bid price requirement, or any other Nasdaq requirements, in the future. In addition, we may be unable to meet other applicable Nasdaq listing requirements, including maintaining minimum levels of stockholders' equity or market values of our common stock, in which case our common stock could be delisted.

If we remain a public company and our common stock were to be delisted from Nasdaq, we could face significant material adverse consequences, including:

- a limited availability of market quotations for our common stock;
- a reduced amount of news and analyst coverage for our company;
- a decreased ability to issue additional securities or obtain additional financing in the future;
- reduced liquidity for our stockholders;
- potential loss of confidence by partners and employees; and
- loss of institutional investor interest and fewer business development opportunities.

The market price of our common stock has been and may continue to be volatile, and you could lose all or part of your investment.

The market price for our common stock has fluctuated significantly from time to time, for example, varying between a high of $32.12 on March 17, 2021 and a low of $0.60 on November 16, 2023. The trading price of our common stock has been and may continue to be highly volatile and subject to wide fluctuations in response to various factors, some of which we cannot control. In addition to the factors discussed in this "Risk Factors" section, these factors include:

- our failure to complete the Offer and the Merger within the expected time frame, or at all;
- interim or final results of clinical trials of our product candidates or those of our competitors;

- our ability to raise adequate capital through public or private equity or debt offerings or negotiate potential BD Arrangements in a timely manner or at all, particularly in light of restrictions imposed on such activities under the Merger Agreement;
- the success of competitive products or technologies;
- regulatory actions with respect to our product candidates or our competitors' product candidates or products;
- timeline delays in our clinical trials;
- the level of expenses related to any of our product candidates or clinical development programs;
- actual or anticipated changes in our growth rate relative to our competitors;
- announcements by us or our competitors or partners of significant acquisitions, strategic collaborations, joint ventures or capital commitments;
- regulatory, legal or payor developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the results of our efforts to in-license or acquire additional product candidates or products;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- announcement or expectation of financing efforts;
- purchases or sales of our common stock by us, our insiders or our other stockholders;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors; and
- general economic, industry and market conditions.

In addition, the stock market in general, and The Nasdaq Global Select Market and biotechnology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies, including in connection with ongoing global geopolitical conflicts, which has resulted in decreased stock prices for many companies notwithstanding the lack of a fundamental change in their underlying business models or prospects. Broad market and industry factors, including worsening economic conditions and other adverse effects or developments relating to the effects of potential future bank failures, macroeconomic factors including inflation and elevated interest rates, and global geopolitical conflicts may negatively affect the market price of our common stock, regardless of our actual operating performance. The realization of any of the above risks or any of a broad range of other risks, including those described elsewhere in this "Risk Factors" section, could have a dramatic and material adverse impact on the market price of our common stock.

Because of volatility in our trading price and trading volume, we may incur significant costs from class action securities litigation.

Holders of stock in companies that have a volatile stock price frequently bring securities class action litigation against the company that issued the stock. We may be the target of this type of litigation in the future. If any of our stockholders were to bring a lawsuit of this type against us, even if the lawsuit is without merit, we could incur substantial costs defending the lawsuit and the time and attention of our management could be diverted from other business concerns, either of which could seriously harm our business. Refer to the risk factors titled "*An active trading market for our common stock may not be sustained and sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall*" and "*We may become involved in securities class action litigation due to the Offer and the Merger that could divert management's attention and harm our business, and adversely affect our ability to consummate the Offer and the Merger within the expected time frame or at all.*"

Our principal stockholders, including entities affiliated with The Column Group, Merck and management, own a substantial percentage of our stock and collectively will be able to exert significant control over matters subject to stockholder approval.

As of December 28, 2023, David V. Goeddel, Ph.D., a member of our board of directors, and entities affiliated with The Column Group, collectively referred to as TCG, collectively beneficially owned approximately 26.7% of our common stock and, as a result, have the ability to significantly influence all matters submitted to our stockholders for approval at a meeting of our stockholders, including the approval of any significant transaction. On December 28, 2023, we received a letter from TCG which expressed TCG's intent to explore and evaluate a potential acquisition of all of our outstanding shares of common stock not already owned by TCG in a going private transaction. We subsequently executed the Merger Agreement with Parent and Merger Sub, each of which TCG is the controlling stockholder and with which Dr. Goeddel is affiliated (although Dr. Goeddel recused himself from the board of directors' determination in favor of the Merger). With respect to the Offer and the Merger, although TCG has the ability to significantly influence matters submitted to our stockholders for approval at a meeting of our stockholders, the consummation of the Offer is subject to the condition that at least a majority of our stockholders unaffiliated with TCG and certain other parties elect to tender their shares in the Offer.

Additionally, our executive officers, directors, significant stockholders, including TCG and Merck and their respective affiliates, collectively beneficially own a substantial amount of our voting stock. These stockholders collectively may be able to determine all matters requiring stockholder approval at a meeting of our stockholders. For example, these stockholders collectively may be able to control elections of directors, amendments of our organizational documents or approval of any merger, sale of assets or other major corporate transaction. The interests of this group of stockholders may not always coincide with your interests or the interests of other stockholders, particularly as it relates to TCG and the Offer and the Merger. In addition, if any of our significant stockholders decide to sell a meaningful amount of their ownership position and there is not sufficient demand in the market for our common stock, our stock price could fall.

We are a "smaller reporting company" and the reduced disclosure requirements applicable to such companies that we have availed ourselves of may make our common stock less attractive to investors.

We are currently a "smaller reporting company" as defined in the Exchange Act. We will be a smaller reporting company and may take advantage of the scaled-back disclosures available to smaller reporting companies for so long as (i) the market value of our voting and non-voting ordinary shares held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter or (ii) (a) our annual revenue is less than $100.0 million during the most recently completed fiscal year and (b) the market value of our voting and non-voting ordinary shares held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter.

As a smaller reporting company, we are permitted to comply with scaled-back disclosure obligations in our SEC filings compared to other issuers, including with respect to disclosure obligations regarding executive compensation in our periodic reports and proxy statements. We have elected to adopt certain of the accommodations available to smaller reporting companies, including but not limited to reduced disclosure obligations regarding executive compensation arrangements.

Until we cease to be a smaller reporting company, the scaled-back disclosure in our SEC filings will result in less information about our company being available than for other public companies. If investors consider our common stock less attractive as a result of our election to use certain of the scaled-back disclosure permitted for smaller reporting companies, there may be a less active trading market for our common stock and our share price may be more volatile.

An active trading market for our common stock may not be sustained and sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

Our common stock is currently listed on The Nasdaq Global Select Market under the symbol "NGM" and trades on that market. We cannot ensure that an active trading market for our common stock will be sustained. Accordingly, we cannot ensure the liquidity of any trading market, your ability to sell your shares of our common stock when desired or the prices that you may obtain for your shares.

For the trading days during the three months ended December 31, 2023, the average daily trading volume for our common stock on The Nasdaq Global Select Market was only 481,473 shares. As a result, sales of a substantial number of shares of our common stock in the public market, including pursuant to the Amended Sales Agreement, or by any of our large stockholders, or even the perception in the market that we or the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. In addition, as a

result of the low trading volume of our common stock, the trading of relatively small quantities of shares by our stockholders could disproportionately influence the market price of our common stock in either direction. The price for our shares could, for example, decline significantly in the event that a large number of shares of our common stock are sold on the market without commensurate demand, as compared to an issuer with a higher trading volume that could better absorb those sales without an adverse impact on its stock price. Moreover, certain holders of our common stock have rights, subject to certain 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.

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

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the appreciation of their stock, if any.

Some provisions of our charter documents and Delaware law may have anti-takeover effects or could otherwise discourage an acquisition of us by others, even if an acquisition would benefit our stockholders, and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us or increase the cost of acquiring us, even if doing so would benefit our stockholders, or to remove our current management. These provisions include:

- a board of directors divided into three classes serving staggered three-year terms, such that not all members of the board will be elected at one time;
- authorizing the issuance of “blank check” preferred stock, the terms of which we may establish and shares of which we may issue without stockholder approval;
- prohibiting cumulative voting in the election of directors, which would otherwise allow for less than a majority of stockholders to elect director candidates;
- prohibiting stockholder action by written consent, thereby requiring all stockholder actions to be taken at a meeting of our stockholders;
- eliminating the ability of stockholders to call a special meeting of stockholders; and
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholder meetings.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, who are responsible for appointing the members of our management. Because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law which may discourage, delay or prevent someone from acquiring us or merging with us whether or not it is desired by or beneficial to our stockholders. In addition, Section 203 of the Delaware General Corporation Law prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, which is generally a person that together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

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

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and the federal district courts of the United States will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: any derivative action or proceeding brought on our behalf; any action asserting a breach of a fiduciary

duty owed by any director, officer or other employee to us or our stockholders; any action asserting a claim against us or any director or officer or other employee arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws; any action with respect to the validity of our amended and restated certificate of incorporation or amended and restated bylaws; any action as to which the Delaware General Corporation Law confers jurisdiction to the Court of Chancery of the State of Delaware; or any action asserting a claim against us or any director or officer or other employee that is governed by the internal affairs doctrine. This provision would not apply to suits brought to enforce a duty or liability created by the Securities and Exchange Act of 1934, as amended, or the Exchange Act, or any other claim for which the federal courts have exclusive jurisdiction. Furthermore, Section 22 of the Securities Act of 1933, as amended, or the Securities Act, creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our amended and restated certificate of incorporation further provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our amended and restated certificate of incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

These exclusive forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees. If a court were to find either exclusive-forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur further significant additional costs associated with resolving the dispute in other jurisdictions, all of which could seriously harm our business.

General Risk Factors

We, our CROs, our CMOs, our current and potential future partners and other third parties we rely on or partner with could experience a cybersecurity incident that could harm our business.

We collect, store and transmit proprietary, confidential and sensitive information, including personal information (such as health-related data), in the course of our business. Our technology systems and the information and data processed and stored in our technology systems or otherwise by us or on our behalf, and the technology systems of, and data accessed on our behalf by, our research collaborators, partners, CROs, CMOs, contractors, consultants and other third parties on which we depend to operate our business, may be vulnerable to security breaches, loss, damage, corruption, unauthorized access, use or disclosure or misappropriation. Such incidents may result from the actions of a wide variety of actors, including traditional hackers, our personnel or the personnel of the third parties we work with, sophisticated nation-states and nation-state-supported actors. During times of war and other major conflicts, we, the third parties upon which we rely, and our customers may be vulnerable to a heightened risk of these attacks, including retaliatory cyberattacks, that could materially disrupt our systems and operations, supply chain, and ability to produce, sell and distribute our goods and services. Threats we and third parties on which we rely may face are constantly evolving and include (without limitation) malware, viruses, software vulnerabilities and bugs, software or hardware failure, hacking, denial of service attacks, social engineering (including phishing), ransomware, inside threats, credential stuffing or other cyberattacks, telecommunications failures, earthquakes, fires, floods and similar threats. Threats such as ransomware attacks, for example, are becoming increasingly prevalent and severe. Extortion payments may alleviate the negative impact of a ransomware attack, but we may be unwilling or unable to make such payments due to, for example, applicable laws or regulations prohibiting such payments. Supply-chain attacks have also increased in frequency and severity, and we cannot guarantee that third parties' infrastructure in our supply chain or our third-party partners' supply chains have not been compromised. Our ability to monitor third parties on whom we rely to operate our business is limited, and these third parties may be subject to, and may expose us to, cyberattacks and other security incidents.

We may, under certain data privacy and security obligations, be required to, or we may choose to, expend significant resources or modify our business activities (including our clinical trial activities) in an effort designed to protect against security incidents. While we have developed systems and processes designed to protect the integrity, confidentiality and security of the confidential and personal information under our control, we cannot assure you that any security measures that we or our third-party service providers implement will be effective in

preventing cybersecurity incidents. There are many different cyber-crime and hacking techniques, and as such techniques continue to evolve, we may be unable to anticipate attempted security breaches, identify them before our information is exploited or react in a timely manner.

Some of our workforce work remotely on a full- or part-time basis outside of our corporate network security protection boundaries or otherwise utilize network connections, computers and devices outside of our premises or network, which imposes additional risks to our business, including increased risk of industrial espionage, phishing and other cybersecurity attacks, and unauthorized dissemination of proprietary or confidential information, including personal information, any of which could have a material adverse effect on our business.

Despite our efforts to strengthen security and authentication measures, we have not always been able in the past, and may be unable in the future, to detect vulnerabilities in our information technology systems. We have experienced an overall increase in cybersecurity incidents since 2020, none of which, to date, have caused material disruption to our business, or, to our knowledge, involved a material security breach. We or the third parties we rely on or partner with could experience a material system failure, security breach or other cybersecurity incident, including any related to or in connection with any of the aforementioned threats, in the future, which could interrupt our operations, disrupt our development programs and have a material adverse effect on our business, financial condition and results of operations. For example, the loss or corruption of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on third parties for the manufacture of our product candidates, to analyze clinical trial samples and to conduct clinical trials, and cybersecurity incidents experienced by these third parties could have a material adverse effect on our business. Security breaches and other cybersecurity incidents affecting us or the third parties we rely on or partner with could also result in substantial remediation costs and expose us to litigation (including class claims), regulatory enforcement action (for example, investigations, fines, penalties, audits and inspections), additional reporting requirements and/or oversight, fines, penalties, indemnification obligations, negative publicity, reputational harm, monetary fund diversions, interruptions in our operations (including availability of data), financial loss and other liabilities and harms. Additionally, such incidents may trigger data privacy and security obligations requiring us to notify relevant stakeholders or to publicly disclose material breaches when required under securities and other laws and regulations. These disclosures are costly, and the disclosures or the failure to comply with such requirements could lead to adverse consequences.

Our contracts may not contain limitations of liability, and even where they do, there can be no assurance that limitations of liability in our contracts are sufficient to protect us from claims related to our data privacy and security obligations. Additionally, we cannot be certain that our insurance coverage will be adequate for data security liabilities actually incurred, will continue to be available to us on economically and commercially reasonable terms, or at all, or that any insurer will not deny coverage as to any future claim. The successful assertion of one or more large claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could adversely affect our reputation, business, financial condition and results of operations.

We are subject to rapidly changing and increasingly stringent foreign and domestic laws and regulations relating to privacy, data protection and information security. The restrictions imposed by these requirements or our actual or perceived failure to comply with them could harm our business.

We may collect, use, transfer or otherwise process proprietary, confidential and sensitive information, including personal information (including health-related data), which subjects us to numerous evolving and complex data privacy and security obligations, including various laws, regulations, guidance, industry standards, external and internal privacy and security policies, contracts and other obligations that govern the processing of such information by us and on our behalf. Outside the United States, an increasing number of laws, regulations, and industry standards may govern data privacy and security. For example, the European Union's General Data Protection Regulation, or EU GDPR, and the United Kingdom's GDPR, or UK GDPR, collectively the GDPR, impose strict requirements for processing personal information. The GDPR, together with other relevant laws that govern patient confidentiality and storage of personal health data, may apply to our processing of personal information from clinical trials participants and other individuals located in the EEA and/or the United Kingdom, or UK, and, if any of our product candidates are approved, we may seek to commercialize those products in the EEA and/or the UK (as applicable). Companies that violate the GDPR can face private litigation, prohibitions on data processing, other administrative measures, reputational damage and fines of up to the greater of 20 million Euros under the EU GDPR, 15.5 million pounds sterling under the UK GDPR, or, in each case, 4% of their worldwide annual revenue. The GDPR requires us to, among other things: give detailed disclosures about how we collect, use and share personal information; contractually commit to data protection measures in our contracts with vendors; maintain adequate data security measures; notify regulators and affected individuals of certain data breaches; meet

extensive privacy governance and documentation requirements; and honor individuals' data protection rights, including, but not limited to, their rights to access, correct and delete their personal information.

On July 10, 2023, the European Commission adopted an adequacy decision for the new EU-US Data Privacy Framework, which facilitates international transfers of personal data between the EU and the US for companies that choose to self-certify with the framework and comply with its principles. However, the EU-US Data Privacy Framework is expected to be subject to legal challenges and there is no assurance that we can satisfy or rely on this mechanism to lawfully transfer personal data to the United States.

On June 28, 2021, the European Commission adopted an adequacy decision permitting flows of personal data between the EU and the UK to continue without additional requirements. The UK Government also adopted a reciprocal adequacy decision in respect of EEA member states permitting flows of personal data from the UK to the EEA. However, the European Commission's UK adequacy decision will automatically expire in June 2025 unless the European Commission re-assesses and renews/extends that decision and remains under review by the European Commission during this period. The UK adequacy decision could be withdrawn prior to June 2025, for example, if the legal framework of the UK GDPR diverges from the EU GDPR in a way that impacts the deemed adequacy of the UK GDPR, if the UK permits cross-border data transfers to third countries that do not currently have an EU adequacy decision without requiring sufficient privacy protections, or if the UK adequacy decision is successfully challenged at the European Court of Justice. If the UK adequacy decision were to be withdrawn, personal data could not flow freely between the UK and the EU and additional safeguards would need to be adopted, which could result in additional costs for us.

The relationship between the UK and the EU in relation to certain aspects of data protection laws remains unclear, and it is unclear how UK data protection laws and regulations will develop in the medium to longer term, and how data transfers to and from the UK will be regulated in the long term. The UK's Data Protection and Digital Information Bill, or the Bill, was re-introduced before the UK Parliament in March 2023, proposing reforms intended to update and simplify the UK's data protection framework, which may deviate from the EU GDPR.

Certain jurisdictions have enacted data localization laws and laws restricting cross-border transfers of personal information. In particular, regulators and courts in the EEA and the UK have in the past significantly restricted the transfer of personal information to the United States and other countries whose privacy laws it believes are inadequate, and may do so again in the future. Other jurisdictions may adopt similarly stringent interpretations of their data localization and cross-border data transfer laws. Although there are currently various mechanisms that may be used to transfer personal information from the EEA and UK to the United States in compliance with law, including without limitation the EEA's standard contractual clauses and the UK's international data transfer agreement, these mechanisms are subject to legal challenges, and there is no assurance that we can satisfy or rely on these measures to lawfully transfer personal information to the United States.

We continue to monitor changes in data protection laws related to the cross-border transfer of personal information; however, uncertainty remains regarding any future regulations, interpretations of existing law or guidance that may be issued, particularly by the EU authorities. If we are unable to implement a valid compliance solution for cross-border transfers of personal information, or if the requirements for a legally-compliant transfer are too onerous, we will face increased exposure to significant adverse consequences, including substantial fines, regulatory actions, as well as injunctions against the export and processing of personal information from the EEA. Our inability to import personal information from the EEA, UK or Switzerland or other countries may also restrict or prohibit our clinical trial activities in those countries; limit our ability to collaborate with CROs, service providers, contractors and other companies subject to laws restricting cross-border data transfers; require us to increase our data processing capabilities in other countries at significant expense and may otherwise negatively impact our business operations. We may also become subject to new laws in these jurisdictions that regulate cybersecurity and non-personal data, such as data collected through the internet of things. Depending on how these laws are interpreted, we may have to make changes to our business practices and products to comply with such obligations.

Additionally, other countries have enacted or are considering enacting similar cross-border data transfer restrictions and laws requiring local data residency, which could increase the cost and complexity of delivering our services and operating our business.

Privacy and data security laws in the United States at the federal, state and local level are increasingly complex and changing rapidly. For example, at the federal level, HIPAA, as amended by HITECH, imposes specific requirements relating to the privacy, security and transmission of individually identifiable health information. Additionally, at the state level, the privacy and data protection landscape is changing rapidly. For example, the California Consumer Privacy Act of 2018, or CCPA, took effect on January 1, 2020. The CCPA gives California residents certain rights similar to the individual rights given under the GDPR, including the right to access and

delete their personal information, opt-out of certain personal information sharing and receive detailed information about how their personal information is used. The CCPA provides for civil penalties for violations, including statutory fines for noncompliance and a limited private right of action in connection with certain data breaches. In addition, the California Privacy Rights Act of 2020, or CPRA, which became operative January 1, 2023, expands the CCPA's requirements, including in that it applies to personal information of business representatives and employees and establishes a new regulatory agency to implement and enforce the law. While the CCPA contains an exemption for certain personal information processed in connection with clinical trials, we may process other personal information that is subject to the CCPA and CPRA. Other states, such as Virginia, Connecticut, Utah and Colorado, have also passed comprehensive privacy laws, and similar laws are being considered in several other states, as well as at the federal and local levels. The evolving patchwork of differing state and federal privacy and data security laws increases the cost and complexity of operating our business and increase our exposure to liability.

We may also be bound by contractual obligations related to data privacy and security, and our efforts to comply with such obligations may not be successful. We may publish privacy policies, marketing materials and other statements, such as compliance with certain certifications or self-regulatory principles, regarding data privacy and security. If these policies, materials or statements are found to be deficient, lacking in transparency, deceptive, unfair or misrepresentative of our practices, we may be subject to investigation, enforcement actions by regulators or other adverse consequences.

Our obligations related to data privacy and security are quickly changing in an increasingly stringent fashion. These obligations may be subject to differing applications and interpretations, which may be inconsistent or in conflict among jurisdictions. Preparing for and complying with these obligations requires us to devote significant resources (including, without limitation, financial and time-related resources). These obligations may necessitate changes to our information technologies, systems and practices and to those of any third parties that process personal information on our behalf. In addition, these obligations may require us to change aspects of our business model. Although we endeavor to comply with applicable data privacy and security obligations, we may at times fail (or be perceived to have failed) to do so. Moreover, despite our efforts, our personnel or third parties upon whom we rely, may fail to comply with such obligations, which could impact whether or not we are in compliance.

If we (or third parties on which we rely) fail, or are perceived to have failed, to address or comply with data privacy and security obligations, we could face significant consequences, including (without limitation): government or regulatory enforcement actions (e.g., investigations, fines, penalties, audits, inspections and similar); litigation (including class-related claims); additional reporting requirements and/or oversight; bans on processing personal information; orders to destroy or not use personal information; and imprisonment of company officials. Any of these events could have a material adverse effect on our reputation, business or financial condition, including but not limited to: loss of customers; interruptions or stoppages in our business operations (including clinical trials); inability to process personal information or to operate in certain jurisdictions; limiting our ability to develop or commercialize our products; expenditure of time and resources to defend any claim or inquiry; adverse publicity; or revision or restructuring of our operations.

Our operations are vulnerable to interruption by fire, earthquake, power loss, telecommunications failure, terrorist activity and other events beyond our control, which could harm our business.

Our facilities have experienced electrical blackouts as a result of a shortage of available electrical power. Future blackouts, which may be implemented by the local electricity provider in the face of high winds and dry conditions, could disrupt our operations. Our facility is located in a seismically active region. We have not undertaken a systematic analysis of the potential consequences to our business and financial results from a major earthquake, fire, power loss, terrorist activity or other disasters and do not have a comprehensive recovery plan for such disasters. In addition, we do not carry sufficient insurance to compensate us for actual losses from interruption of our business that may occur, and any losses or damages incurred by us could harm our business. The sole supplier of some of our clinical drug substances is located in Lithuania, a region that has experienced political unrest. Refer to the risk factor titled "*We rely completely on CMOs for the manufacture of our product candidates and are subject to many manufacturing risks, any of which could substantially increase our costs and limit supply of our product candidates and any future products*." If our operations or the operations of third parties providing services to us are disrupted by any such occurrences, our business and future prospects may be negatively affected.

We use and generate materials that may expose us to material liability.

Our research programs involve the use of hazardous materials, chemicals and radioactive and biological materials. We are subject to foreign, federal, state and local environmental and health and safety laws and

regulations governing, among other matters, the use, manufacture, handling, storage and disposal of hazardous materials and waste products. We may incur significant costs to comply with these current or future environmental and health and safety laws and regulations. In addition, we cannot completely eliminate the risk of contamination or injury from hazardous materials and may incur material liability as a result of such contamination or injury. In the event of an accident, an injured party may seek to hold us liable for any damages that result. Any liability could exceed the limits or fall outside the coverage of our workers' compensation, property and business interruption insurance and we may not be able to maintain insurance on acceptable terms, if at all. We currently carry no insurance specifically covering environmental claims.

Our ability to use net operating loss carryforwards and certain other tax attributes to offset taxable income could be limited.

We plan to use our current year operating losses to offset taxable income from any revenue generated from operations, including BD Arrangements. To the extent that our taxable income exceeds any current year operating losses, we plan to use our net operating loss carryforwards to offset income that would otherwise be taxable. Our federal net operating loss carryforwards generated in tax years beginning before January 1, 2018 are only permitted to be carried forward for 20 years under applicable U.S. tax law. Under the 2017 Tax Act, as modified by the Coronavirus Aid, Relief and Economic Security Act, or the CARES Act, our federal net operating losses generated in tax years beginning after December 31, 2017 may be carried forward indefinitely, but the ability to deduct such federal net operating losses is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to the 2017 Tax Act or the CARES Act.

In addition, under Sections 382 and 383 of the U.S. Internal Revenue Code of 1986, as amended, or the Code, and corresponding provisions of state law, if we experience an "ownership change," generally defined as a greater than 50% change, by value, in equity ownership over a three-year period, our ability to use our net operating loss carryforwards and certain other tax attributes (such as R&D tax credits) before the change to offset our income after the change may be limited. Due to our initial public offering and other shifts in our stock ownership, we have experienced ownership changes in the past and may experience ownership changes in the future as a result of subsequent shifts in our stock ownership, some of which are outside our control. As a result, our use of federal net operating loss carryforwards and certain other tax attributes could be limited. State net operating loss carryforwards may be similarly limited. In addition, at the state level, there may be periods during which the use of net operating losses is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed.

New tax laws or regulations, changes to existing tax laws or regulations or changes in their application to us or our customers may have a material adverse effect on our business, cash flows, financial condition or results of operations.

New tax laws, statutes, rules, regulations, directives, decrees or ordinances could be enacted at any time. Further, existing tax laws, statutes, rules, regulations, directives, decrees or ordinances could be interpreted, changed or modified. Any such enactment, interpretation, change or modification could adversely affect us, possibly with retroactive effect. For example, the Inflation Reduction Act of 2022 imposes, among other rules, a 15% minimum tax on the book income of certain large corporations and a 1% excise tax on certain corporate stock repurchases. In addition, for certain research and experimental expenses incurred in tax years beginning after December 31, 2021, the 2017 Tax Act requires the capitalization and amortization of such expenses over five years if incurred in the United States and fifteen years if incurred outside the United States, rather than deducting such expenses currently. There have been legislative proposals to repeal or defer the capitalization requirement, including legislation recently passed by the U.S. House of Representatives that would restore the deductibility of research and experimental expenses incurred in the United States (but not research and experimental expenses incurred outside the United States); however, there can be no assurance that such requirement will be repealed, deferred or otherwise modified. Changes in corporate tax rates, the realization of net deferred tax assets relating to our operations, the taxation of foreign earnings and the deductibility of expenses under the 2017 Tax Act, as amended by the CARES Act or any future tax reform legislation, could have a material impact on the value of our deferred tax assets, result in significant one-time charges and increase our future U.S. tax expense.

Future changes in financial accounting standards or practices may cause adverse and unexpected revenue fluctuations and adversely affect our reported results of operations.

Future changes in financial accounting standards may cause adverse, unexpected revenue fluctuations and affect our reported financial position or results of operations. Financial accounting standards in the United States are constantly under review and new pronouncements and varying interpretations of pronouncements have occurred frequently in the past and are expected to occur again in the future. As a result, we may be required to

make changes in our accounting policies. Those changes could affect our financial condition and results of operations or the way in which such financial condition and results of operations are reported. Compliance with new accounting standards may also result in additional expenses. As a result, we intend to invest all reasonably necessary resources to comply with evolving standards, and this investment may result in increased general and administrative expenses and a diversion of management time and attention from business activities to compliance activities.

We continue to incur increased costs as a result of operating as a public company, and our management devotes substantial time to new compliance initiatives. In addition, we are obligated to develop and maintain proper and effective internal control over financial reporting. In the future, we may not complete our analysis of our internal control over financial reporting in a timely manner, or our internal control over financial reporting may not be determined to be effective, which may adversely affect investor confidence in our company and, as a result, the value of our common stock.

As a public company, we incur significant legal, accounting, insurance and other expenses, and these expenses further increased in connection with our loss of "emerging growth company" status as of December 31, 2021. As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act and the Dodd-Frank Act, as well as rules adopted, and to be adopted, by the SEC and The Nasdaq Global Select Market. Our management and other personnel devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations increase our legal and financial compliance costs and may make some activities more time-consuming and costly. The increased costs will increase our net loss. For example, these rules and regulations make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain sufficient coverage. We cannot predict or estimate the amount or timing of additional costs we may incur in the future to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

Specifically, in order to comply with the requirements of being a public company, we need to undertake various actions, including maintaining effective internal controls and procedures. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are continuing to develop and refine our disclosure controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file with the SEC is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that information required to be disclosed in reports under the Exchange Act is accumulated and communicated to our principal executive and financial officers. In addition, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting, as required by Section 404(a) of the Sarbanes-Oxley Act. Our compliance with Section 404(b) of the Sarbanes-Oxley Act requires that we incur substantial accounting expense and expend significant management efforts. We currently do not have an internal audit staff and outsource this function to a third party. We have hired and will need to retain our current accounting and financial staff who have the appropriate public company experience and technical accounting knowledge. As a result of our public float on June 30, 2023, commencing on December 31, 2023, we became a non-accelerated filer. For so long as we remain a non-accelerated filer, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal control over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act. If we identify deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, investors may lose confidence in our operating results and the price of our common stock could decline. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on The Nasdaq Global Select Market.

Our ability to successfully implement our business plan and comply with Section 404(a) of the Sarbanes-Oxley Act requires us to be able to prepare timely and accurate financial statements. We expect that we will need to continue to improve existing, and implement new operational and financial systems, procedures and controls 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. This, in turn, could have an adverse impact on the price for our common stock and could adversely affect our ability to access the capital markets.

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

We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management,

and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the realities that judgments in decision-making can be faulty and breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about our business, our stock price and trading volume could decline.

Our stock price and trading volume is heavily influenced by the way analysts and investors interpret our clinical trial results, any BD Arrangements we may enter into, our financial information and other disclosures. If securities or industry analysts do not publish research or reports about our business, delay publishing reports about our business or publish negative reports about our business, regardless of accuracy, our stock price and trading volume could decline.

Item 1B. Unresolved Staff Comments.

None.

Item 1C. Cybersecurity.

Risk Management Strategy

We have implemented and maintain various information security processes. These processes are designed to identify, assess and manage material risks from cybersecurity threats to our critical computer networks, third-party hosted services, communications systems, hardware and software, and our critical data, including intellectual property, strategic or competitive in nature, and proprietary or confidential information, including clinical trial data, personal and financial information, referred to collectively as Information Systems and Data.

Our Chief Financial Officer, or CFO, together with our Incident Disclosure Committee, or IDC, Security Incident Response Team, or SIRT, which is led by our head of information technology, or IT, and composed of two employees who have direct work experience in network security, and third-party service providers, help identify, assess and manage the Company's cybersecurity threats and risks. In doing so, they identify and assess risks from cybersecurity threats by monitoring and evaluating our threat environment and the Company's risk profile using various methods including, for example, automated and manual tools, third-party threat assessments and intelligence feeds, subscribing to reports and services that identify cybersecurity threats, analyzing reports of threats and threat actors, evaluating the Company's and the industry's risk profile, evaluating reported threats, coordinating with law enforcement relating to threats, conducting threat assessments for internal and external threats, conducting red/blue team testing and tabletop incident response exercises jointly with external third parties.

Depending on the environment, we implement and maintain various technical, physical and organizational measures, processes, standards and policies designed to manage and mitigate material risks from cybersecurity threats to our Information Systems and Data, including, for example: an incident detection and response plan and policy; encryption of data; network security controls; access controls; physical security and employee training.

Our assessment and management of material risks from cybersecurity threats are integrated into the Company's overall risk management processes. For example, our IT department works with management to prioritize our risk management processes and mitigate cybersecurity threats that are more likely to lead to a material impact to our business.

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

We use third-party service providers to perform a variety of functions throughout our business, such as application providers, hosting companies, contract research organizations, and contract manufacturing organizations. We have a vendor management program to manage cybersecurity risks associated with our use of these providers. The program includes a risk assessment for each vendor which includes a security questionnaire, a review of the vendor's written security program, and security assessment calls with the vendor's security team.

Depending on the nature of the services provided the sensitivity of the Information Systems and Data at issue, and the identity of the provider, our vendor management process may involve different levels of assessment designed to help identify cybersecurity risks associated with a provider and impose contractual obligations related to cybersecurity on the provider.

For a description of the risks from cybersecurity threats that may materially affect the Company and how they may do so, see our risk factors under Part 1. Item 1A. Risk Factors in this Annual Report, including "*We, our CROs, our CMOs, our current and potential future partners and other third parties we rely on or partner with could experience a cybersecurity incident that could harm our business*".

Governance

Our board of directors, or the Board, addresses the Company's cybersecurity risk management as part of its general oversight function. The Board has delegated to the audit committee of the Board, or Audit Committee, responsibility for overseeing the Company's cybersecurity risk management processes generally, including oversight and mitigation of risks from cybersecurity threats.

Our CFO is responsible for cybersecurity risk management and has experience overseeing IT departments in previous roles. Our principal accounting officer, or PAO, oversees the IT department and in that capacity is responsible for hiring appropriate cybersecurity personnel, helping to integrate cybersecurity risk considerations into the Company's overall risk management strategy, and communicating key priorities to relevant personnel. Our PAO has significant experience with managing access to key company-wide information systems. Our head of IT is responsible for assessing and managing our material risks from cybersecurity threats and for our cybersecurity protections generally, including helping prepare for cybersecurity incidents, approving cybersecurity processes and reviewing security assessments and other security-related reports. Our head of IT has prior work experience in cybersecurity, holds relevant degrees and current cybersecurity certifications. The Audit Committee receives periodic reports from our CFO and head of IT concerning cybersecurity threats and risks, and the processes that we have implemented to address and mitigate them. The Audit Committee updates the Board on such cybersecurity issues as part of its general committee report to the Board at regular Board meetings. Our Board is responsible for approving budgets to support those activities.

We have in place a cybersecurity incident response plan, reviewed by the Audit Committee, which establishes incident response processes, policies and procedures. Under the plan, our CFO, as incident response leader, works with the Company's SIRT to help the Company mitigate and remediate cybersecurity incidents of which they are notified.

Our IDC is notified and activated in the event of a significant cybersecurity incident. The IDC is composed of our CFO, the lead of the SIRT, our General Counsel and other members of our legal and finance teams. In the event of a severe or major cybersecurity incident, the IDC will oversee and coordinate the response, determine materiality of impact and any disclosure requirements in conjunction with legal counsel and will ensure that the Audit Committee and/or the Board are updated and that required disclosures are made in a timely manner.

Item 2. Properties.

We lease and occupy approximately 122,000 square feet of office and laboratory space in South San Francisco, California. In July 2022, we entered into an operating lease agreement, or the 2024 Lease Agreement, for our existing corporate office and laboratory space at 333 Oyster Point Boulevard, South San Francisco, California. The initial term of the 2024 Lease Agreement commenced on January 1, 2024 and expires on December 31, 2033.

Item 3. Legal Proceedings.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

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

Market Information

Our common stock has been listed on The Nasdaq Global Select Market under the symbol "NGM" since April 4, 2019.

Holders of Record

As of the close of business on March 5, 2024, there were 33 stockholders of record of our common stock. The actual number of stockholders is greater than the number of stockholders of record and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees. This number of stockholders of record also does not include stockholders whose shares may be held in trust by other entities.

Performance Graph

We are a smaller reporting company as defined by Rule 12b-2 of the Exchange Act and are not required to provide the performance graph required by Item 201(e) of Regulation S-K.

Recent Sales of Unregistered Securities

During the year ended December 31, 2023, we did not issue or sell any unregistered securities.

Issuer Purchases of Equity Securities

During the three-month period ended December 31, 2023, we did not repurchase shares of our common stock.

Item 6. [Reserved]

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our audited consolidated financial statements and related notes appearing elsewhere in this Annual Report. This discussion and analysis contains forward-looking statements based upon current beliefs, plans and expectations that involve risks, uncertainties and assumptions, such as statements regarding our plans, objectives, expectations, intentions and projections. Our actual results and the timing of events could differ materially from those anticipated in these forward-looking statements as a result of several factors that could impact our business, including those set forth in the section titled "Risk Factors" under Part I, Item 1A in this Annual Report on Form 10-K, or Annual Report. In some cases, you can identify forward-looking statements by terminology such as "anticipate," "aspire," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potentially," "predict," "should," "will" or the negative of these terms or other similar expressions. See "Special Note Regarding Forward-Looking Statements" in this Annual Report.

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

Overview of Our Business

We are a biopharmaceutical company focused on discovering and developing novel, potentially life-changing medicines based on scientific understanding of key biological pathways. Our mission is to translate complex, powerful biology with rigor and urgency into life-changing medicines. Our strategy is built on a straightforward central premise: create an environment that both allows drug discovery research to thrive by focusing on powerful human biology unconstrained by therapeutic area or technology approach and remain grounded in the singular motivation of delivering impactful medicines to address critical unmet or underserved

needs of patients suffering from grievous diseases. As explorers on the frontier of life-changing science, we aspire to operate one of the most productive research and development engines in the biopharmaceutical industry. All therapeutic candidates in our pipeline have been generated by our in-house discovery engine, led by biology and motivated by patient need.

Our biology-driven and therapeutic area agnostic discovery engine has produced a diverse pipeline of product candidates spanning oncology, liver and metabolic disease and retinal disease. We have evolved our strategy to concentrate our resources on three product candidates in three specific disease areas, as well as to continue our discovery research efforts. For our other product candidates and potential future opportunities that have been, and may in the future be, produced by our discovery engine, we are seeking collaboration, out licensing, partnering or other business development arrangements, or BD Arrangements, with third-party partners with sufficient resources and relevant domain expertise to further their development. We believe that this strategy, if successfully implemented, may enable more of the programs in our pipeline to be advanced effectively and efficiently.

Pending Transactions Contemplated by the Merger Agreement

On February 25, 2024, we entered into the Merger Agreement with Parent and Merger Sub. The Merger Agreement provides for, among other things, (i) the acquisition of the Company by Parent through a cash tender offer, or the Offer, by Merger Sub for each issued and outstanding share of our common stock for $1.55 per share, or the Offer Price, and (ii) the merger of Merger Sub with and into the Company, or the Merger, with the Company surviving the Merger. Subject to the terms of the Merger Agreement, the Offer Price will be paid subject to any applicable tax withholding and without interest.

We anticipate that the Offer and the Merger contemplated under the Merger Agreement will be consummated in the second quarter of 2024. However, there can be no assurance that the Offer and the Merger contemplated by the Merger Agreement will be completed. If the Merger is effected, our common stock will be delisted from The Nasdaq Global Select Market, our obligation to file periodic reports under the Securities Exchange Act of 1934, as amended, or the Exchange Act, will terminate, and we will be privately held.

Pipeline Programs and Operational Updates

We are currently prioritizing the majority of our execution efforts and significant resources on three key development opportunities:

- completing a Phase 1 Part 1b dose escalation cohort of the ongoing Phase 1/2 trial evaluating NGM707 in combination with KEYTRUDA® (pembrolizumab) for the treatment of patients with advanced or metastatic solid tumors;
- designing a potential registrational trial of aldafermin in primary sclerosing cholangitis, or PSC, and continuing discussions with the United States Food and Drug Administration, or FDA, including on the proposed utilization of a primary endpoint composed of surrogate biomarkers with the goal of obtaining accelerated approval from the FDA; and
- producing a toxicology package that we hope will support the potential initiation of a Phase 2 proof-of-concept trial of NGM120 in patients with hyperemesis gravidarum, or HG.

Subject to our ability to obtain sufficient additional capital, whether through financing activities or potential future BD Arrangements, we may in the future pursue development of other product candidates and programs. While we may consider BD Arrangements to advance these three key priorities for clinical development, we intend to invest our resources in their development, contingent upon capital availability as described below, in the absence of BD Arrangements.

NGM707: ILT2/ILT4 Dual Antagonist Antibody for the Potential Treatment of Solid Tumors, Including MSS CRC Patients

NGM707, the lead asset in our myeloid reprogramming and checkpoint inhibition portfolio, is a dual antagonist monoclonal antibody that is designed to improve patient immune responses to tumors by inhibiting both Immunoglobulin-like transcript 2, or ILT2, and Immunoglobulin-like transcript 4, or ILT4, receptors. We believe NGM707 has the potential to reprogram ILT4- and ILT2-expressing myeloid cells to shift them from a suppressive state that restricts anti-tumor immunity to a stimulatory state that may promote anti-tumor immunity. Blocking ILT2 also may reverse inhibition of ILT2-expressing lymphoid cells to further stimulate anti-tumor immune responses.

- We are conducting an open-label Phase 1/2 clinical trial evaluating NGM707 as a monotherapy and in combination with KEYTRUDA® (pembrolizumab) for the treatment of patients with advanced or metastatic solid tumors.
- A Phase 1 Part 1a cohort evaluating NGM707 as a monotherapy was initiated in 2021 and a Phase 1 Part 1b cohort evaluating NGM707 in combination with pembrolizumab was initiated in 2022. Two Phase 2 expansion cohorts evaluating NGM707 in combination with pembrolizumab in specific tumor types were initiated in the first quarter of 2023. The Part 1a cohort has completed enrollment. Enrollment in the Part 1b cohort is ongoing. We are no longer enrolling in the Phase 2 expansion cohorts.
- In January 2024, we released data from the Phase 1b cohort. As of the data cutoff date of November 6, 2023, we had enrolled 46 heavily pretreated patients across multiple indications. The combination of NGM707 and pembrolizumab was found to be generally well-tolerated at all four dose levels of NGM707. Of 37 response-evaluable patients (those completing at least one on-treatment scan), there were four confirmed partial responses, including one pathological complete response and 12 patients with stable disease, representing an 11% overall response rate, or ORR, and a 43% disease control rate, or DCR. The pathological complete response patient had significant target lesion reduction that allowed subsequent surgical resection of all gross residual disease, resulting in a confirmed pathological complete response. Moreover, three of the four patients with confirmed partial responses had active liver metastases at baseline that were fully or partially reduced. Of the eight response-evaluable patients with a diagnosis of microsatellite stable colorectal cancer, or MSS CRC, there were two confirmed partial responses (including the one pathological complete response) and two patients with stable disease, representing a 25% ORR and a 50% DCR. Immune checkpoint inhibitors, alone and in combination with other therapies, have shown low or no benefit in MSS CRC patients. In addition, preliminary evidence of myeloid reprogramming was seen in peripheral blood and in tumor biopsies consistent with the putative mechanism of NGM707.
- Enrollment in the Phase 1b cohort is projected to be complete in the second quarter of 2024. We anticipate providing an update in mid-2024 on the Phase 1 Part 1b cohort and planned next steps in the NGM707 program, including the potential for additional cohorts, which we expect will include MSS CRC patients. Clinical development of NGM707 beyond completing the Phase 1 Part 1b cohort, including initiating additional cohorts, will require us to obtain the additional capital necessary to conduct such development.

Aldafermin: Engineered Analog of Human Hormone FGF19 for the Potential Treatment of PSC

Aldafermin is an engineered analog of human hormone fibroblast growth factor 19, or FGF19, that is administered through a once-daily subcutaneous injection. PSC is a rare liver disease that irreparably damages the bile ducts, leading to bile acid dysregulation, which, ultimately, results in serious liver damage. There are currently no FDA- or EU- approved therapies for PSC. We have spent more than a decade discovering and developing product candidates that target various forms of cardio-metabolic and liver diseases, including PSC, and our product candidates, including aldafermin, stem from novel insights we have made in the regulation of bile acid synthesis and liver function.

Our decision to pursue the potential further clinical development of aldafermin as a treatment for PSC was informed by a large body of clinical data. Over 800 patients across multiple indications have been treated with aldafermin, which has repeatedly demonstrated powerful bile acid suppression in patients with PSC and non-alcoholic steatohepatitis, or NASH. As a result, we believe aldafermin may have the differentiated potential to directly address the underlying biology of PSC.

- We are continuing discussions with the FDA on the design of a potential registrational trial of aldafermin in PSC, including on the proposed utilization of a primary endpoint composed of surrogate biomarkers with the goal of obtaining accelerated approval from the FDA. We plan to continue working with the FDA to reach agreement on a trial design, with the goal of initiating trial enrollment by the end of 2024, contingent upon reaching agreement with the FDA on trial design and obtaining the additional capital necessary to conduct the potential registrational trial.
- In January 2024, we announced that the FDA granted orphan drug designation for aldafermin for the treatment of PSC.
- In November 2023, we presented positive Phase 2b results from the ALPINE 4 trial of aldafermin in compensated cirrhosis (F4) due to NASH at AASLD The Liver Meeting.

NGM120: GFRAL Antagonist for the Potential Treatment of Hyperemesis Gravidarum

NGM120 is an antagonist antibody that binds to glial cell-derived neurotrophic factor receptor alpha-like, or GFRAL, and is designed to block the effects of elevated serum levels of growth differentiation factor 15, or GDF15. We designed NGM120 as a potent, humanized monoclonal antibody inhibitor of GFRAL. Targeting GFRAL has the potential to ameliorate the metabolic and emetic effects caused by overstimulation of GFRAL neurons by excessive GDF15. HG is a severe condition that affects approximately 100,000 to 150,000 women in the United States each year. HG is characterized by intractable nausea and vomiting during pregnancy, resulting in dehydration, debility, weight loss and malnutrition. Genetic and serological studies have linked GDF15/GFRAL to HG. GDF15 levels have been shown to increase steadily in the first 12 weeks of pregnancy and, on average, are higher in women who experience nausea, vomiting or HG in pregnancy. There are currently no FDA-approved therapies for this condition.

- We are exploring the potential initiation of a Phase 2 proof-of-concept study of NGM120 for the treatment of HG by the end of 2024. We are in the process of producing a toxicology package to submit to regulatory authorities in Australia or the United Kingdom that we hope will support the potential initiation of that trial.
- We have previous clinical trial experience with NGM120, focused on a four-cohort Phase 1/2 clinical trial to assess NGM120's effect on cancer and cancer-related cachexia in patients with select advanced solid tumors, metastatic pancreatic cancer and metastatic castration-resistant prostate cancer. NGM120 has been well tolerated in the trial, as well as in a Phase 1 study, together comprising approximately 140 healthy volunteers and cancer patients treated. However, a clear signal of response to NGM120 was not detected, and we do not plan to develop NGM120 further in oncology.

Additional Programs Currently Without Meaningful Resource Allocation

Due to the need to conserve capital and prioritize focused execution, the remainder of our pipeline includes programs (NGM438, NGM831, NGM621 and NGM313) whose further development is dependent on our ability to secure potential future BD Arrangements, and, in the absence of such BD Arrangements, we are unlikely to advance development of these product candidates unless our portfolio prioritization changes and we are able to secure the additional capital necessary to fund such development. As a result, we are seeking BD Arrangements with third-party partners possessing sufficient resources and relevant domain expertise in the relevant therapeutic area in order to further clinical development of these programs. These programs include:

- NGM438, an antagonist antibody that is designed to inhibit leukocyte-associated immunoglobulin-like receptor 1, or LAIR1, and thereby promote anti-tumor immune responses, and NGM831, an antagonist antibody that is designed to block the interaction of Immunoglobulin-like transcript 3, or ILT3, receptor, with fibronectin, as well as other cognate ligands, currently being studied in a Phase 1/2 trial in combination with pembrolizumab. In 2022, we initiated an open-label, Phase 1/1b clinical trial to evaluate NGM438 as a monotherapy and in combination with pembrolizumab for the treatment of patients with advanced or metastatic solid tumors. Both the Phase 1 Part 1a cohort evaluating NGM438 as a monotherapy and the Phase 1 Part 1b cohort evaluating NGM438 in combination with pembrolizumab have completed enrollment. In 2022, we also initiated an open-label Phase 1/1b clinical trial to evaluate NGM831 as a monotherapy and in combination with pembrolizumab for the treatment of patients with advanced or metastatic solid tumors. Both the Phase 1 Part 1a cohort evaluating NGM831 as a monotherapy and the Phase 1 Part 1b cohort evaluating NGM831 in combination with pembrolizumab have completed enrollment. In 2023, we initiated an open-label Phase 1 Part 1c dose finding cohort of that trial evaluating the triplet combination of NGM831, NGM438 and pembrolizumab. This cohort is anticipated to complete enrollment in the first half of 2024.
- NGM621, a humanized Immunoglobulin 1, or IgG1, monoclonal antibody administered via intravitreal, or IVT, injection, which was engineered to potently bind to, and be a long-acting inhibitor of, complement C3 with the treatment goal of reducing the rate of disease progression in patients with geographic atrophy, or GA, secondary to age-related macular degeneration, or AMD. Our Phase 2 clinical trial which evaluated the efficacy and safety of NGM621 when given to patients with GA every four weeks or every eight weeks via IVT injections compared to sham control did not meet its primary endpoint of a statistically significant reduction in the rate of change in GA lesion area growth using slope analysis over 52 weeks of treatment with NGM621 versus sham.
- NGM313, an agonistic antibody that selectively activates fibroblast growth factor receptor 1c-beta-klotho, or FGFR1c/KLB, which regulates insulin sensitivity, blood glucose and liver fat and is administered every four weeks through a subcutaneous injection. Merck licensed NGM313 and other FGFR1c/KLB agonists in 2018, but terminated its license rights in 2023 and returned the program to us.

We have additional programs that are in various stages of development ranging from functional validation to preclinical development. Given the breadth of opportunities that have been, and may in the future be, produced by our discovery engine, we are also seeking BD Arrangements with third-party partners to progress, in whole or in part, the development of one or more of our preclinical programs.

The success of each of our product candidates may be affected by numerous factors, including preclinical data, clinical data, competition, manufacturing capability, sales capability, any future BD Arrangements, the sufficiency of our cash resources, regulatory matters, third-party payor matters and commercial viability. We do not have any products approved for sale and do not anticipate generating revenue from product sales for the foreseeable future, if ever.

Operational Updates

We do not own, and have no plans to establish, any manufacturing facilities. All of our manufacturing activities are outsourced to third-party contract development and manufacturing organizations or third-party contract manufacturing organizations, which we refer to collectively as CMOs, which are generally single-source suppliers of the drug product or drug substance they are manufacturing for us. We also utilize third-party contract research organizations, or CROs, to carry out many of our clinical development activities. We expect to be reliant on CMOs and CROs for these activities for the foreseeable future. Significant portions of our R&D resources are focused, and will continue to be focused, on the manufacture and testing of clinical trial materials. If our CMOs and CROs fail to satisfy their contractual duties to us or meet expected deadlines or if our CMOs experience difficulties in scaling production, higher than anticipated costs or lower than anticipated yields, product loss due to contamination, equipment failure, improper installation or operation of equipment, vendor or operator error, turnover of qualified staff or improper storage conditions, difficulties with quality control, product stability or quality assurance testing, or difficulties procuring raw materials or components, our ongoing and planned trials and possible acceleration or expansion of those trials may be delayed, perhaps substantially, or abandoned, which could materially and adversely affect our business. For example, in 2022, our planned investigational new drug application, or IND, submissions for NGM438 and NGM831 were delayed due to challenges at one of our CMOs with respect to the manufacture of those product candidates, primarily related to analytical method qualification and release testing. It is possible that we could experience further supply-related delays that would create supply challenges and possible timing delays for ongoing and planned clinical trials or delay the commencement of first-in-human testing of future product candidates. In addition, there have historically been times of increased competition in the biotechnology industry for available CMO manufacturing slots and other capabilities generally, which has had, and may in the future have, a negative impact on the availability of manufacturing capacity and therefore our ability to supply clinical trial materials for planned, ongoing, accelerated or expanded clinical trials. Our CMOs' facilities and operations have also been adversely affected by labor, raw material and component shortages, high turnover of staff and difficulties in hiring trained and qualified replacement staff. Changes in economic conditions, supply chain constraints, labor, raw material and component shortages and steps taken by governments and central banks could lead to higher inflation than previously experienced or expected, which could, in turn, lead to an increase in costs. These supply chain effects, increased competition and higher costs of acquired goods and services have not materially impacted our results of operations for the year ended December 31, 2023, although they may negatively impact our business operations and our financial results in the future.

In addition, some of our product candidates are currently manufactured solely at a facility in Lithuania. Following Russia's invasion of Ukraine in February 2022, NATO deployed additional military forces to Eastern Europe, including to Lithuania. The ongoing conflict between Russia and Ukraine and the retaliatory measures taken or that may be taken by the United States, NATO and others, including significant sanctions against Russia, create global security concerns and regional instability, including due to the possibility of expanded regional or global conflict, and are likely to have short-term and likely longer-term negative impacts on regional and global economies, any or all of which could disrupt our supply chain and adversely affect our ability to conduct ongoing and future clinical trials of our product candidates and our ability to raise capital on favorable terms.

In July 2022, we entered into an operating lease agreement, or the 2024 Lease Agreement, for our existing corporate office and laboratory space at 333 Oyster Point Blvd., South San Francisco, California, which allows us to remain in our existing facilities through December 31, 2033, subject to our compliance with the 2024 Lease Agreement. We also have an option to extend the 2024 Lease Agreement for a period of either eight or ten years after the initial ten-year term of January 1, 2024 to December 31, 2033. Base rent during the initial ten-year term of the 2024 Lease Agreement will total $124.1 million.

We seek to allocate our capital efficiently and strategically and fund our development portfolio based on each program's scientific and other merits. Our discipline has been demonstrated by our decision not to proceed

with development activities on multiple potentially viable product candidates for portfolio management and capital conservation reasons to concentrate our resources and focus our execution on selected programs. Given that we will receive minimal funding from Merck in the first half of 2024 and expect to receive no funding from Merck thereafter, we need to devote a substantial amount of our own financial resources to fund our R&D programs, and we may need to delay or suspend development activities on product candidates that we consider promising unless and until we are able to raise sufficient additional capital and/or we need to enter into additional BD Arrangements in order to proceed with such development through to regulatory approval.

Restructuring

In April 2023, we announced a restructuring of our workforce pursuant to which our workforce was reduced by 74 people, or approximately 33% of our existing headcount as of such date. The restructuring, including cash payments, was substantially completed by the end of the second quarter of 2023. We incurred approximately $4.9 million in restructuring charges in connection with the restructuring, consisting of (i) approximately $4.2 million in cash-based expenses related to employee severance and notice period payments, benefits and related costs, and (ii) approximately $0.7 million in noncash stock-based compensation expense related to the vesting of stock-based awards.

Financial Highlights

Since inception, we have funded our operations primarily through:

- fees received from collaboration partners, which since inception through December 31, 2023 includes reimbursement of R&D expenses of $544.6 million and upfront cash licensing fees of $123.0 million, primarily from Merck, and a payment of $20.0 million from Merck to license NGM313 and related compounds;
- proceeds from private placements of convertible preferred stock prior to our initial public offering, or IPO, including approximately $106.0 million of our Series E convertible preferred stock purchased by Merck;
- net proceeds from our IPO in 2019 of approximately $107.8 million, together with proceeds from the concurrent private placement of shares of common stock to Merck of $65.9 million;
- net proceeds of $134.6 million from the sale of approximately 5.3 million shares of our common stock in January 2021 upon completion of an underwritten public offering of our common stock, or the follow-on offering, which included the full exercise by the underwriters of their option to purchase additional shares; and
- net proceeds of $71.5 million through December 31, 2023 from sales of approximately 4.1 million shares of our common stock pursuant to at-the-market sales programs.

At December 31, 2023, we had $144.2 million in cash, cash equivalents and short-term marketable securities.

We have incurred net losses each year since our inception. As of December 31, 2023, we had an accumulated deficit of $724.0 million. Our net losses have resulted from costs incurred in connection with our R&D programs and general and administrative, or G&A, costs associated with our operations. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our clinical trials and our expenses on other R&D activities, and the amount of R&D funding we receive from future BD Arrangements, if any. For further discussion of our financial position and future sources of funding, see “Liquidity and Capital Resources” below.

Financial Operations Overview

Related Party Revenue

Our revenue to date has been generated primarily from recognition of license fees and R&D service funding pursuant to our collaboration with Merck. Merck is also a significant stockholder and, as such, collaboration revenue from Merck is referred to as related party revenue.

Since the Company's inception through December 31, 2023, Merck has paid us $619.8 million pursuant to the terms of our collaboration. Due to the nature of our collaboration with Merck and the timing of related revenue recognition, our revenue has fluctuated from period to period in the past and has decreased significantly in 2023 given the substantial reduction in the level of funding we have received from Merck. In this regard, for the first half of

2024, we expect funding and related party revenue from Merck to be minimal. We do not expect the research program term of the collaboration to be extended and accordingly we do not expect any funding from Merck thereafter. As a result, we believe that period-to-period comparisons of our revenue may not be meaningful and should not be relied upon as being indicative of future performance.

We use the cost-based input method in accordance with Accounting Standards Codification 606, or ASC 606, to calculate the corresponding amount of revenue to recognize at each reporting period. In applying the cost-based input measure of revenue recognition, we measure actual costs incurred relative to budgeted costs to fulfill our performance obligation. We apply considerable judgment when we re-evaluate the estimate of expected costs to satisfy the performance obligation each reporting period and make adjustments for any significant changes. A significant change in the estimate of expected costs under the Amended Collaboration Agreement could have a material impact on revenue recognized (including the possible reversal of previously recognized revenue) at each reporting period.

Research and Development Expenses

R&D efforts include drug discovery and other research activities and development activities relating to our product candidates, such as manufacturing drug substance, drug product and other clinical trial materials, conducting preclinical studies and clinical trials and providing support for these operations. Our R&D expenses consist of both internal and external costs. Our internal costs include employee, consultant, facility and other R&D operating expenses. Our external costs include fees paid to CROs and other service providers in connection with our clinical trials and preclinical studies, third-party license fees and CMO costs related to manufacturing drug substance, drug product and other clinical trial materials.

Our R&D efforts are extensive and costly. Our R&D expenses related to the development of our product candidates consist primarily of:

- fees paid to our CROs in connection with our clinical trials and other related clinical trial fees, when applicable;
- costs related to acquiring and manufacturing drug substance, drug product and clinical trial materials, and the costs of continued testing, such as process validation testing and stability testing, of drug substance and drug product;
- costs related to toxicology testing and preclinical studies;
- salaries and related overhead expenses, which include stock-based compensation and benefits, for personnel in R&D functions;
- fees paid to consultants for R&D activities;
- R&D operating expenses, including facility costs and depreciation expenses; and
- costs related to compliance with regulatory requirements.

We need to devote a substantial amount of our own financial resources to our wholly-owned development programs, and we recently have been focusing primarily on NGM707, aldafermin for the treatment of PSC and NGM120 for the treatment of HG. We will need to raise significant additional capital in order to conduct any potential registrational trial of aldafermin in PSC. In addition, clinical development of NGM707 beyond completing the Phase 1 Part 1b cohort evaluating NGM707 in combination with pembrolizumab, including initiating additional cohorts, will require us to obtain the additional capital necessary to conduct such development. Moreover, further development of NGM438, NGM831, NGM621, NGM313 and other product candidates and programs is dependent on our ability to secure potential future BD Arrangements and, in the absence of such BD Arrangements, we are unlikely to be able to advance development of those programs unless our portfolio prioritization changes and we are able to secure the additional capital necessary to fund such development. For the foreseeable future, we anticipate a significant portion of our financial resources will be directed to activities required for our ongoing NGM707 trial and efforts to initiate clinical trials of aldafermin in patients with PSC and NGM120 in patients with HG. We expect our R&D expenses will decrease in 2024 compared to 2023 as we suspend development activities related to our other programs and due to a decrease in compensation-related expenses following the workforce restructuring we implemented in the second quarter of 2023.

The successful development of our product candidates is highly uncertain. At this time, we cannot reasonably estimate the nature, timing or costs of the efforts that will be necessary to complete the remainder of the development of our product candidates or if we will be able to enter into BD Arrangements or otherwise raise adequate additional capital to meet our funding requirements to support such efforts. This is due to the numerous risks and uncertainties associated with developing medicines, including the uncertainty of:

- the scope, rate of progress, results and expense of our ongoing, as well as any future, clinical trials and other R&D activities;
- the impact and timing of any interactions with regulatory authorities, including timing and receipt of regulatory approvals;
- our ability to hire and retain key R&D personnel;
- manufacturing scale-up challenges, production shortages or other supply disruptions for clinical trial materials;
- the timely and quality performance of our CROs, CMOs and other service providers;
- the effect of products that may compete with our product candidates or other market developments; and
- our ability to expand and enforce our intellectual property portfolio.

A change in the development of a product candidate could cause a significant change in the costs, as well as the timing, associated with the development of that product candidate. For example, if the FDA or a comparable foreign health authority were to require us to conduct toxicology studies or clinical trials beyond those that we currently anticipate will be required for the initiation or completion of clinical development of a product candidate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development. For additional discussion of the risks and uncertainties associated with our R&D efforts, see “Risk Factors—Risks Related to Our Business and Industry,” “—Risks Related to Our Dependence on Third Parties,” “—Risks Related to Regulatory Approvals” and "—Risks Related to Our Intellectual Property” in Part I, Item 1A of this Annual Report.

General and Administrative Expenses

G&A expenses consist primarily of salaries and other related costs, including stock-based compensation and benefits. Other significant costs include legal fees relating to patent and corporate matters, facility costs not otherwise included in R&D expenses and fees for accounting and other consulting services.

We anticipate that our G&A expenses in 2024 will increase moderately compared to 2023. In 2024, our G&A expenses will include an increase of approximately $10.2 million in operating lease expenses under the 2024 Lease Agreement which will be partially offset by a decrease in compensation-related expenses due to the workforce restructuring we implemented in the second quarter of 2023. In addition, we may continue to incur expenses associated with negotiating and entering into BD Arrangements. Further, we expect to incur legal and other professional fees as a result of the potential consummation of the transactions contemplated under the Merger Agreement.

Results of Operations

Our results of operations were as follows (in thousands):

	Year Ended December 31,			Change	
	2023	2022	2021	2023 vs 2022	2022 vs 2021
Related party revenue	$ 4,417	$ 55,333	$ 77,882	$ (50,916)	$ (22,549)
Operating expenses:					
Research and development	118,040	181,067	161,712	(63,027)	19,355
General and administrative	37,840	40,515	36,865	(2,675)	3,650
Total operating expenses	155,880	221,582	198,577	(65,702)	23,005
Loss from operations	(151,463)	(166,249)	(120,695)	14,786	(45,554)
Interest income, net	9,322	3,714	420	5,608	3,294
Other expense, net	(234)	(132)	(60)	(102)	(72)
Net loss	$ (142,375)	$ (162,667)	$ (120,335)	$ 20,292	$ (42,332)

Related Party Revenue from Merck

Revenue decreased $50.9 million and $22.5 million in the years ended December 31, 2023 and 2022, respectively, compared to the prior year periods primarily due to a decrease in R&D revenue under our collaboration with Merck.

Due to the nature of our collaboration with Merck, the timing of related revenue recognition and the substantial decrease in the level of funding we received from Merck in 2023, our revenue has fluctuated from period to period in the past. In the first half of 2024, we expect funding, and related party revenue, from Merck to be minimal. We do not expect the research program term of the collaboration to be extended and accordingly we do not expect any funding from Merck thereafter.

Research and Development Expenses

Our R&D expenses by program were as follows (in thousands):

	Year Ended December 31,		
	2023	2022	2021
External R&D expenses:			
NGM707 (ILT2/ILT4 dual antagonist)	$ 16,834	$ 24,333	$ 5,521
NGM438 (LAIR1 antagonist)	7,461	8,504	4,074
NGM831 (ILT3 antagonist)	6,111	6,832	2,377
NGM120 (GFRAL antagonist)	4,233	7,183	6,856
Aldafermin (FGF19 analog)	4,118	13,665	31,766
Other external R&D expenses	3,187	1,186	1,437
NGM621 (C3 inhibitor)	2,036	23,738	20,415
Total external R&D expenses	43,980	85,441	72,446
Personnel expenses	47,241	62,151	56,209
Internal and unallocated R&D expenses (1)	26,819	33,475	33,057
Total R&D expenses	$ 118,040	$ 181,067	$ 161,712

(1) Internal and unallocated R&D expenses consist primarily of research supplies and consulting fees, which we deploy across multiple R&D programs and include restructuring charges of $3.8 million in the year ended December 31, 2023.

R&D expenses decreased $63.0 million in the year ended December 31, 2023 compared to the same period in 2022 primarily due to a decrease in expenses for our clinical trial of NGM621 of $21.7 million, a decrease in personnel expenses of $14.9 million, decreases in expenses for our manufacturing activities and our clinical trials of aldafermin of $9.5 million, decreases in expenses for our clinical trials of NGM707 and NGM120 of $7.5 million and $3.0 million, respectively, and a decrease in our internal and unallocated R&D expenses of $6.7 million which include restructuring charges of $3.8 million.

R&D expenses increased $19.4 million in the year ended December 31, 2022 compared to the same period in 2021 primarily due to increases in external expenses, driven by our ongoing clinical trials of NGM707, NGM831, NGM438 and NGM120, our completed trial of NGM621, and personnel expenses including an increase in stock-based compensation expense of $3.6 million, partially offset by a decrease in expenses for our manufacturing activities and our clinical trials of aldafermin.

We expect our R&D expenses will decrease in 2024 compared to 2023 as we suspend development activities related to certain of our solid tumor oncology and other programs and also due to a decrease in compensation-related expenses following the workforce restructuring we implemented in the second quarter of 2023.

General and Administrative Expenses

G&A expenses decreased $2.7 million in the year ended December 31, 2023 compared to the same period in 2022 primarily due to a decrease in compensation-related expenses of $3.2 million, partially offset by restructuring charges of $1.1 million.

G&A expenses increased $3.7 million in the year ended December 31, 2022 compared to the same period in 2021 primarily due to an increase in compensation-related expenses of $3.3 million including an increase in stock-based compensation expense of $2.5 million.

We anticipate that our G&A expenses in 2024 will increase moderately compared to 2023 due to an increase in operating lease expenses of approximately $10.2 million under the 2024 Lease Agreement, partially offset by a decrease in compensation-related expenses due to the workforce restructuring we implemented in the

second quarter of 2023. Further, we expect to incur legal and other professional fees as a result of the potential consummation of the transactions contemplated under the Merger Agreement.

Interest Income, net

Interest income, net increased $5.6 million and $3.3 million in the years ended December 31, 2023 and 2022, respectively, compared to same prior year periods primarily due to higher interest rates.

Liquidity and Capital Resources

Funding Requirements

We have no products approved for commercial sale, have not generated any revenue from product sales to date and we are not and may never be profitable. We have incurred losses in each year since commencing operations, and we expect to incur significant operating losses in 2024 and over the next several years. As of December 31, 2023, we had an accumulated deficit of $724.0 million, and we expect our accumulated deficit will continue to increase over time.

We have an active discovery research group and have spent significant resources to fund R&D of multiple pipeline programs. In 2023, our execution efforts and resources were focused on our solid tumor oncology programs, NGM707, NGM438, NGM831 and NGM120. In 2024, we are narrowing our focus to advance our three key priorities for clinical development -- our ongoing NGM707 clinical trial, the potential development of aldafermin for the treatment of PSC and the potential development of NGM120 for the treatment of HG -- as well as to continue our discovery research efforts. We will need to raise significant additional capital in order to conduct any potential registrational trial of aldafermin in PSC. In addition, clinical development of NGM707 beyond completing the Phase 1 Part 1b cohort evaluating NGM707 in combination with pembrolizumab, including initiating additional cohorts, will require us to obtain the additional capital necessary to conduct such development.

Due to the need to conserve capital and prioritize focused execution, the remainder of our pipeline includes programs whose further development is dependent on our ability to secure potential future BD Arrangements. We are seeking BD Arrangements with third-party partners with sufficient resources and relevant domain expertise in order to further the clinical development, if any, of NGM438, NGM831, NGM621 and NGM313. Further development of these programs, which are in therapeutic areas where clinical development is relatively resource intensive and can have long timelines to generate proof-of-concept data, is dependent on our ability to secure potential future BD Arrangements. In the absence of such BD Arrangements for these programs, we are unlikely to be able to advance their development unless our portfolio prioritization changes and we are able to secure the additional capital necessary to fund such development.

Prior to 2022, we received substantial R&D funding from our collaboration with Merck. However, beginning in April 2022 under the narrower scope of the Amended Collaboration Agreement, R&D funding from Merck was substantially lower than the R&D funding previously provided by Merck. For the first half of 2024 we expect minimal funding from Merck. We do not expect the research program term of the collaboration to be extended and accordingly we do not expect any funding from Merck thereafter.

At December 31, 2023, we had $144.2 million in cash, cash equivalents and short-term marketable securities. Our cash requirements for fiscal year 2024 will continue to be driven by our R&D and G&A expenses. In 2023 and 2022, our R&D expenses were $118.0 million and $181.1 million, respectively. In 2024, we expect our R&D expenses to decrease compared to 2023 as we limit our development activities to focus on the continued advancement of NGM707, as well as potential development activities related to aldafermin for the treatment of PSC and NGM120 for the treatment of HG. In 2023 and 2022, our G&A expenses were $37.8 million and $40.5 million, respectively. In 2024, we expect our G&A expenses will increase moderately compared to 2023 due to an increase in our operating lease costs of $10.2 million pursuant to the 2024 Lease Agreement we entered into in July 2022 for our current corporate office and laboratory space in South San Francisco, California. Our previous lease expired on December 31, 2023. The 2024 Lease Agreement commenced on January 1, 2024 and expires on December 31, 2033. In 2024, we are paying an initial monthly base rent of approximately $0.9 million, which is subject to increases at an annual rate of 3.5% each year thereafter, plus certain operating and tax expenses. Further, we expect to incur legal and other professional fees as a result of the potential consummation of the transactions contemplated under the Merger Agreement. In addition, if the Merger is not consummated, we may face increased difficulties raising capital and may need to significantly delay, scale back or discontinue development of, or abandon some or all of, our product candidates, or scale back or discontinue our discovery research efforts.

We believe that our existing cash, cash equivalents and short-term marketable securities will be sufficient to fund our operations for at least one year from the date this Annual Report is filed. We have based these estimates on plans and assumptions that may prove to be insufficient or inaccurate (for example, with respect to anticipated costs, timing or success of certain activities), and we could utilize our available capital resources sooner than we currently expect. These estimates do not include entering into BD Arrangements or receiving funds through debt or equity financing activities and, as a result, unless we significantly lower our use of cash, we may no longer have sufficient cash, cash equivalents and short-term marketable securities to fund our operations for more than one year at the end of future reporting periods. Our forecast of the time period 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 as a result of a number of factors, including the factors discussed under “Risk Factors” in Part I, Item 1A of this Annual Report. Nonetheless, in order to advance our current and potential future product candidates through development and to regulatory approval and commercialization, we need to raise significant additional capital and we will need to enter into BD Arrangements for one or more of our wholly-owned programs. Neither may be possible and, as a result, we may need to significantly delay, scale back or discontinue development of or abandon some or all of our product candidates, or scale back or discontinue our discovery research efforts, any of which could have a material adverse effect on our business, operating results and prospects, or we may be required to cease operations altogether.

Sources of Liquidity

Cash and Investments

As of December 31, 2023, we had cash and cash equivalents of $55.8 million and short-term marketable securities of $88.4 million.

Merck Collaboration

The revenue we received under our collaboration with Merck was our only source of revenue. In the first half of 2024, we expect funding, and related party revenue, from Merck to be minimal. We do not expect the research program term of the collaboration to be extended and accordingly we do not expect any funding from Merck thereafter.

Other Sources of Capital

In June 2023, we entered into Amendment No. 1, or the Amendment, to the Open Market Sales Agreement℠, or the Sales Agreement, with Jefferies LLC, or Jefferies, and we refer to the Sales Agreement as amended as the Amended Sales Agreement. As of December 31, 2023, up to $100.0 million of the Company's common stock remained available to be sold through or to Jefferies under the Amended Sales Agreement, subject to conditions specified in the Amended Sales Agreement.

We plan to finance our future cash needs through public or private equity or debt offerings, including under the Amended Sales Agreement, BD Arrangements or a combination of these potential financing sources. Additional capital may not be available in sufficient amounts, on reasonable terms or when we need it, if at all.

Our ability to raise additional capital through public or private equity or debt offerings may be adversely impacted by global economic conditions and the disruptions to, and volatility in, the credit and financial markets in the United States and worldwide, and in the biotechnology industry specifically. While the long-term economic impact of either the COVID-19 pandemic or ongoing global geopolitical conflicts is difficult to assess or predict, each of these events has caused significant disruptions to the global financial markets and contributed to a general global economic slowdown. Furthermore, higher inflation may result in increased operating costs (including labor costs) and may affect our operating budgets. In addition, the U.S. Federal Reserve raised interest rates in 2022 and 2023 in response to concerns about inflation. Elevated interest rates, especially if coupled with reduced government spending and volatility in financial markets, may further increase economic uncertainty. Moreover, the closures of Silicon Valley Bank, or SVB, and other banks in early 2023 have resulted in broader financial institution liquidity risk and concerns. Although we incurred no losses as a result of the closure of SVB or other banks, future adverse developments with respect to specific financial institutions or the broader financial services industry may lead to liquidity shortages that could materially harm our business and financial condition. In this regard, we continue to maintain our cash at SVB and other banks, often in balances that exceed the current FDIC insurance limits, and the failure of any bank in which we deposit our funds could reduce the amount of cash we have available for our operations or delay our ability to access our cash, cash equivalents and investments, including transferring funds, making payments or receiving funds. We also may not be able to access additional capital on favorable terms, or at all, which could materially and adversely affect our financial condition and our ability to pursue our business strategy.

In addition, if we raise additional funds by issuing equity securities, our stockholders may experience dilution. Debt financing, if available, may involve restrictive covenants. Any debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders. Furthermore, any securities that we may issue may have rights senior to those of our common stock and could contain covenants or protective rights that would lead to restrictions on our operations and potentially impair our competitiveness, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business.

While we may consider BD Arrangements to advance development of the product candidates that are our key priorities for clinical development, we are seeking BD Arrangements with third-party partners to progress, in whole or in part, the development of one or more of our other programs whose further development is dependent on our ability to secure potential future BD Arrangements or capital. We believe that this strategy, if successfully implemented, may enable more of the product candidates in our pipeline to be advanced effectively and efficiently. However, we may not be able to enter such BD Arrangements on acceptable terms, if at all. If we are unable to secure BD Arrangements to support these programs, we are unlikely to be able to advance their development unless our portfolio prioritization changes and we are able to secure additional capital necessary to fund such development. We may discontinue or abandon any or all of our programs, in which case we will not realize any return on our investments in these programs. Even if we are successful in securing BD Arrangements for these or our other programs, we will likely have limited control over the amount and timing of resources that our partners dedicate to the development or commercialization of the applicable product candidates. Our ability to generate revenue from any such BD Arrangement will depend on the specific terms of the BD Arrangement.

If we are unable to raise adequate additional capital through public or private equity or debt offerings, BD Arrangements or otherwise, on acceptable terms or at all, we may be delayed in or prevented from pursuing our planned and any future development and commercialization efforts, which will have a material adverse effect on our business, operating results and prospects, or we may be required to cease operations altogether.

Cash Flow Activity

The following table summarizes our cash flow activity for the periods indicated (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Net cash provided by (used in):			
Operating activities	$ (132,202)	$ (144,439)	$ (73,229)
Investing activities	114,287	14,322	(71,650)
Financing activities	1,775	54,233	149,657
Net (decrease) increase in cash, cash equivalents and restricted cash	$ (16,140)	$ (75,884)	$ 4,778

Operating Activities

Cash used in operating activities in 2023 was $132.2 million, which consisted of a net loss of $142.4 million, adjusted for noncash charges of $28.6 million and a change in operating assets and liabilities of $18.4 million. The noncash charges consisted primarily of stock-based compensation expense of $28.7 million, depreciation expense of $2.2 million and noncash lease expense of $2.1 million, partially offset by an accretion of the discount on our marketable securities of $5.6 million. The change in operating assets and liabilities was mainly driven by decreases in accrued liabilities of $17.0 million, a related party receivable of $7.5 million, operating lease liabilities of $5.4 million, accounts payable of $5.0 million and prepaid expenses and other current assets of $1.6 million.

Cash used in operating activities in 2022 was $144.4 million, which consisted of a net loss of $162.7 million, adjusted for noncash charges of $39.0 million and a change in operating assets and liabilities of $20.7 million. The noncash charges consisted primarily of stock-based compensation expense of $32.4 million, depreciation expense of $4.0 million and noncash lease expense of $1.9 million. The change in operating assets and liabilities was mainly driven by decreases in contract liabilities of $17.4 million, operating lease liabilities of $5.1 million, prepaid expenses and other current assets of $1.8 million and accrued liabilities of $0.6 million, partially offset by increases in accounts payable of $3.2 million and related party receivable of $2.6 million.

Cash used in operating activities in 2021 was $73.2 million, which consisted of a net loss of $120.3 million, adjusted for noncash charges of $42.9 million and a change in operating assets and liabilities of $4.2 million. The noncash charges consisted primarily of stock-based compensation expense of $26.2 million, depreciation expense

of $6.1 million, a decrease in related party contract assets due to the Amended Collaboration Agreement with Merck of $4.6 million, amortization of a premium on marketable securities of $3.5 million and noncash lease expense of $1.8 million. The change in operating assets and liabilities was mainly driven by increases in contract liabilities of $17.8 million, related party receivable of $4.6 million, prepaid expenses and other current assets of $4.1 million and accrued liabilities of $2.9 million, partially offset by decreases in operating lease liabilities of $4.8 million, accounts payable of $4.4 million and related party contract assets of $1.5 million.

Investing Activities

Cash provided by investing activities in 2023 was $114.3 million, which consisted primarily of $221.0 million in net proceeds on maturity of marketable securities offset by purchases of marketable securities of $105.4 million. Cash provided by investing activities in 2022 was $14.3 million, which consisted primarily of $289.0 million in net proceeds on maturity of marketable securities offset by purchases of marketable securities of $272.9 million. Cash used in investing activities in 2021 was $71.7 million, which consisted primarily of purchases of marketable securities of $293.5 million primarily from the net proceeds of the follow-on offering, partially offset by $223.5 million in net proceeds on maturity of marketable securities.

Financing Activities

Cash provided by financing activities in 2023 was $1.8 million, which consisted of net proceeds from our employee equity incentive and employee purchase plans. Cash provided by financing activities in 2022 was $54.2 million, which consisted of net proceeds of $49.4 million from the sale of shares of our common stock under the Sales Agreement and proceeds from our employee equity incentive and employee purchase plans of $4.8 million. Cash provided by financing activities in 2021 was $149.7 million, which consisted primarily of net proceeds from the follow-on offering of $134.6 million and proceeds from employee equity incentive and employee purchase plans of $14.9 million.

Contractual Obligations

We have contractual obligations related to our lease liabilities. In July 2022, we entered into the 2024 Lease Agreement for the corporate office and laboratory space in South San Francisco, California that we occupied pursuant to a sublease agreement through December 31, 2023. The initial term of the 2024 Lease Agreement commenced on January 1, 2024 and expires on December 31, 2033. Base rent for the initial ten-year term of the 2024 Lease Agreement amounts to $124.1 million. See Note 6 to our consolidated financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report for additional information.

We enter into agreements in the normal course of business with CROs for clinical trials, CMOs and other vendors for preclinical studies, supplies, manufacturing and other services and products for operating purposes. These agreements are generally cancellable at any time by us, upon prior written notice, and may include cancellation fees. Given that the amount and timing related to such payments are uncertain, they are not considered to be contractual obligations. As of December 31, 2023, we did not accrue for any termination or cancellation charges for any of these agreements as these were not considered probable. See "Liquidity and Capital Resources - Funding Requirements" above for information regarding our expected R&D spend.

We are obligated to make future payments to third parties under in-license agreements, including sublicense fees, low single-digit royalties and payments that become due and payable on the achievement of certain development and commercialization milestones. As the amount and timing of sublicense fees and the achievement and timing of these milestones are not probable and estimable, such commitments have not been included on our consolidated balance sheets and are not considered to be contractual obligations. See "Business— Licensing and Collaboration Arrangements" in Part I, Item 1 of this Annual Report for additional information regarding our current in-license agreements.

Critical Accounting Policies and Estimates

Our management’s discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which we have prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. The preparation of our consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of our consolidated financial statements, as well as revenue and expenses during the reported periods. We evaluate these estimates and judgments on an ongoing basis. In accordance with U.S. GAAP, we base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of

assets and liabilities that are not readily apparent from other sources. Actual results may differ materially from these estimates under different assumptions or conditions.

While our significant accounting policies are described in Note 2 to our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report, we believe that the following critical accounting policies are the most important policies in understanding and evaluating our financial condition and results of operations because they are complex and relate to the more significant areas involving management's judgment.

Accrued Research and Development Expenses

As part of the process of preparing these consolidated financial statements, we are required to estimate and accrue expenses, the largest of which are R&D expenses. This process involves:

- identifying services that have been performed on our behalf by third-party vendors and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost;
- estimating and accruing expenses in our consolidated financial statements as of each balance sheet date based on facts and circumstances known to us at the time; and
- periodically confirming the accuracy of our estimates with selected service providers and making adjustments, if necessary.

Examples of estimated R&D expenses that we accrue include:

- fees paid to CROs and other service providers in connection with preclinical studies and clinical trials;
- fees paid to investigative sites in connection with clinical trials;
- fees paid to CMOs in connection with the production of clinical trial materials and to procure raw materials and components for manufacture; and
- professional service fees for consulting and other services.

We base our expense accruals related to clinical trials on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and CROs that conduct and manage clinical trials on our behalf. The financial terms of these agreements vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical study milestones. Our service providers generally invoice us monthly in arrears for services performed. In accruing service fees, we estimate the period over which services will be performed and the level of effort to be expended in each period. If we do not identify costs that we have begun to incur or if we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates.

Our clinical trials have been executed with support from CROs and other vendors. We accrue costs for clinical trial activities performed by CROs based upon the estimated amount of work completed on each trial. For clinical trial expenses, the significant factors used in estimating accruals include the number of patients enrolled, the activities to be performed for each patient, the number of active clinical sites and the duration for which the patients will be enrolled in the trial. We monitor patient enrollment levels and related activities to the extent possible through internal reviews, correspondence with CROs and review of contractual terms. We base our estimates on the best information available at the time.

To date, we have not experienced significant changes in our estimates of accrued R&D expenses after a reporting period. However, due to the nature of estimates, we cannot assure that we will not make changes to our estimates in the future as we become aware of additional information about the status or conduct of our clinical trials and other research activities.

Stock-Based Compensation

We account for stock-based compensation arrangements in accordance with Topic 718, Compensation—Stock Compensation.

Stock-based compensation expense represents the grant-date fair value of stock options and restricted stock units, or RSUs, granted under our 2008 Equity Incentive Plan, or 2008 Plan, and our 2018 Amended and Restated Equity Incentive Plan, or 2018 Plan, and rights to acquire stock granted under our 2019 Employee Stock Purchase Plan, or ESPP, recognized over the requisite service period of the awards (usually the vesting period) on a straight-line basis, net of estimated forfeitures.

We use the Black-Scholes option-pricing model to calculate the grant-date fair value of stock options. The Black-Scholes option-pricing model requires the use of subjective assumptions, including stock price volatility, the expected term that stock options will remain outstanding, risk-free interest rates and expected dividends.

The expected volatility is based on the historical volatility of our stock and the stock of similar entities within our industry over periods commensurate with our expected term assumption. The expected term of stock option grants represents the weighted-average period the options are expected to remain outstanding and is based on the "simplified" method where the expected term is the midpoint between the vesting date and the end of the contractual term for each option. We base the risk-free interest rate on the interest rate payable on U.S. Treasury securities in effect at the time of grant for a period that is commensurate with the assumed expected option term. In reference to the expected dividend yield assumption, we have not historically paid, and do not expect for the foreseeable future to pay, a dividend.

Smaller Reporting Company Status

We are a smaller reporting company as defined in the Exchange Act. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as (i) our voting and non-voting common stock held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter or (ii) our annual revenue is less than $100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter.

As a smaller reporting company, we are permitted to comply with scaled-back disclosure obligations in our SEC filings compared to other issuers, including with respect to disclosure obligations regarding executive compensation in our periodic reports and proxy statements. We have elected to adopt certain of the accommodations available to smaller reporting companies, including but not limited to reduced disclosure obligations regarding executive compensation arrangements.

Recent Accounting Pronouncements

See Note 2 to our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report for a description of recent accounting pronouncements applicable to our business.

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

We are a smaller reporting company as defined by Rule 12b-2 of the Exchange Act and are not required to provide the information under this item.

Item 8. Financial Statements and Supplementary Data.

NGM BIOPHARMACEUTICALS, INC.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of NGM Biopharmaceuticals, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of NGM Biopharmaceuticals, Inc. (the Company) as of December 31, 2023 and 2022, the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2023, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended 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.

Critical Audit Matters

Critical audit matters are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. We determined that there are no critical audit matters.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2008.

San Mateo, California

March 11, 2024

NGM BIOPHARMACEUTICALS, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except per share amounts)

	December 31, 2023	December 31, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 55,816	$ 73,456
Short-term marketable securities	88,369	198,036
Related party receivable from collaboration	58	7,580
Prepaid expenses and other current assets	9,202	9,787
Restricted cash	2,999	—
Total current assets	156,444	288,859
Property and equipment, net	7,033	8,496
Operating lease right-of-use asset	—	2,096
Restricted cash	2,455	3,954
Other non-current assets	2,936	3,997
Total assets	$ 168,868	$ 307,402
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 2,982	$ 8,453
Accrued liabilities	17,099	33,638
Operating lease liability, current	—	5,385
Contract liabilities	—	366
Total current liabilities	20,081	47,842
Other non-current liabilities	149	—
Total liabilities	20,230	47,842
Commitments and contingencies (Note 6)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 10,000 shares authorized; no shares issued or outstanding as of December 31, 2023 and 2022, respectively	—	—
Common stock, $0.001 par value; 400,000 shares authorized; 82,907 and 81,885 shares issued and outstanding as of December 31, 2023 and 2022, respectively	83	82
Additional paid-in capital	872,545	841,413
Accumulated other comprehensive income (loss)	18	(302)
Accumulated deficit	(724,008)	(581,633)
Total stockholders' equity	148,638	259,560
Total liabilities and stockholders' equity	$ 168,868	$ 307,402

See accompanying notes to consolidated financial statements.

NGM BIOPHARMACEUTICALS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)

	Year Ended December 31,		
	2023	2022	2021
Related party revenue	$ 4,417	$ 55,333	$ 77,882
Operating expenses:			
Research and development	118,040	181,067	161,712
General and administrative	37,840	40,515	36,865
Total operating expenses	155,880	221,582	198,577
Loss from operations	(151,463)	(166,249)	(120,695)
Interest income, net	9,322	3,714	420
Other expense, net	(234)	(132)	(60)
Net loss	$ (142,375)	$ (162,667)	$ (120,335)
Net loss per share, basic and diluted	$ (1.73)	$ (2.03)	$ (1.56)
Weighted average shares used to compute net loss per share, basic and diluted	82,496	79,950	77,085

See accompanying notes to consolidated financial statements.

NGM BIOPHARMACEUTICALS, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In thousands)

	Year Ended December 31,		
	2023	2022	2021
Net loss	$ (142,375)	$ (162,667)	$ (120,335)
Other comprehensive gain (loss), net of tax:			
Net unrealized gain (loss) on available-for-sale marketable securities	320	(173)	(133)
Total comprehensive loss	$ (142,055)	$ (162,840)	$ (120,468)

See accompanying notes to consolidated financial statements.

NGM BIOPHARMACEUTICALS, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

	Common Stock		Additional Paid-In Capital	Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2020	70,583	$ 71	$ 578,599	$ 4	$ (298,631)	$ 280,043
Issuance of common stock under offering, net of issuance costs	5,324	5	134,575	—	—	134,580
Issuance of common stock upon exercise of stock options	1,845	2	12,360	—	—	12,362
Issuance of common stock under employee stock purchase plan	193	—	2,519	—	—	2,519
Issuance of common stock under Open Market Agreement, net of issuance costs	7	—	196	—	—	196
Issuance of common stock to participants in 401(k) plan	4	—	125	—	—	125
Vesting of common stock from early exercises	6	—	48	—	—	48
Stock-based compensation expense	—	—	26,242	—	—	26,242
Comprehensive loss	—	—	—	(133)	—	(133)
Net loss	—	—	—	—	(120,335)	(120,335)
Balance at December 31, 2021	77,962	$ 78	$ 754,664	$ (129)	$ (418,966)	$ 335,647
Issuance of common stock under Open Market Sale Agreement, net of issuance costs	3,246	3	49,443	—	—	49,446
Issuance of common stock upon exercise of stock options	426	1	2,983	—	—	2,984
Issuance of common stock under employee stock purchase plan	243	—	1,803	—	—	1,803
Issuance of common stock to participants in 401(k) plan	8	—	137	—	—	137
Stock-based compensation expense	—	—	32,383	—	—	32,383
Comprehensive loss	—	—	—	(173)	—	(173)
Net loss	—	—	—	—	(162,667)	(162,667)
Balance at December 31, 2022	81,885	$ 82	$ 841,413	$ (302)	$ (581,633)	$ 259,560
Issuance of common stock under employee stock purchase plan	544	1	1,106	—	—	1,107
Issuance of common stock upon exercise of stock options	351	—	668	—	—	668
Issuance of common stock to participants in 401(k) plan	127	—	639	—	—	639
Stock-based compensation expense	—	—	28,719	—	—	28,719
Comprehensive income	—	—	—	320	—	320
Net loss	—	—	—	—	(142,375)	(142,375)
Balance at December 31, 2023	82,907	$ 83	$ 872,545	$ 18	$ (724,008)	$ 148,638

See accompanying notes to consolidated financial statements.

NGM BIOPHARMACEUTICALS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2023	2022	2021
Cash flows from operating activities			
Net loss	$ (142,375)	$ (162,667)	$ (120,335)
Adjustments to reconcile net loss to net cash used in operating activities:			
Stock-based compensation expense	28,719	32,383	26,242
Reduction in related party contract asset due to Amended Collaboration Agreement with Merck	—	—	4,600
Depreciation	2,221	4,035	6,089
(Accretion of discount) amortization of premium on marketable securities	(5,552)	69	3,514
Noncash lease expense	2,096	1,949	1,810
Other noncash expenses	1,065	504	643
Changes in operating assets and liabilities:			
Related party receivable from collaboration	7,522	(2,635)	(4,612)
Related party contract asset	—	—	1,500
Prepaid expenses and other assets	1,646	1,790	(4,145)
Accounts payable	(4,977)	3,207	(4,417)
Accrued and other liabilities	(16,965)	(589)	2,893
Operating lease liability	(5,385)	(5,077)	(4,785)
Contract liabilities	(366)	(17,408)	17,774
Other noncurrent liabilities	149	—	—
Net cash used in operating activities	(132,202)	(144,439)	(73,229)
Cash flows from investing activities			
Purchase of marketable securities	(105,431)	(272,857)	(293,466)
Proceeds from maturities of marketable securities	220,970	289,037	223,500
Purchase of property and equipment	(1,252)	(1,858)	(1,684)
Net cash provided by (used in) investing activities	114,287	14,322	(71,650)
Cash flows from financing activities			
Proceeds from Open Market Agreement, net	—	49,446	196
Proceeds from exercise of stock options	668	2,984	12,362
Proceeds from employee stock purchase plan	1,107	1,803	2,519
Proceeds from follow on offering, net	—	—	134,580
Net cash provided by financing activities	1,775	54,233	149,657
Net (decrease) increase in cash and cash equivalents	(16,140)	(75,884)	4,778
Cash, cash equivalents and restricted cash, at beginning of period	77,410	153,294	148,516
Cash, cash equivalents and restricted cash, at end of period	$ 61,270	$ 77,410	$ 153,294
Supplemental disclosures of noncash investing and financing activities:			
Property and equipment purchases not yet paid	$ 122	$ 606	$ —
Right of use asset acquired under operating lease on the adoption of ASC 842	—	—	5,855

See accompanying notes to consolidated financial statements.

NGM BIOPHARMACEUTICALS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Description of Business

NGM Biopharmaceuticals, Inc. and its wholly-owned subsidiary, NGM Biopharmaceuticals Australia Pty Ltd., or NGM Australia, collectively referred to as the Company, is a biopharmaceutical company focused on discovering and developing novel, potentially life-changing medicines based on scientific understanding of key biological pathways underlying grievous diseases with critical unmet or underserved patient need. The Company's portfolio of product candidates ranges from early discovery to Phase 2b development.

The Company was incorporated in Delaware in December 2007 and commenced operations in 2008. The Company's headquarters are located at 333 Oyster Point Blvd., South San Francisco, California 94080.

Pending Transactions Contemplated by the Merger Agreement

On February 25, 2024, the Company entered into the Agreement and Plan of Merger, dated as of February 25, 2024, or the Merger Agreement, with Atlas Neon Parent, Inc., a Delaware corporation, or Parent, and Atlas Neon Merger Sub, Inc., a Delaware corporation and a wholly-owned subsidiary of Parent, or Merger Sub. Parent and Merger Sub are affiliates of The Column Group, LP, which, along with certain of its affiliates, is collectively referred to as TCG. TCG is the Company's largest stockholder, holding approximately 26.7% of the Company's common stock as of December 28, 2023.

The Merger Agreement provides for, among other things, (i) the acquisition of the Company by Parent through a cash tender offer, or the Offer, by Merger Sub for each issued and outstanding share of the Company’s common stock for $1.55 per share, or the Offer Price, and (ii) the merger of Merger Sub with and into the Company, or the Merger, with the Company surviving the Merger. Subject to the terms of the Merger Agreement, the Offer Price will be paid subject to any applicable tax withholding and without interest.

Upon the unanimous recommendation of the special committee of the Company's board of directors, or the Special Committee, the members of the Company's board (other than David V. Goeddel, Ph.D. and Roger M. Perlmutter, M.D., Ph.D. who recused themselves because of their relationship to TCG, and William J. Rieflin, who recused himself because he had entered into the Rollover Agreement (as defined in the Merger Agreement) at the time of the board's determination) have unanimously determined that the terms of the Offer, the Merger and the other transactions contemplated by the Merger Agreement are fair to and in the best interests of the Company and the Unaffiliated Stockholders (as defined in the Merger Agreement), authorized and approved the execution, delivery and performance by the Company of the Merger Agreement and, subject to the terms and conditions of the Merger Agreement, the consummation by the Company of the transactions contemplated by the Merger Agreement, declared the Merger Agreement and the transactions contemplated by the Merger Agreement advisable and recommended that the Unaffiliated Stockholders accept the Offer and tender their shares of common stock pursuant to the Offer.

The Offer is being made subject to all terms and conditions set forth in the Offer to Purchase, dated March 8, 2024, or, as it may be amended or supplemented from time to time, the Offer to Purchase, and in the related Letter of Transmittal, or as it may be amended or supplemented from time to time, the Letter of Transmittal. The Offer to Purchase and the Letter of Transmittal constitute the Offer. The Offer will expire at one minute after 11:59 p.m., Eastern time, on April 4, 2024, unless extended in accordance with the terms of the Offer and the Merger Agreement and the applicable rules and regulations of the U.S. Securities and Exchange Commission, or the SEC.

Pursuant to the terms of the Merger Agreement, as of the effective time of the Merger, or the Effective Time, by virtue of the Merger and without any action on the part of the holders, (i) each outstanding share of the Company's common stock (other than any shares of common stock (a) held in the treasury of the Company, (b) owned, directly or indirectly by TCG, Parent, Merger Sub or any other subsidiary of Parent, or the Rollover Stockholders (as defined in the Merger Agreement) at the commencement of the Offer, (c) irrevocably accepted for purchase in the Offer or (d) owned by any stockholders who are entitled to and who properly exercise appraisal rights under Delaware law) will be converted into the right to receive the Offer Price without interest, less any applicable tax withholding; (ii) the vesting of each option to purchase shares of the Company's common stock, or the Company Stock Options, shall be accelerated and (A) each Company Stock Option that has an exercise price per share that is less than the Offer Price, or an In-the-Money Option, that is then outstanding will be cancelled and, in exchange therefor, the holder of such cancelled In-the-Money Option will be entitled to receive an amount in cash, without any interest thereon and subject to applicable tax withholding, equal to the product of (x) the total number of shares of the Company's common stock underlying such In-the-Money Option as of immediately prior to

the Effective Time multiplied by (y) the excess of the Offer Price over the applicable exercise price per share of the common stock underlying such In-the-Money Option, and (B) each Company Stock Option that is not an In-the-Money Option will be cancelled for no consideration; and (iii) each unvested restricted stock unit, or RSU, of the Company that is then outstanding shall become immediately vested in full and cancelled, and, in exchange therefor, the holder of such cancelled RSU will be entitled to receive an amount in cash without interest, less any applicable tax withholding, equal to the Offer Price.

Merger Sub's obligation to accept shares of the Company's common stock tendered in the Offer is subject to conditions, including: (i) that the number of shares of the Company's common stock validly tendered and not validly withdrawn, equals at least a majority of all shares of the Company's common stock then owned by the Unaffiliated Stockholders as of the expiration of the Offer; (ii) the accuracy of the Company's representations and warranties contained in the Merger Agreement (subject to certain exceptions and qualifications described in the Merger Agreement and except, generally, for any inaccuracies that have not had a Company Material Adverse Effect (as defined in the Merger Agreement)); (iii) the Company's performance in all material respects of its obligations under the Merger Agreement and (iv) the other conditions set forth in Exhibit A to the Merger Agreement. The obligations of Parent and Merger Sub to consummate the Offer and the Merger under the Merger Agreement are not subject to a financing condition.

Following the completion of the Offer, subject to the absence of injunctions or other legal restraints preventing or prohibiting the consummation of the Merger, Merger Sub will merge with and into the Company, with the Company surviving as a wholly-owned subsidiary of Parent, pursuant to the procedure provided for under Section 251(h) of the Delaware General Corporation Law, without any additional stockholder approvals. The Merger will be effected as soon as practicable following the time at which Merger Sub purchases the shares of the Company's common stock validly tendered and not withdrawn in the Offer.

The Merger Agreement contains customary representations and warranties by Parent, Merger Sub and the Company. The Merger Agreement also contains customary covenants and agreements, including with respect to the operations of the Company's business between signing and closing.

The Merger Agreement contains customary non-solicitation restrictions prohibiting the Company's solicitation of alternative business combination transactions and restricts the Company's ability to furnish non-public information to, or participate in any discussions or negotiations with, any third party with respect to any such alternative business combination transaction, subject to customary exceptions in the event of an acquisition proposal that was not solicited in violation of these restrictions and that our board of directors (acting upon the recommendation of the Special Committee) or the Special Committee determines constitutes or could reasonably be expected to lead to a Superior Company Proposal (as defined in the Merger Agreement).

The Merger Agreement contains customary termination rights for both Parent and Merger Sub, on the one hand, and the Company, on the other hand, including, among others, for failure to consummate the Offer on or before June 15, 2024. If the Merger Agreement is terminated under certain circumstances specified in the Merger Agreement in connection with the Company's entry into an agreement with respect to a Superior Company Proposal, the Company will be required to pay Parent a termination fee of $2.0 million.

We anticipate that the Offer and the Merger contemplated under the Merger Agreement will be consummated in the second quarter of 2024. However, there can be no assurance that the Offer and the Merger contemplated by the Merger Agreement will be completed. If the Merger is effected, the Company's common stock will be delisted from The Nasdaq Stock Market LLC and the Company's obligation to file periodic reports under the Securities Exchange Act of 1934, as amended, or the Exchange Act, will terminate, and NGM Bio will be privately held.

Pending consummation of the Offer and the Merger, the Merger Agreement generally requires the Company to operate in the ordinary course of business consistent with past practice and restricts the Company from taking certain actions with respect to the Company's business and financial affairs without Parent's consent. Such restrictions will be in place until either the Offer and the Merger are consummated or the Merger Agreement is terminated. These restrictions could restrict the Company's ability to pursue or prevent the Company from pursuing attractive business or fundraising opportunities (if any) that arise prior to the consummation of the Offer and the Merger. For example, the Company's ability to raise additional capital through the issuance of equity securities, incur indebtedness or to pursue business development or similar arrangements are generally restricted without Parent's consent during the pendency of the Offer and the Merger.

2. Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP, and include the consolidated accounts of NGM Biopharmaceuticals, Inc. and its wholly-owned foreign subsidiary, NGM Australia. All intercompany balances and transactions have been eliminated upon consolidation.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make judgments, assumptions and estimates that affect the reported amounts of assets, liabilities, revenues and expenses. Specific accounts that require management estimates include, but are not limited to, stock-based compensation expense, clinical trial accruals, other accruals including contract manufacturing accruals and revenue recognition in accordance with Accounting Standards Update, or ASU, 2014-09, Revenue from Contracts with Customers (Topic 606), or ASC 606. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could differ materially from those estimates, and to the extent that there are differences between management's estimates and actual results, the Company's future financial statement presentation, financial condition, results of operations and cash flows may be affected.

Sources and Uses of Liquidity

Since inception, the Company has incurred net losses and negative cash flow from operations. During the years ended December 31, 2023, 2022 and 2021, the Company incurred net losses of $142.4 million, $162.7 million and $120.3 million, respectively. As of December 31, 2023, the Company had an accumulated deficit of $724.0 million. The Company expects its accumulated deficit will continue to increase over time and does not expect to experience positive cash flows from operations in the near future.

As of December 31, 2023, the Company had $144.2 million of cash, cash equivalents and short-term marketable securities.

In June 2020, the Company entered into an Open Market Sale Agreement℠, or the Sales Agreement, with Jefferies LLC, or Jefferies, pursuant to which the Company could sell, from time to time, through or to Jefferies, up to an aggregate of $150.0 million of the Company’s common stock. In June 2023, the Company entered into Amendment No. 1, or the Amendment, to the Sales Agreement, and the Sales Agreement as amended is referred to as the Amended Sales Agreement. In connection with the Amendment, the Company filed a new shelf registration statement on Form S-3 which the SEC declared effective in August 2023. The Amended Sales Agreement provides for the issuance and sales of shares of the Company's common stock having an aggregate offering price of up to $100.0 million through or to Jefferies. As of December 31, 2023, up to $100.0 million of the Company's common stock remained available to be sold under the Amended Sales Agreement, subject to conditions specified in the Amended Sales Agreement.

The Company believes its existing cash, cash equivalents and short-term marketable securities will be sufficient to fund its operations for a period of at least one year from the issuance of these consolidated financial statements.

To fully implement the Company’s business plan and fund its operations, the Company needs to raise significant additional capital through public or private equity or debt offerings (which may include potential net proceeds from future sales of the Company's common stock, if any, under the Amended Sales Agreement), potential future collaboration, out licensing, partnering or other business development arrangements, or BD Arrangements, or a combination of the foregoing. None may be possible and, as a result, the Company may need to significantly delay, scale back or discontinue development of or abandon some or all of its product candidates, or scale back or discontinue the Company's discovery research efforts, any of which could have a material adverse effect on the Company's business, operating results and prospects, or the Company may be required to cease operations altogether.

Fair Value of Financial Instruments

The carrying amounts of cash and cash equivalents, the related party receivable from collaboration and other current assets and liabilities approximate their respective fair values due to their short-term nature.

Cash and Cash Equivalents

Cash and cash equivalents are stated at fair value. Cash equivalents are securities with an original maturity of three months or less at the time of purchase. The Company limits its credit risk associated with cash and cash equivalents by investing in highly rated money market funds and placing its cash with banks it believes are highly creditworthy in amounts that may at times exceed Federal Deposit Insurance Corporation, or FDIC, limits. As of December 31, 2023 and 2022, cash and cash equivalents consisted of bank deposits and investments in money market funds. The Company's bank deposits as of December 31, 2023 and 2022 included certain amounts over the FDIC limits.

Marketable Securities

The appropriate classification of the Company's marketable securities is determined at the time of purchase and such designations are re-evaluated at each balance sheet date. The Company's securities are considered as available-for-sale and carried at estimated fair values and reported in cash equivalents and short-term marketable securities. Unrealized gains and losses on available-for-sale securities are excluded from net loss and reported in accumulated other comprehensive income (loss) as a separate component of stockholders' equity. Interest income, net, includes interest, amortization of purchase premiums and accretion of purchase discounts, realized gains and losses on sales of securities and other-than-temporary declines in the fair value of securities, if any. The cost of securities sold is based on the specific identification method.

The Company's investments are regularly reviewed for any impairments in fair value. This review includes the consideration of the cause of the impairment, including the creditworthiness of the security issuers, the number of securities in an unrealized loss position, the severity and duration of the unrealized losses, whether the Company has the intent to sell the securities and whether it is more likely than not that the Company will be required to sell the securities before the recovery of their amortized cost basis. When the Company determines that the investment is impaired, the Company reduces the carrying value of the security it holds and records a loss for the amount of such decline. As of December 31, 2023, the Company did not record any impairments related to its securities.

Restricted Cash

The Company's restricted cash balances represent collateral required under the Company's facility lease agreements. Collateral that will not be returned to the Company within twelve months from the date of these consolidated financial statements is classified as a non-current asset.

Concentration of Credit and Other Risks

Cash, cash equivalents and marketable securities from the Company's available-for-sale and marketable securities portfolio potentially subject the Company to concentrations of credit risk. The Company is invested in money market funds and marketable securities through custodial relationships with major United States, or U.S., banks. Under its investment policy, the Company limits amounts invested in such securities by credit rating, maturity, industry group, investment type and issuer, except for securities issued by the U.S. government.

Related party receivables from collaboration and partnering arrangements are typically unsecured. Accordingly, the Company may be exposed to credit risk generally associated with its current amended and restated research collaboration, product development and license agreement, or the Amended Collaboration Agreement, with Merck Sharp & Dohme, LLC, or Merck, and any future collaboration or partnering arrangements with other potential future partners. To date, the Company has not experienced any losses related to these receivables.

Amounts recognized as revenue prior to the Company having an unconditional right (other than a right that is conditioned only on the passage of time) to receipt are recorded as contract assets in the Company's consolidated balance sheets. Although the Company expects to have an unconditional right to receive such amounts, the Company may be exposed to the risk of not receiving the recorded amounts under its current collaboration agreement with Merck and any future collaboration or partnering arrangements with other potential future partners. To date, the Company has not experienced any losses related to contract assets.

The Company's related party revenue from Merck accounted for 100% of the Company's revenue for the years ended December 31, 2023, 2022 and 2021.

Property and Equipment, Net

Property and equipment are recorded at cost and consist of computer equipment, laboratory equipment and office furniture and leasehold improvements. Maintenance and repairs, and training on the use of equipment, are expensed as incurred. Costs that improve assets or extend their economic lives are capitalized. Depreciation is recognized using the straight-line method based on an estimated useful life of the asset, which is as follows:

Computer equipment	3 years
Laboratory equipment and office furniture	3 years
Leasehold improvement	Shorter of life of asset or lease term

Leases

The Company determines if an arrangement is a lease at inception. Lease assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Lease liabilities are measured at the lease commencement date as the present value of future minimum lease payments over the term of the lease. Lease assets are measured as the lease liability plus initial direct costs and prepaid lease payments less lease incentives. In measuring the present value of the future minimum lease payments, the Company generally uses its incremental borrowing rate. The lease term is the noncancelable period of the lease and includes options to extend or terminate the lease when it is reasonably certain that an option will be exercised. Leases with terms of 12 months or less are not recorded on the Company's balance sheet. Lease expense is recognized on a straight-line basis over the lease term, or in some cases, the useful life of the underlying asset. The Company accounts for the lease and non-lease components as a single lease component. The Company’s lease agreement for its corporate office and laboratory space is classified as an operating lease.

Impairment of Long-Lived Assets

Long-lived assets, such as property and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated undiscounted future cash flows, an impairment charge is recognized as the amount by which the carrying amount of the asset exceeds the estimated fair value of the asset. As of December 31, 2023 and 2022, no revision to the remaining useful lives or write-down of long-lived assets was required.

Income Taxes

Income taxes are accounted for under the liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and the operating loss and tax credit carryforwards. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized. Deferred tax assets and liabilities are measured at the balance sheet date using the enacted tax rates expected to apply 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 the period such tax rate changes are enacted. The net deferred tax assets have been fully offset by a valuation allowance.

Revenue Recognition

Under ASC 606, the Company estimates each arrangement’s total transaction price, which includes unconstrained variable consideration, and the recognition of that transaction price based on a cost-based input method that requires estimates to determine, at each reporting period, the percentage of completion based on the estimated total effort required to complete the project and the total transaction price. The unconstrained variable consideration amount included in the transaction price represents an amount for which it is probable that a significant reversal of cumulative revenue recognized will not occur.

The Company applies the following five-step revenue recognition model outlined in ASC 606 to adhere to this core principle: (1) identify the contract(s) with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligations in the contract; and (5) recognize revenue when (or as) the Company satisfies a performance obligation.

All of the Company's revenue to date has been generated from its collaboration agreements, primarily its collaboration agreement with Merck. The terms of these agreements generally require the Company to provide (i) license options for its compounds, (ii) research and development, or R&D, services and (iii) non-mandatory services in connection with participation in research or steering committees. Payments received under these arrangements may include non-refundable upfront license fees, partial or complete reimbursement of R&D costs, contingent consideration payments based on the achievement of defined collaboration objectives and royalties on sales of commercialized products. In some agreements, the collaboration partner is solely responsible for meeting defined objectives that trigger contingent or royalty payments. Often the partner only pursues such objectives subsequent to exercising an optional license on compounds identified as a result of the R&D services performed under the collaboration agreement.

The Company assesses whether the promises in its arrangements, including any options provided to the partner, are considered distinct performance obligations that should be accounted for separately. Judgment is required to determine whether the license to a compound is distinct from R&D services or participation in research or steering committees, as well as whether options create material rights in the contract. In situations when a contract includes distinct R&D services that are substantially the same and have the same pattern of transfer to the customer over time, they are recognized as a series of distinct services.

The transaction price in each arrangement is generally comprised of a non-refundable upfront fee and unconstrained variable consideration related to the performance of R&D services. The unconstrained variable consideration amount included in the transaction price represents an amount for which it is probable that a significant reversal of cumulative revenue recognized will not occur. The Company typically submits a budget for the R&D services to the partner in advance of performing the services. The transaction price is allocated to the identified performance obligations based on the standalone selling price, or SSP, of each distinct performance obligation. Judgment is required to determine the SSP. In instances where the SSP is not directly observable, such as when a license or service is not sold separately, SSP is determined using information that may include market conditions and other observable inputs. The Company utilizes judgment to assess the nature of its performance obligations to determine whether they are satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress toward completion. The Company evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition.

The Company's collaboration agreements may include contingent payments related to specified development and regulatory milestones or contingent payments for royalties based on sales of a commercialized product. Milestones can be achieved for such activities in connection with progress in clinical trials, regulatory filings in various geographical markets and marketing approvals from health authorities. Sales-based royalties are generally related to the volume of annual sales of a commercialized product. At the inception of each agreement that includes such payments, the Company evaluates whether the milestones are considered probable of being achieved and estimates the amount to be included in the transaction price by using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the Company's or its partner's control, such as those related to regulatory approvals, are not considered probable of being achieved until those approvals are received. The transaction price is then allocated to each performance obligation based on a relative SSP basis. At the end of each subsequent reporting period, the Company re-evaluates the probability of achievement of each such milestone and any related constraint and, if necessary, adjusts its estimate of the overall transaction price. Pursuant to the guidance in ASC 606, sales-based royalties are not included in the transaction price. Instead, royalties are recognized at the later of when the performance obligation is satisfied or partially satisfied, or when the sale that gives rise to the royalty occurs.

Contract modifications, defined as changes in the scope or price (or both) of a contract that are approved by the parties to the contract, such as a contract amendment, exist when the parties to a contract approve a modification that either creates new, or changes existing, enforceable rights and obligations of the parties to the contract. Depending on facts and circumstances, the Company accounts for a contract modification as one of the following: (i) a separate contract; (ii) a termination of the existing contract and a creation of a new contract; or (iii) a combination of the preceding treatments. A contract modification is accounted for as a separate contract if the scope of the contract increases because of the addition of promised services that are distinct and if the price of the contract increases by an amount of consideration that reflects the Company's standalone selling prices of the additional promised services. When a contract modification is not considered a separate contract and the remaining services are distinct from the services transferred on or before the date of the contract modification, the Company accounts for the contract modification as a termination of the existing contract and a creation of a new contract. When a contract modification is not considered a separate contract and the remaining services are not distinct, the

Company accounts for the contract modification as an add-on to the existing contract and as an adjustment to revenue on a cumulative catch-up basis.

Research and Development

R&D costs are expensed as incurred. R&D expenses primarily include salaries and benefits for medical, clinical, quality, preclinical, manufacturing and research personnel, costs related to research activities, preclinical studies, clinical trials, drug manufacturing expenses and allocated overhead and facility occupancy costs. The Company accounts for non-refundable advance payments for goods or services that will be used in future R&D 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 R&D expenses. The Company accrues estimated costs for its clinical trial activities performed by third parties, including clinical research organizations, or CROs, and other service providers based upon estimates of the proportion of work completed over the life of the individual clinical trial and patient enrollment rates in accordance with associated agreements. The Company's estimates are determined through detailed discussions with internal personnel and its service providers as to the progress of each clinical trial and by reviewing contracts, vendor agreements and purchase orders for previously agreed-upon rates and fees to be paid for such services.

Stock-Based Compensation

The Company’s stock-based compensation program includes awards made under the Company's 2018 Equity Incentive Plan, or the 2018 Plan, and the 2019 Employee Stock Purchase Plan, or ESPP. The Company measures stock-based compensation expense for all stock-based awards at the grant date based on the fair value measurement of the award. The expense is recorded on a straight-line basis over the requisite service period, which is generally the vesting period, for the entire award. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures materially differ from estimates. The Company calculates the fair value measurement of stock options using the Black-Scholes option-pricing model.

Comprehensive Loss

Comprehensive loss is composed of net loss and certain changes in stockholders’ equity that are excluded from net loss, primarily unrealized gains or losses, net of taxes, on the Company’s marketable securities.

Net Loss per Share

Basic net loss per share is calculated by dividing net loss by the weighted average number of shares outstanding during the period, less shares subject to repurchase and excludes any dilutive effects of stock-based options and awards. Diluted net income per share is computed by giving effect to all potentially dilutive shares, including common stock issuable upon exercise of stock options and the assumed vesting of outstanding RSUs. However, where there is a diluted net loss per share, no adjustment is made for potentially issuable shares since their effect would be anti-dilutive. In this case, diluted net loss per share is equal to basic net loss per share.

Net loss per share was computed as follows (in thousands, except per share amounts):

	Year Ended December 31,		
	2023	**2022**	**2021**
Numerator:			
Net loss	$ (142,375)	$ (162,667)	$ (120,335)
Denominator:			
Weighted average number of shares used in calculating net loss per share—basic and diluted	82,496	79,950	77,085
Net loss per share—basic and diluted	$ (1.73)	$ (2.03)	$ (1.56)

Potentially dilutive securities that were not included in the diluted per share calculations because they would be anti-dilutive were as follows (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Options to purchase common stock	12,990	14,215	10,485
Shares committed under the ESPP	1,337	1,222	390
Shares subject to RSUs	622	—	—
Total	14,949	15,437	10,875

Segment and Geographical Information

The Company operates in one business segment. Substantially all of the Company's long-lived assets, primarily comprised of property and equipment, are based in the United States. For the years ended December 31, 2023, 2022 and 2021, the Company's revenues were entirely within the United States based upon the location of the Company and Merck.

Recent Accounting Pronouncements

New accounting pronouncements are issued by the Financial Accounting Standards Board, or FASB, or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the impact of recently issued standards that are not yet effective will not have a material impact on the Company's results of operations and financial position upon adoption.

Recent Accounting Pronouncements Not Yet Adopted

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures. The guidance requires public business entities to disclose in their rate reconciliation table additional categories of information about federal, state and foreign income taxes and to provide additional information about reconciling items that meet a quantitative threshold. The guidance requires all entities to disclose annually income taxes paid (net of refunds received) disaggregated by federal (national), state and foreign taxes and to disaggregate the information by jurisdiction based on a quantitative threshold. For public business entities, the guidance is effective for annual periods beginning after December 15, 2024. All entities should apply the guidance prospectively but have the option to apply it retrospectively. Early adoption is permitted. The Company is currently assessing the timing of adoption and expects the adoption of ASU 2023-09 will not have a material impact on its results of operations and financial position.

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures. The guidance requires a public entity to disclose for each reportable segment, on an interim and annual basis, the significant expense categories and amounts that are regularly provided to the chief operating decision-maker, or CODM, and included in each reported measure of a segment's profit or loss. Public entities with a single reportable segment are required to provide the new disclosures and all the disclosures required under Accounting Standards Codification (ASC) Topic 280, Segment Reporting. Additionally, ASU 2023-07 requires a public entity to disclose the title and position of the individual or the name of the group or committee identified as the CODM. All public entities are required to explain in the notes to the financial statements how the CODM uses each reported measure of a segment's profit or loss in assessing segment performance and determining how to allocate resources. The guidance is effective for public entities for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. The guidance is applied retrospectively to all periods presented in the financial statements, unless it is impracticable. The segment expense categories and amounts disclosed in the prior periods should be based on the significant segment expense categories identified and disclosed in the period of adoption. The Company is currently assessing the timing of adoption and expects the adoption of ASU 2023-07 will not have a material impact on its results of operations and financial position.

3. Fair Value Measurements

Cash equivalents and marketable securities are classified as available-for-sale securities and consisted of the following (in thousands):

	Amortized Cost	Unrealized Gain	Unrealized Loss	Fair Value
As of December 31, 2023				
Money market funds	$ 49,374	$ —	$ —	$ 49,374
U.S. Treasury securities	47,901	23	(1)	47,923
Corporate and agency bonds	20,820	8	(7)	20,821
Commercial paper	19,630	1	(6)	19,625
Totals	$ 137,725	$ 32	$ (14)	$ 137,743
Classified as:				
Cash and cash equivalents				$ 49,374
Short-term marketable securities (amortized cost of $88,351)				88,369
Total				$ 137,743

	Amortized Cost	Unrealized Gain	Unrealized Loss	Fair Value
As of December 31, 2022				
U.S. Treasury securities	$ 89,039	$ 7	$ (160)	$ 88,886
Money market funds	62,844	—	—	62,844
Corporate and agency bonds	46,300	—	(200)	46,100
Commercial paper	42,746	—	—	42,746
U.S. government agency securities	20,253	51	—	20,304
Totals	$ 261,182	$ 58	$ (360)	$ 260,880
Classified as:				
Cash and cash equivalents				$ 62,844
Short-term marketable securities (amortized cost of $198,338)				198,036
Total				$ 260,880

The cash and cash equivalents amount in the table above excludes cash on deposit with banks of $6.4 million and $10.6 million as of December 31, 2023 and 2022, respectively.

To date, the Company has not recorded any impairment charges against the market value of its marketable securities. In determining whether an investment is impaired, the Company considers various factors including the length of time and extent to which the market value has been less than cost, the financial condition and near-term prospects of the issuer and the Company's intent and ability to retain its investment in the issuer for a time period sufficient to allow for any anticipated recovery in market value.

As of December 31, 2023 and 2022, all of the Company's marketable securities had remaining contractual maturities of less than one year. As of December 31, 2023, the Company had nine marketable securities in an unrealized loss position compared to 19 marketable securities in an unrealized loss position as of December 31, 2022. Marketable securities that were in unrealized loss positions as of December 31, 2023 and 2022 had been in an unrealized loss position for less than twelve months. The Company does not need to, nor does it intend to, sell marketable securities that are in an unrealized loss position, and it is highly unlikely that the Company will be required to sell the investments before recovery of their amortized cost basis, which may be maturity.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following table summarizes, by major security type, the Company's available-for-sale securities that were measured at fair value on a recurring basis and were categorized using the fair value hierarchy (in thousands):

	Fair Value Measurements			
As of December 31, 2023	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets:				
Money market funds	$ 49,374	$ —	$ —	$ 49,374
U.S. Treasury securities	47,923	—	—	47,923
Corporate and agency bonds	—	20,821	—	20,821
Commercial paper	—	19,625	—	19,625
Totals	$ 97,297	$ 40,446	$ —	$ 137,743

	Fair Value Measurements			
As of December 31, 2022	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets:				
U.S. Treasury securities	$ 88,886	$ —	$ —	$ 88,886
Money market funds	62,844	—	—	62,844
Corporate and agency bonds	—	46,100	—	46,100
Commercial paper	—	42,746	—	42,746
U.S. government agency securities	—	20,304	—	20,304
Totals	$ 151,730	$ 109,150	$ —	$ 260,880

The Level 1 fair values are based on quoted prices in active markets for identical assets or liabilities. The Company estimates the fair values of investments in commercial paper, corporate and agency bond securities and U.S. government agency securities using Level 2 inputs by taking into consideration valuations obtained from third-party pricing services.

There were no transfers of assets or liabilities between the fair value measurement levels during the years ended December 31, 2023 and 2022.

4. Balance Sheet Components

Cash, Cash Equivalents and Restricted Cash

A reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets to the amount reported within the consolidated statements of cash flows is as follows (in thousands):

	December 31,	
	2023	**2022**
Cash and cash equivalents	$ 55,816	$ 73,456
Restricted cash	5,454	3,954
Total cash, cash equivalents and restricted cash	$ 61,270	$ 77,410

Property and Equipment, Net

Property and equipment consisted of the following (in thousands):

	December 31,	
	2023	2022
Leasehold improvements	$ 25,840	$ 25,866
Laboratory equipment and office furniture	24,056	23,807
Computer equipment	1,583	1,433
Construction-in-progress	395	284
Total property and equipment, gross	51,874	51,390
Less: accumulated depreciation	(44,841)	(42,894)
Total property and equipment, net	$ 7,033	$ 8,496

Depreciation expense for the years ended December 31, 2023, 2022 and 2021 was approximately $2.2 million, $4.0 million and $6.1 million, respectively.

Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	December 31,	
	2023	2022
Clinical trials and research and development costs	$ 6,942	$ 14,597
Personnel-related costs	6,439	9,181
Accrued expenses	3,257	3,834
Manufacturing costs (1)	461	6,026
Total accrued liabilities	$ 17,099	$ 33,638

(1) As of December 31, 2022, the Company recorded an aggregate of $3.0 million for cancellation charges related to the Company's cancellation of its agreement with Lonza Ltd for the Phase 3 manufacturing of NGM621 following Merck's decision to not exercise its option to license NGM621 and the Company's decision not to proceed with further development of NGM621, of which $1.8 million was recorded in accrued manufacturing costs and $1.2 million was included in accounts payable. See Note 5 for additional information.

5. Research Collaboration and License Agreements

Merck

In 2015, the Company entered into a research collaboration, product development and license agreement with Merck, which, together with amendments made prior to June 30, 2021, is referred to as the Original Collaboration Agreement, covering the discovery, development and commercialization of novel therapies across a range of therapeutic areas, including a broad, multi-year drug discovery and early development program that was financially supported by Merck, and scientifically directed by the Company with input from Merck. The original research program term of the collaboration was for five years and was extended by Merck for an additional two years through March 2022. As part of that extension, Merck agreed to continue to fund up to $75.0 million of the Company's R&D efforts each year consistent with the initial five-year research term and, in lieu of a $20.0 million extension fee payable to the Company, Merck agreed to make additional payments totaling up to $20.0 million in support of the Company's R&D activities during 2021 through the first quarter of 2022.

On June 30, 2021, the Company entered into an amended and restated research collaboration, product development and license agreement with Merck, or the Amended Collaboration Agreement, replacing the Original Collaboration Agreement and extending the research program term of the collaboration generally through March 31, 2024, with possible extensions for each of the various programs to allow the Company or Merck to complete ongoing development, but with a narrower scope than in the Original Collaboration Agreement. Under the Amended Collaboration Agreement, the collaboration was focused primarily on the identification, research and development of collaboration compounds directed to targets of interest to Merck in the fields of ophthalmology and cardiovascular or metabolic, or CVM, disease, including heart failure. The collaboration scope also included certain laboratory testing

and other activities on compounds that are directed to one of up to two undisclosed targets outside of the fields of ophthalmology and CVM disease, or the Lab Programs.

Currently, the only ongoing research activities to be funded under the Amended Collaboration Agreement are certain CVM-related activities. The research program term for the CVM-related continuing programs will continue until March 31, 2024, unless the parties mutually agree to extend the research program term to March 31, 2026, in which case Merck would provide up to a total of $20.0 million in research funding during those additional two years. The Company does not expect the research program term to be extended. Remaining activities under the Lab Programs were substantially completed in the first quarter of 2023. The ophthalmology compounds in the collaboration under the Amended Collaboration Agreement initially included NGM621 (and its related compounds) and compounds directed against two other undisclosed ophthalmology targets (and their related compounds). Merck had a one-time option to license NGM621, its related compounds and the ophthalmology bundle upon completion of the Phase 2 CATALINA trial. In December 2022, Merck notified the Company that it would not exercise its option to license NGM621 and its related compounds, nor would Merck exercise the related ophthalmology bundle option; accordingly, these options expired unexercised in January 2023 and the programs are now wholly-owned by the Company. Further, Merck did not elect for the Company to continue to conduct R&D during an extended or tail period on any compounds from the Company's other ophthalmology programs that were subject to the collaboration. Because Merck did not exercise its ophthalmology license options or make an R&D tail period election, the programs are now wholly-owned by the Company and the Company does not have any funding from Merck to pursue such ophthalmology programs.

Pursuant to the Amended Collaboration Agreement, the Company gained the right, in its sole discretion, to independently research, develop and commercialize the collaboration compounds known as NGM707, NGM120, NGM438 and NGM831, their related compounds and all other preclinical and research assets that the Company researched or developed under the Original Collaboration Agreement but that were not included within the R&D scope of the continuing collaboration, which are referred to as the released NGM compounds. Merck retained the right to receive royalties at low single-digit rates on the sales of any released NGM compounds that receive regulatory approval and, if the Company decides during a certain time period to engage in a formal partnering process for a released NGM compound or negotiations regarding a license or asset sale of a released NGM compound, the Company is obligated to notify Merck, provide Merck with certain information and engage in good faith, non-exclusive negotiations with respect to such released NGM compound with Merck at Merck’s request.

Under the Amended Collaboration Agreement, Merck continued to have a Merck license option, as it did under the Original Agreement, to each continuing collaboration compound that is identified, researched and developed under the Amended Collaboration Agreement and reaches the specified option exercise point for such continuing collaboration compound as described below, and to its related compounds (each such continuing collaboration compound and its related compounds are referred to generally as a continuing program). In addition, under the terms of the Amended Collaboration Agreement, new CVM-related programs may be added to the continuing collaboration if recommended by the Company and selected by Merck, and Merck would have a Merck license option to such CVM-related continuing program. We do not expect any new CVM-related programs to be added to the collaboration.

The Merck license option exercise point for a continuing collaboration compound from the CVM-related continuing programs or the Lab Programs will be the designation by Merck of such continuing collaboration compound as a research program development candidate that Merck intends to progress into preclinical development.

Under the Amended Collaboration Agreement, if Merck exercises the Merck license option for a continuing collaboration compound from a CVM-related continuing program or the Lab Programs, Merck will pay the Company a $6.0 million option exercise fee at the time of selection to progress such licensed continuing collaboration compound or any of its related compounds into preclinical development and an additional $10.0 million milestone payment if such continuing collaboration compounds or one of its related compounds subsequently completes a human proof-of-concept trial. Merck will be responsible, at its own cost, for any further development and commercialization activities for continuing collaboration compounds within any such licensed continuing program.

In March 2022, the Company and Merck entered into a letter agreement, or the Letter Agreement, regarding NGM621 manufacturing activities that the Company undertook with the intention of avoiding a significant delay between the completion of the CATALINA trial and the start of any Phase 3 clinical trial for NGM621.

Under the Amended Collaboration Agreement, Merck provided $86.0 million in research funding for the four calendar quarters that ended on March 31, 2022, which included the remaining $16.0 million of the up to $20.0 million in additional payments Merck agreed to pay as part of exercising its first option to extend the research

program term of the collaboration under the Original Collaboration Agreement for two years through March 16, 2022. The Company was obligated to use commercially reasonable efforts to expend, and did spend, at least $35.0 million of such $86.0 million in funding for the four calendar quarters that ended on March 31, 2022 on the ophthalmology and CVM-related programs and Lab Programs as required under the Amended Collaboration Agreement. The Company was permitted to use the remainder of the $86.0 million in research funding provided by Merck during such time frame to advance the released NGM compounds. Pursuant to the Letter Agreement, the Company also used part of this research funding to cover the costs of its personnel who provided support for the manufacturing activities that the Company undertook in preparation for a potential Phase 3 clinical trial for NGM621 and Merck reimbursed the Company the maximum reimbursable amount for NGM621 third-party manufacturing costs of $4.75 million. Merck also funded certain costs and reimbursements related to the NGM621 program in 2022 and in 2023.

The Company concluded that the Amended Collaboration Agreement is a separate arrangement containing a three-year performance obligation to provide distinct R&D services in accordance with ASC 606. The total transaction price under the Amended Collaboration Agreement is $119.0 million which includes $86.0 million in research funding for the four calendar quarters that ended on March 31, 2022, $15.1 million in research funding for the ophthalmology and CVM-related continuing programs and the Lab Programs during the remaining two years of the research program term after March 2022, $13.1 million in estimated NGM621 reimbursable expenses and costs during the remaining two years of the research program term after March 2022 and $4.75 million for reimbursable amounts paid in 2022 to a third-party manufacturer in accordance with the terms of the Letter Agreement. The Company will continue to re-evaluate the transaction price as uncertain events are resolved or other changes in circumstances occur. The Company continues performing its R&D services in the area of both the continuing collaboration compounds and the released NGM compounds and has one performance obligation across all continuing programs. The Company will continue to use the cost-based input method to calculate the amount of revenue to recognize as services are being rendered from April 1, 2021 through March 31, 2024. For the first half of 2024, the Company expects Merck will provide minimal funding and this amount is included in the transaction price.

The Company considered whether the Merck license option created material rights in the contract and concluded that the fee attached to the exercise of such options approximated the SSP of the promised goods or services included in the options. Therefore, the Company concluded that such options did not give rise to material rights, were not performance obligations in the Amended Collaboration Agreement and, if and when exercised, would be accounted for as separate arrangements under ASC 606.

Merck owned approximately 16% of the Company's outstanding shares as of December 31, 2023.

Summary of Related Party Revenue

The Company recognized revenue from its collaboration and license agreements as follows (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Related party revenue	$ 4,417	$ 55,333	$ 77,882

For the years ended December 31, 2023 and 2022, the Company recognized collaboration and license revenue primarily related to reimbursable R&D activities associated with the performance obligation under the Amended Collaboration Agreement under which Merck is providing significantly less annual R&D funding than it had provided through March 31, 2022. Related party revenue related to the reimbursable R&D activities was recognized using the cost-based input model related to R&D activities.

For the year ended December 31, 2021, the Company recognized collaboration and license revenue primarily related to reimbursable R&D activities associated with the performance obligation for the two-year extension period through March 31, 2021 under the Original Collaboration Agreement and from April 1, 2021 through December 31, 2021 under the Amended Collaboration Agreement, all of which were recognized using the cost-based input model.

Related Party Contract Assets and Liabilities

Amounts recognized as revenue prior to the Company having an unconditional right (or a right that is conditioned only on the passage of time) to receipt are recorded as contract assets in the Company's consolidated balance sheets. If the Company expects to have an unconditional right to receive the consideration in the next

twelve months, the contract asset will be classified in current assets. As of December 31, 2023 and 2022, the Company did not have a related party contract asset.

Amounts received prior to satisfying the revenue recognition criteria are recorded as contract liabilities in the Company's consolidated balance sheets. If the related performance obligation is expected to be satisfied within the next twelve months, the contract liability will be classified in current liabilities. As of December 31, 2023, the Company did not have a contract liability. As of December 31, 2022, the Company recorded a contract liability in current liabilities of $0.4 million.

6. Commitments and Contingencies

Operating Leases and Lease Guarantee

In December 2015, the Company entered into an operating lease agreement, or the 333 Oyster Point lease agreement, for its corporate office and laboratory space at 333 Oyster Point Blvd., South San Francisco, California, or the 333 Oyster Point facility, for approximately 122,000 square feet that expired on December 31, 2023. The 333 Oyster Point lease agreement provided a tenant improvement allowance of $15.2 million that the Company used in 2016 towards $22.3 million in total leasehold improvements that were amortized over the lease term of seven years. As of December 31, 2023, restricted cash in current assets on the Company's consolidated balance sheets included a letter of credit in the amount of $1.5 million required under the 333 Oyster Point lease agreement.

Cash paid for amounts included in the measurement of the lease liabilities were $5.5 million and $5.3 million for the years ended December 31, 2023 and 2022, respectively.

During the years ended December 31, 2023 and 2022, the components of lease costs, which were included in general and administrative expenses on the Company's consolidated statements of operations, were as follows (in thousands):

	Year Ended December 31,	
	2023	2022
Operating lease costs	$ 2,166	$ 2,166
Variable lease costs (1)	1,406	1,286
Total lease costs	$ 3,572	$ 3,452

(1) Variable lease costs include certain additional charges for operating costs, including insurance, maintenance, taxes and other costs incurred, which are billed based on both usage and as a percentage of the Company's share of total square footage.

In July 2022, the Company entered into an operating lease agreement, or the 2024 Lease Agreement, for its corporate office and laboratory space at 333 Oyster Point Blvd., South San Francisco, California, which the Company occupied pursuant to the 333 Oyster Point lease agreement through December 31, 2023. Pursuant to the 2024 Lease Agreement, the lease term with the new landlord began on January 1, 2024 (the lease commencement date) and expires on December 31, 2033, and the Company will pay an initial monthly base rent of approximately $0.9 million for the first year, which is subject to increase at an annual rate of 3.5% each year thereafter, plus certain operating and tax expenses. Base rent for the initial ten-year term of the 2024 Lease Agreement amounts to $124.1 million. The 2024 Lease Agreement provides a tenant improvement allowance of approximately $4.9 million. The Company has an option to extend the 2024 Lease Agreement for a period of either eight years or ten years after the initial term. In July 2022, pursuant to the 2024 Lease Agreement, the Company provided the landlord with a letter of credit in the amount of $2.5 million, that was reported as restricted cash in non-current assets on the Company's consolidated balance sheets as of December 31, 2023 and 2022, respectively.

Indemnification

In the normal course of business, the Company enters into contracts and agreements that contain a variety of representations and warranties and may provide for indemnification of the counterparty. The Company's exposure under these agreements is unknown because it involves claims that may be made against it in the future but have not yet been made.

In accordance with the Company's amended and restated certificate of incorporation and its amended and restated bylaws, the Company has indemnification obligations to its officers and directors, subject to some limits, with respect to their service in such capacities. The Company has also entered into indemnification agreements with its directors and certain of its officers. To date, the Company has not been subject to any claims, and it maintains director and officer insurance that may enable it to recover a portion of any amounts paid for future potential claims.

The Company's exposure under these agreements is unknown because it involves claims that may be made against it in the future but have not yet been made. The Company believes that the fair value of these indemnification obligations is minimal and, accordingly, it has not recognized any liabilities relating to these obligations for any period presented.

7. Stockholders' Equity

Preferred Stock

The Company has 10.0 million shares of preferred stock authorized, which may be issued at the discretion of the Company's board of directors. The board of directors may issue shares of preferred stock in one or more series and may fix the number, rights, preferences, privileges and restrictions on such shares. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences and sinking fund terms. As of December 31, 2023, the Company does not have any shares of preferred stock issued or outstanding.

Common Stock

Public Offering of Common Stock

In January 2021, the Company sold 5.3 million shares of its common stock through an underwritten public offering at a price to the public of $27.00 per share for aggregate net proceeds to the Company of $134.6 million, after deducting underwriting discounts and commissions and other offering expenses paid by the Company. The offering closed on January 8, 2021.

As of December 31, 2023 and 2022, the Company had 82.9 million and 81.9 million shares of common stock outstanding, respectively.

The Company had reserved the following shares of common stock for issuance as follows (in thousands):

	December 31,	
	2023	2022
Common stock options & RSUs outstanding	13,612	14,215
Reserve balance for Sales Agreement	10,937	10,937
Common stock available for grant	9,189	5,661
ESPP shares available for purchase	540	264
401(k) matching plan	65	192
Total	34,343	31,269

Open Market Sale Agreement

In June 2020, the Company entered into the Sales Agreement with Jefferies pursuant to which the Company could sell, from time to time, through or to Jefferies, up to an aggregate of $150.0 million of the Company's common stock. In June 2023, the Company entered into the Amended Sales Agreement. In connection with the Amendment, the Company filed a new shelf registration statement on Form S-3 which the SEC declared effective in August 2023. The Amended Sales Agreement provides for the issuance and sales of shares of the Company's common stock having an aggregate offering price of up to $100.0 million through or to Jefferies. As of December 31, 2023, up to $100.0 million of the Company's common stock remained available to be sold under the Amended Sales Agreement, subject to conditions specified in the Amended Sales Agreement.

Equity Incentive Plan

In 2018, the Company adopted the 2018 Plan for eligible employees, officers, directors, advisors and consultants, which provides for the grant of incentive and non-statutory stock options, restricted stock awards and stock appreciation rights. The terms of the stock option agreements, including vesting requirements, are determined by the board of directors, subject to the provisions of the 2018 Plan. Options granted by the Company generally vest within four years and are exercisable from the grant date until ten years after the date of grant. Vesting of certain employee options may be accelerated in the event of a change in control of the Company. Pursuant to the terms of the 2018 Plan, the number of shares reserved and available to issue will automatically increase on January 1st of each year in an amount equal to 4% of the total number of shares of common stock outstanding on the

December 31st immediately preceding calendar year, unless the board of directors elects to forego or reduce such increase. As of December 31, 2023, 22.8 million shares of common stock had been authorized for issuance under the 2018 Plan and the Company's 2008 Equity Incentive Plan which expired in 2018.

Stock options are governed by stock option agreements between the Company and recipients of stock options. The exercise price of each option may not be less than 100% of the fair market value of the common stock subject to the option on the date the option is granted. A 10% or greater stockholder may not be granted an incentive stock option unless the exercise price of such option is at least 110% of the fair value of the common stock on the date of grant and the option is not exercisable after the expiration of five years from the grant date. Options become exercisable and expire as determined by the Company's Compensation Committee, or the Committee, of the Board of Directors, or the Board, provided that the term of incentive stock options may not exceed ten years from the date of grant for options granted to those other than 10% stockholders.

2019 Employee Stock Purchase Plan

In 2019, the Company adopted the ESPP. The Company reserved 1.0 million shares of common stock pursuant to purchase rights granted to the Company's employees. The ESPP provides that the number of shares reserved and available for issuance will automatically increase on January 1 of each calendar year by the lesser of (1) 1% of the total number of shares of common stock outstanding on December 31 of the preceding calendar year, (2) 1.0 million shares or (3) a number determined by the Company's board of directors that is less than (1) and (2). Under the ESPP, eligible employees are granted the right to purchase shares of the Company's common stock through payroll deductions that cannot exceed 15% of each employee's salary. The ESPP provides for a 24-month offering period, which includes four six-month purchase periods. At the end of each purchase period, eligible employees are permitted to purchase shares of common stock at the lower of 85% of fair market value at the beginning of the offering period or fair market value at the end of the purchase period. The ESPP is considered a compensatory plan. As of December 31, 2023, 1.3 million shares of common stock had been purchased under the ESPP.

Restricted Stock Units

During the year ended December 31, 2023, the Company granted 1.0 million RSUs covering an equal number of shares of the Company's common stock to employees with a weighted-average grant date fair value of $4.36 per RSU. The fair value of RSUs is determined on the date of grant based on the market price of the Company's common stock as of that date. The fair value of the RSUs is recognized as an expense ratably over the vesting period of four years. As of December 31, 2023, no shares underlying the RSUs had vested or been released and 0.4 million shares had been forfeited .

Stock Option Activity

Repricing Program

On October 17, 2023, the Committee approved an option repricing program, or the repricing program, which was effective on November 6, 2023, or the Effective Date. The repricing program generally applies to options to purchase shares of the Company's common stock that: (i) were granted under the Company's equity incentive plans; (ii) as of the Effective Date, are held by the Company's then-current employees (subject to the retention requirements below); and (iii) have an exercise price per share greater than $5.00. Such options are referred to as the Eligible Options. The Eligible Options include options held by certain of the Company's executive officers. Options held by nonemployee members of the Board are not eligible for the repricing program.

As of the Effective Date, the Eligible Options were immediately repriced such that the exercise price per share for such options was reduced to the closing price of the Company's common stock on the Effective Date, subject to certain retention requirements outlined below. The closing price of the Company's common stock was $0.84 and became the reduced exercise price for the Eligible Options. If an employee exercises Eligible Options in advance of the end of the retention period as described below, the employee will be required to pay a premium exercise price equal to the original exercise price per share of the Eligible Options. The Eligible Options that were previously incentive stock options were amended to become nonstatutory stock options on or following the Effective Date. There were no changes to the number of shares underlying the Eligible Options or to the vesting schedules or expiration dates of the Eligible Options.

In order to exercise the Eligible Options at the reduced exercise price, holders of the Eligible Options are required to remain in service with the Company through the end of the relevant retention period. The retention period begins on the Effective Date and ends on the earliest of the following: (i) the date 12 months (or, in the case

of the Eligible Options held by the Company's Chief Executive Officer that are unvested as of the Effective Date, 18 months) following the Effective Date; (ii) a Change in Control (as defined in the applicable equity incentive plan) if the Eligible Options are not assumed or continued by the successor or acquiror entity (or its parent company) in such Change in Control or substituted for a similar award of the successor or acquiror entity (or its parent company); and (iii) the optionholder's termination of Continuous Service (as defined in the applicable equity incentive plan) (a) due to such individual's death or disability, (b) by the Company (or successor entity in a Change in Control) other than for Cause (as defined in the applicable equity incentive plan) or (c) due to such optionholder's resignation on or following a Change in Control under certain circumstances.

As of the Effective Date, the total number of shares underlying all Eligible Options was 6.9 million shares. The effect of the repricing resulted in total incremental stock-based compensation expense of $2.1 million, $1.9 million of which will be recognized on a straight-line basis through the end of each of the applicable retention periods, while the remaining $0.2 million will be recognized on a straight-line basis over the original vesting period for those options that vest after the end of each applicable retention period. The incremental stock-based compensation expense was calculated using the lattice option-pricing model.

For the year ended December 31, 2023, the Company recognized incremental stock-based compensation expense totaling $0.3 million associated with the repricing program, which is included in general and administrative and research and development expense on the consolidated statement of operations.

A summary of the activity under the 2008 Plan and the 2018 Plan is as follows:

	Outstanding Options		Weighted Average Remaining Contractual Life (In Years)	Aggregate Intrinsic Value (In Thousands)
	Number of Options (In Thousands)	Weighted Average Exercise Price		
Balances at December 31, 2022	14,215	$ 14.74	6.89	$ 1,749
Options granted	5,662	3.95		
Options exercised	(351)	1.90		
Options forfeited	(3,275)	10.89		
Options expired	(3,261)	13.30		
Balances at December 31, 2023	12,990	$ 11.73	6.92	$ 42
Vested and expected to vest at December 31, 2023	12,457	$ 11.92	6.84	$ 37
Exercisable at December 31, 2023	7,803	$ 14.15	5.62	$ —

The aggregate intrinsic values of options outstanding, vested and expected to vest, and exercisable were calculated as the difference between the exercise price of the options and the estimated fair value of the Company's common stock. The weighted average exercise prices and aggregate intrinsic values of the Eligible Options in the above table are based on the original exercise prices due to the applicable retention periods.

Stock-Based Compensation Expense

Stock-based compensation expense for awards was calculated based on awards previously granted to employees, directors and nonemployees that are ultimately expected to vest and has been reduced for estimated forfeitures.

Stock-based compensation expense was allocated as follows (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Research and development	$ 14,258	$ 17,875	$ 14,271
General and administrative	14,461	14,508	11,971
Total stock-based compensation expense	$ 28,719	$ 32,383	$ 26,242

Stock-based compensation expense included expense related to the ESPP of $2.6 million, $2.9 million and $1.6 million for the years ended December 31, 2023, 2022 and 2021, respectively.

Valuation Assumptions

The Company uses the Black-Scholes option-pricing model to estimate the fair value of stock options at the grant date. The Black-Scholes option-pricing model requires the Company to make certain estimates and assumptions, including assumptions related to the expected price volatility of the Company's stock, the period during which the options will be outstanding, the rate of return on risk-free investments and the expected dividend yield for the Company's stock.

The expected volatility is based on the historical volatility of the Company's stock and the stock of similar entities within the Company's industry over periods commensurate with the Company's expected term assumption. The expected term of stock option grants represents the weighted-average period the options are expected to remain outstanding and is based on the "simplified" method where the expected term is the midpoint between the vesting date and the end of the contractual term for each option. The Company bases the risk-free interest rate on the interest rate payable on U.S. Treasury securities in effect at the time of grant for a period that is commensurate with the assumed expected option term. In reference to the expected dividend yield assumption, the Company has not historically paid, and does not expect for the foreseeable future to pay, a dividend.

The weighted average grant-date fair value of stock options granted during the years ended December 31, 2023, 2022 and 2021 was $2.87, $8.63 and $18.57 per share, respectively. The intrinsic value of stock options exercised was $1.0 million, $3.2 million and $34.2 million for the years ended December 31, 2023, 2022 and 2021, respectively. Due to the Company's net operating losses, the Company did not realize any tax benefits from stock-based payment arrangements for the years ended December 31, 2023, 2022 and 2021.

The fair value of stock option awards granted to employees and directors was estimated at the date of grant using a Black-Scholes option-pricing model with the following weighted average valuation assumptions:

	Year Ended December 31,		
	2023	2022	2021
Volatility	84 %	78 %	72 %
Expected term (years)	5.89	5.93	5.98
Risk-free interest rate	4.16 %	2.52 %	0.95 %
Expected dividend yield	—	—	—

As of December 31, 2023, total compensation cost not yet recognized related to unvested stock options granted to employees and directors was $24.6 million, which is expected to be recognized over a weighted-average period of 1.8 years.

The fair value of the rights granted to employees under the ESPP was estimated at the date of offer using a Black-Scholes option-pricing model with the following weighted average valuation assumptions:

	Year Ended December 31,		
	2023	2022	2021
Volatility	102 %	110 %	72 %
Expected term (years)	1.52	1.63	1.27
Risk-free interest rate	4.64 %	3.76 %	0.27 %
Expected dividend yield	—	—	—

8. Employee Benefit Plan

The Company sponsors a 401(k) defined contribution plan for its employees. Employee contributions are voluntary. In December 2011, the Company adopted the 401(k) Matching Plan, under which the Company makes matching contributions in the form of common stock at a rate of $1.00 for each $2.00 of employee contributions up to a maximum of $3,500 of common stock per employee per year beginning in 2022 and $750 prior to 2022. As of December 31, 2023 and 2022, the Company had reserved 64,975 and 192,385 shares of common stock for issuance pursuant to the 401(k) Matching Plan, respectively. Matching contributions of 127,410, 7,615 and 4,117 shares, or $639,000, $137,000 and $125,000 were issued for the years ended December 31, 2023, 2022 and 2021, respectively.

9. Workforce Reduction

During the second quarter of 2023, the Company announced and substantially completed a restructuring of the Company's workforce pursuant to which the Company's workforce was reduced by 74 people, or approximately 33% of the Company's existing headcount as of April 3, 2023. The Company incurred approximately $4.9 million in restructuring charges in connection with the restructuring, consisting of (i) approximately $4.2 million in cash-based expenses related to employee severance and notice period payments, benefits and related costs, and (ii) approximately $0.7 million in noncash stock-based compensation expense related to the vesting of stock-based awards.

The restructuring charges are included in the Company's consolidated statements of operations for the year end December 31, 2023 as follows (in thousands):

	Year Ended December 31, 2023
Research and development	$ 3,811
General and administrative	1,105
Total restructuring expense	$ 4,916

All restructuring charges were incurred in the second quarter of 2023, and cash payments were substantially completed by the end of the second quarter of 2023.

10. Income Taxes

The Company has reported pretax operating losses for all periods presented. The Company has not reflected any benefit for corresponding tax net operating loss carryforwards in the accompanying consolidated financial statements. The Company has established a full valuation allowance against its deferred tax assets due to the uncertainty surrounding the realization of such assets.

The components of the Company's losses before income taxes were as follows (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Domestic	$ (142,348)	$ (161,813)	$ (120,858)
Foreign	(27)	(854)	523
Total	$ (142,375)	$ (162,667)	$ (120,335)

A reconciliation of the statutory U.S. federal rate to the Company's effective tax rate is as follows:

	Year Ended December 31,		
	2023	2022	2021
U.S. federal tax at statutory rate	21.0 %	21.0 %	21.0 %
Foreign tax rate differential	—	0.1	—
State, net of federal benefit	0.6	—	—
Stock-based compensation (recovery)	(1.2)	(1.3)	1.3
Change in valuation allowance	(22.8)	(19.9)	(21.8)
Other	2.4	0.1	(0.5)
Total	— %	— %	— %

The components of the net deferred tax assets are as follows (in thousands):

	December 31,	
	2023	2022
Deferred tax assets:		
Net operating loss carryforwards	$ 85,315	$ 77,563
Capitalized R&D Section 174	44,456	31,964
Stock-based compensation	6,865	4,739
Research and development credit	7,156	2,918
Lease liability	—	1,132
Other temporary differences	282	435
Total gross deferred tax assets	144,074	118,751
Deferred tax liabilities:		
Depreciation and amortization	(521)	(779)
ROU asset	—	(440)
Non-qualified stock options with 83(b) election	—	(15)
Total gross deferred tax liabilities	(521)	(1,234)
Net deferred tax assets before valuation allowance	143,553	117,517
Deferred tax asset valuation allowance	(143,553)	(117,517)
Net deferred tax assets	$ —	$ —

ASC 740 requires that the tax benefit of net operating losses, temporary differences and credit carryforwards be recorded as an asset to the extent that management assesses that realization is “more likely than not.” Realization of the future tax benefits is dependent on the Company’s ability to generate sufficient taxable income within the carryforward period. Because of the Company’s recent history of operating losses, management believes that recognition of the deferred tax assets arising from the above-mentioned future tax benefits is currently not more-likely-than-not to be realized and, accordingly, has provided a valuation allowance.

Realization of deferred tax assets is dependent upon future earnings, if any, the timing and amount of which are uncertain. Accordingly, the net deferred tax assets have been fully offset by a valuation allowance. The valuation allowance increased by approximately $26.0 million and $22.8 million during the years ended December 31, 2023 and 2022, respectively.

As of December 31, 2023, the Company had approximately $382.3 million in federal net operating loss carryforwards to reduce future taxable income. Of this amount, $329.8 million was generated after December 31, 2017 and can be carried forward indefinitely. The federal net operating loss carryforwards generated prior to January 1, 2018 are subject to a 20-year carryforward period and will begin to expire after 2032. The utilization of the federal net operating loss carryforwards generated in fiscal year 2018 and onwards is limited to 80% of the federal taxable income. The Company also had approximately $592.5 million in state net operating loss carryforwards to reduce future taxable income, which will begin to expire after 2028, if not utilized.

In accordance with the 2017 Tax Act, research and experimental, or R&E, expenses under Internal Revenue Code Section 174 are capitalized beginning in 2022. R&E expenses are required to be amortized over a period of five years for domestic expenses and 15 years for foreign expenses.

The Company had approximately $10.3 million and $3.1 million in federal R&D tax credits for the years ended December 31, 2023 and 2022, respectively. In addition, the Company had approximately $5.7 million and $4.0 million in state R&D tax credits for the years ended December 31, 2023 and 2022, respectively. The federal research credits will begin to expire in the years 2028 through 2035, if not utilized. The state R&D credits have no expiration date and can be carried forward indefinitely.

The Company had no foreign net operating loss carryforwards for each of the years ended December 31, 2023 and 2022.

Utilization of the Company’s net operating losses and R&D tax credits may be subject to a substantial annual limitation due to the “change in ownership” provisions of the Internal Revenue Code of 1986, as amended, and similar state provisions. The annual limitation may result in the expiration of net operating losses and R&D tax credits before utilization. The Company has not completed an ownership change analysis pursuant to IRC Section

382 as of December 31, 2023. If ownership changes within the meaning of IRC Section 382 are identified as having occurred, the amount of remaining net operating loss carryforwards available to offset future taxable income and income tax expense in future years may be significantly restricted.

A reconciliation of the Company's unrecognized tax benefits is as follows (in thousands):

	December 31,		
	2023	2022	2021
Balance at beginning of year	$ 38,697	$ 25,870	$ 10,346
Additions based on tax positions related to prior year	1,699	49	4,447
Additions based on tax positions related to current year	13,820	12,778	11,077
Balance at end of year	$ 54,216	$ 38,697	$ 25,870

The entire amount of the unrecognized tax benefits would not impact the Company's effective tax rate if recognized. The Company has elected to include interest and penalties as a component of tax expense. During the years ended December 31, 2023 and 2022, the Company did not recognize accrued interest and penalties related to unrecognized tax benefits. The Company does not anticipate that the amount of existing unrecognized tax benefits will significantly increase or decrease during the next 12 months.

The Company files U.S. federal, state and foreign income tax returns with varying statutes of limitations. The tax years from inception in 2008 to December 31, 2023 remain subject to examination.

11. Subsequent Event

On February 25, 2024, the Company entered into the Merger Agreement with Parent and Merger Sub. See Note 1, "Organization and Description of Business" for additional information.

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

As of December 31, 2023, management, with the participation of our Chief Executive Officer and Chief Financial Officer, performed an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosures.

Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2023, the design and operation of our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(f) and 15d-15(f) of the Exchange Act that occurred during the quarter ended December 31, 2023 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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 Rule 13a-15(f) under the Exchange Act).

Under the supervision of and with the participation of our principal executive officer and principal financial officer, our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2023 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in "Internal Control—Integrated Framework" (2013). Based on this assessment, management concluded that our internal control over financial reporting was effective as of December 31, 2023.

Item 9B. Other Information.

During the three months ended December 31, 2023, none of the Company's directors or Section 16 officers adopted or terminated any contract, instruction or written plan for the purchase or sale of NGM Bio securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act or any "non-Rule 10b5-1 trading arrangement" as such term is defined in Item 408(a) of Regulation S-K.

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

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item regarding directors and director nominees, executive officers, the board of directors and its committees, and certain corporate governance matters is incorporated by reference to the information set forth under the captions "Proposal No. 1—Election of Directors," "Corporate Governance and Board Matters" and "Executive Officers" to be included in our Proxy Statement for our 2024 Annual Meeting of Stockholders, or the 2024 Proxy Statement. If required, information required by this item regarding compliance with Section 16(a) of the Exchange Act is incorporated by reference to the information set forth under the caption "Delinquent Section 16(a) Reports" to be included in our 2024 Proxy Statement. If such 2024 Proxy Statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report, such information will be included in an amendment to this Annual Report to be filed within such 120-day period.

Our written code of business conduct and ethics, the Code of Conduct, applies to all of our employees, officers and directors, including our principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions. The Code of Conduct is available on our corporate website at https://www.ngmbio.com/ in the Investors & Media section under "Corporate Governance." We intend to promptly disclose on our website or in a Current Report on Form 8-K in the future (i) the date and nature of any amendment (other than technical, administrative or other non-substantive amendments) to the Code of Conduct that applies to our principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions and relates to any element of the code of ethics definition enumerated in Item 406(b) of Regulation S-K and (ii) the nature of any waiver, including an implicit waiver, from a provision of the Code of Conduct that is granted to one of these specified individuals that relates to one or more of the elements of the code of ethics definition enumerated in Item 406(b) of Regulation S-K, the name of such person who is granted the waiver and the date of the waiver.

Item 11. Executive Compensation.

Information required by this item regarding executive compensation is incorporated by reference to the information set forth under the captions "Executive Compensation" and "Director Compensation" in the 2024 Proxy Statement. If such 2024 Proxy Statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report, such information will be included in an amendment to this Annual Report to be filed within such 120-day period.

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

Information required by this item regarding security ownership of certain beneficial owners and management is incorporated by reference to the information set forth under the caption "Security Ownership of

Certain Beneficial Owners and Management" and "Equity Compensation Plans at December 31, 2023" in the 2024 Proxy Statement. If such 2024 Proxy Statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report, such information will be included in an amendment to this Annual Report to be filed within such 120-day period.

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

Information required by this item regarding certain relationships, related transactions and director independence is incorporated by reference to the information set forth under the caption "Transactions with Related Persons and Indemnification" and "Corporate Governance and Board Matters" in the 2024 Proxy Statement. If such Proxy Statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report, such information will be included in an amendment to this Annual Report to be filed within such 120-day period.

Item 14. Principal Accounting Fees and Services.

Information required by this item regarding principal accounting fees and services is incorporated by reference to the information set forth under the caption "Ratification of Selection of Independent Registered Public Accounting Firm" in the 2024 Proxy Statement. If such 2024 Proxy Statement is not filed within 120 days after the end of the fiscal year covered by this Annual Report, such information will be included in an amendment to this Annual Report to be filed within such 120-day period.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) The following documents are filed as part of this Annual Report:

1. *Financial Statements.* See Index to Consolidated Financial Statements in Part II, Item 8 of this Annual Report.
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 consolidated financial statements or notes thereto.
3. *Exhibits*. The following is a list of exhibits filed with this Annual Report or incorporated herein by reference:

		Incorporated by Reference				
Exhibit Number	**Exhibit Description**	**Form**	**File No.**	**Exhibit**	**Filing Date**	**Filed Herewith**
3.1	Amended and Restated Certificate of Incorporation	8-K	001-38853	3.1	4/8/19	
3.2	Amended and Restated Bylaws	S-1	333-227608	3.4	9/28/18	
4.1	Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, dated March 20, 2015.	S-1	333-227608	4.1	9/28/2019	
4.2	Form of Common Stock Certificate.	S-1	333-227608	4.2	4/1/2019	
4.3	Description of Capital Stock.	10-K	001-38853	4.3	3/17/2020	
10.1*	2008 Equity Incentive Plan, as amended.	S-1	333-227608	10.1	9/28/2018	
10.2*	Form of Stock Option Agreement and Stock Option Grant Notice under the 2008 Equity Incentive Plan.	S-1	333-227608	10.2	9/28/2018	
10.3*	Amended and Restated 2018 Equity Incentive Plan.	S-1	333-227608	10.3	3/25/2019	
10.4*	Forms of Stock Option Agreement and Notice of Grant of Stock Option under the Amended and Restated 2018 Equity Incentive Plan.	S-1	333-227608	10.4	3/25/2019	

10.5*	Forms of Restricted Stock Unit Agreement and Notice of Grant of Restricted Stock Unit under the Amended and Restated 2018 Equity Incentive Plan.	S-1	333-227608	10.5	3/25/2019	
10.6*	2019 Employee Stock Purchase Plan.	S-1	333-227608	10.6	3/25/2019	
10.7*	Form of Indemnification Agreement, by and between NGM Biopharmaceuticals, Inc. and each of its directors and executive officers.	S-1	333-227608	10.7	9/28/2018	
10.8*	Non-Employee Director Compensation Policy	10-Q	001-38853	10.1	5/4/2023	
10.9*	Forms of Stock Option Agreement and Notice of Grant of Stock Option for Non-employee Directors Under the Amended and Restated 2018 Equity Incentive Plan.	10-Q	001-38853	10.2	8/5/2021	
10.10	Sublease Agreement, by and between NGM Biopharmaceuticals, Inc. and AMGEN Inc., dated December 11, 2015.	S-1	333-227608	10.9	9/28/2018	
10.11*	Executive Employment Offer Letter, by and between NGM Biopharmaceuticals, Inc. and Jin-Long Chen, Ph.D.	S-1	333-227608	10.11	9/28/2018	
10.12*	Executive Employment Agreement, by and between NGM Biopharmaceuticals, Inc. and David Woodhouse, Ph.D.	S-1	333-227608	10.13	3/25/2019	
10.13*	Offer Letter Agreement, by and between the Registrant and Siobhan Nolan Mangini, dated as of May 20, 2020.	10-Q	001-38853	10.12	8/12/2020	
10.14*	Offer Letter Agreement, by and between the Registrant and Hsiao D. Lieu, M.D., dated as of January 16, 2019.					X
10.15*	Offer Letter Agreement, by and between the Registrant and Valerie L. Pierce, dated as of August 6, 2019, and related information.					X
10.16*	Offer Letter and Arbitration Agreement, by and between the Registrant and Jean-Frédéric Viret, Ph.D., dated as of October 20, 2023.					X
10.17#	Research Collaboration, Product Development and License Agreement by and between NGM Biopharmaceuticals, Inc. and Merck Sharp & Dohme Corp., dated as of February 18, 2015.	S-1	333-227608	10.15	9/28/2018	
10.18	Letter Agreement, by and between NGM Biopharmaceuticals, Inc. and Merck Sharp & Dohme Corp., dated as of March 20, 2015.	S-1	333-227608	10.17	9/28/2018	
10.19**	Amended and Restated Research Collaboration, Product Development and License Agreement, made effective as of June 30, 2021, by and between NGM Biopharmaceuticals, Inc. and Merck Sharp & Dohme Corp.	10-Q	001-38853	10.1	8/5/2021	

10.20#	Multi-Product Licence Agreement by and between NGM Biopharmaceuticals, Inc. and Lonza Sales AG, dated as of October 31, 2014, as amended by Amendment No. 1 on July 28, 2015, Amendment No. 2 on October 7, 2015, Amendment No. 3 on April 26, 2016, Amendment No. 4 on October 3, 2017, Amendment No. 5 on March 16, 2018 and Amendment No. 6 on February 6, 2019.	S-1	333-227608	10.17	4/1/2019	
10.21**	Amendment No. 7 on December 22, 2020 to Multi-Product Licence Agreement by and between NGM Biopharmaceuticals, Inc. and Lonza Sales AG, dated as of October 31, 2014.	10-K	001-38853	10.17	3/15/2020	
10.22**	Amendment No. 8 on February 10, 2021 to Multi-Product Licence Agreement by and between NGM Biopharmaceuticals, Inc. and Lonza Sales AG, dated as of October 31, 2014.	10-K	001-38853	10.18	3/15/2020	
10.23**	Amendment No. 9 on November 3, 2021 to Multi-Product Licence Agreement by and between NGM Biopharmaceuticals, Inc. and Lonza Sales AG, dated as of October 31, 2014.	10-K	001-38853	10.23	3/1/2022	
10.24**	Amendment No. 10 on October 31, 2023 to the Multi-Product Licence Agreement by and between NGM Biopharmaceuticals, Inc. and Lonza Sales AG, dated as of October 31, 2014.	10-Q	001-38853	10.2	11/2/2023	
10.25	Letter Agreement, by and between NGM Biopharmaceuticals, Inc. and Merck Sharp & Dohme Corp., dated as of March 15, 2019.	S-1	333-227608	10.18	3/25/2019	
10.26	Letter Agreement, by and between NGM Biopharmaceuticals, Inc. and Merck Sharp & Dohme Corp., dated as of March 30, 2022.	10-Q	001-38853	10.1	5/5/2022	
10.27	Lease agreement, by and between NGM Biopharmaceuticals, Inc. and HCP BTC, LLC, dated as of July 7, 2022.	10-Q	001-38853	10.1	8/4/2022	
21.1	Subsidiaries of NGM Biopharmaceuticals, Inc.					X
23.1	Consent of Independent Registered Public Accounting Firm.					X
24.1	Power of Attorney (included on signature page).					X
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1†	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
97.1	NGM Biopharmaceuticals, Inc. Incentive Compensation Recoupment Policy					X

101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.	X
101.SCH	Inline XBRL Taxonomy Extension Schema Document.	X
101.CAL	Inline XBRL Taxonomy Extension Calculation 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.	X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)	X

* Indicates management contract or compensatory plan or arrangement.

** Certain confidential information contained in this exhibit has been omitted because it is both not material and is of the type that the Registrant treats as private or confidential.

Confidential treatment has been granted for a portion of this exhibit.

† The certifications attached as Exhibit 32.1 accompanying this Annual Report are not deemed filed with the SEC and are not to be incorporated by reference into any filing of NGM Biopharmaceuticals, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report, irrespective of any general incorporation language contained in such filing.

The agreements and other documents filed as exhibits to this Annual Report are not intended to provide factual information or other disclosure other than with respect to the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by us in these agreements or other documents were made solely within the specific context of the relevant agreement or document and may not describe the actual state of affairs as of the date they were made or at any other time.

Item 16. Form 10-K Summary.

None.

SIGNATURES

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

NGM Biopharmaceuticals, Inc.

Date: March 11, 2024

By: /s/ David J. Woodhouse

David J. Woodhouse, Ph.D.
Chief Executive Officer and Director
(Principal Executive Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints David J. Woodhouse, Jean-Frédéric Viret and Valerie Pierce, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution for him or her, and in his or her name in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the U.S. Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, and either of them, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ David J. Woodhouse David J. Woodhouse, Ph.D.	Chief Executive Officer and Director *(Principal Executive Officer)*	March 11, 2024
/s/ Jean-Frédéric Viret Jean-Frédéric Viret, Ph.D.	Chief Financial Officer *(Principal Financial Officer)*	March 11, 2024
/s/ Irene Perlich Irene Perlich	Vice President *(Principal Accounting Officer)*	March 11, 2024
/s/ Bill Rieflin William J. Rieflin	Chairman and Director	March 11, 2024
/s/ David V. Goeddel, Ph.D. David V. Goeddel, Ph.D.	Director	March 11, 2024
/s/ Shelly D. Guyer Shelly D. Guyer	Director	March 11, 2024
/s/ Carole Ho Carole Ho, M.D.	Director	March 11, 2024
/s/ Suzanne Sawochka Hooper Suzanne Sawochka Hooper	Director	March 11, 2024
/s/ Roger M. Perlmutter, M.D. Roger M. Perlmutter, M.D.	Director	March 11, 2024

Exhibit 10.14

January 16, 2019

Hsiao D. Lieu, M.D.

Dear Hsiao,

On behalf of NGM Biopharmaceuticals, Inc. ("NGM" or the "Company"), we are pleased that you will be joining the Company as Senior Vice President, Chief Medical Officer reporting to me. We believe this position represents an extraordinary opportunity, and we look forward to your joining our exceptional team.

Below are details of the compensation and benefits program we are offering as part of your employment with NGM, as well as other terms of your employment. Should you have questions regarding any part of this offer, or wish to receive additional details, please let us know. Your annual base salary will be $420,000.00, less payroll deductions and all required withholdings, paid semi-monthly over 24 pay periods per year. In addition, you will be eligible to participate in the NGM Incentive Bonus Plan. You will also be eligible to receive a one-time sign-on bonus of $225,000.00, payable within the first two pay periods of your employment with NGM. Should you voluntarily resign from NGM within two (2) years from your start date, you will be required to repay the pro-rated portion of the sign-on bonus payment based on the number of months you were employed by the Company following receipt of the sign-on bonus payment.

NGM provides all eligible employees with a comprehensive benefits program. You will have the opportunity to participate in these benefits, which include medical, dental and vision coverage for you and your eligible dependents, if you choose to enroll in them. In addition, we provide life insurance, LTD and AD&D coverage, along with a comprehensive 401(k) program. NGM also provides benefits including Company holidays, vacation, sick leave and Health Care and Dependent Flexible Spending Accounts. The Company may change compensation and benefits from time to time in its discretion. There is a formal performance review period once a year.

An important component of your compensation includes the opportunity for ownership in the Company. After you commence employment, and subject to the approval of our Board of Directors (the "Board"), NGM will grant you an option to purchase 400,000 shares of the Company's common stock (subject to adjustment for stock splits, stock dividends, reclassification and the like) at the fair market value determined by the Board as of the date of grant (the "Option"). The Option will be subject to the terms and conditions of the Company's Equity Incentive Plan (the "Plan") and your grant agreement. Your grant agreement will reflect a four year vesting schedule, under which 25% of your Option will vest after 12 months and 1/48th of the total will vest at the end of each month thereafter, until either the Option is fully vested or your employment ends, whichever occurs first.

As a condition of your employment, you will be required to abide by the Company's policies and procedures, including those outlined in our employee handbook. You also agree to read, sign and comply with the Company's Employee Proprietary Information and Inventions Agreement ("Proprietary Information Agreement").

In your work for the Company, you will be expected to not make any unauthorized use of, or disclose, the confidential information or materials, including trade secrets, of any former employer or other third party to whom you owe an obligation of confidentiality. Rather, you will be expected to use only that information generally known and used by persons with training and experience comparable to your own, which information is common knowledge in the industry or otherwise legally available in the public domain, or which is otherwise provided or developed by the Company. By accepting employment with the Company, you are representing to us that you will be able to perform your duties within the guidelines described in this paragraph. You represent further that you have disclosed to the Company any contract you have signed that may restrict your activities on behalf of the Company in any manner.

This offer is contingent upon our verification of your employment history. Any intentional misrepresentation concerning your employment history may result in actions up to and including revocation of this offer or termination of your employment at NGM.

Your employment relationship is at-will. Accordingly, you may terminate your employment with the Company at any time and for any reason whatsoever simply by notifying the Company. Likewise, the Company may terminate your employment at any time and for any reason, with or without cause or advance notice.

This letter, together with your Proprietary Information Agreement, forms the complete and exclusive statement of your agreement with the Company concerning this offer. The terms of this letter supersede any other representations or agreements made to you by any party, whether oral or written. The terms of our agreement cannot be changed (except those changes expressly reserved to the Company's discretion in this letter) other than by a written agreement signed by you and a duly authorized officer of the Company. This agreement is to be governed by the laws of the state of California without reference to its conflicts of law principles. In case any provision contained in this agreement shall, for any reason, be held invalid or unenforceable in any respect, such invalidity or unenforceability will not affect the other provisions of this agreement, and such provision will be construed and enforced so as to render it valid and enforceable consistent with the general intent of the parties insofar as possible under applicable law. With respect to the enforcement of this agreement, no waiver of any right hereunder will be effective unless it is in writing. This agreement may be executed in more than one counterpart, and signatures transmitted electronically will be deemed equivalent to originals. As required by law, this offer is subject to satisfactory proof of your identity and right to work in the United States.

Hsiao, we are thrilled that you have decided to accept our employment offer. Under the terms described above, please sign and date this letter and the Proprietary Information Agreement, and return them by January 23, 2019. It is our expectation that you will join NGM in March 2019.

NGM is an ambitious undertaking, and we fully expect our company to become a force in the development and commercialization of pharmaceutical therapies. To this end, we are assembling a team of uniquely qualified individuals with extraordinary knowledge, skills and drive. Your leadership of the development area will be a critical part of our success and we look forward to you joining our team.

Sincerely,

/s/ David J. Woodhouse
David J. Woodhouse, Ph.D.
Chief Executive Officer

Exhibit A — Employee Proprietary Information and Inventions Agreement

Understood and Accepted

/s/ Hsiao D. Lieu
Hsiao D. Lieu, M.D.

1/22/2019
Date

ADDITIONAL INFORMATION REGARDING SEVERANCE AND CHANGE IN CONTROL ARRANGEMENTS

In addition to the employment offer letter with Dr. Lieu entered into on January 16, 2019, in February 2023, the Compensation Committee of the NGM Biopharmaceuticals, Inc. Board of Directors determined that, in the event of a termination without cause (and other than as a result of death or disability) or resignation for good reason, in either case on or within 18 months after the effective date of a change in control of the Company, and contingent on execution of an effective release of claims against us and satisfaction of certain other conditions, Dr. Lieu will be entitled to (i) continued payment of his base salary for 6 months; (ii) payment or reimbursement of COBRA premiums for him and his eligible dependents for up to 6 months; and (iii) full vesting of any unvested equity awards held by Dr. Lieu. The complete details of the foregoing benefits will be set forth in a written document provided to Dr. Lieu by the Company.

Severance Benefit Addendum

This Severance Benefit Addendum ("Addendum"), effective as of December 4, 2023, to the employment offer letter ("Offer Letter") dated January 16, 2019 by and between Hsiao D. Lieu, M.D. ("Executive") and NGM Biopharmaceuticals, Inc. ("NGM" or the "Company") sets forth the terms of Executive's severance benefits with the Company. This Addendum forms part of the Offer Letter. Capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Offer Letter.

1. **Termination Without Cause or Resignation for Good Reason Following a Change in Control.** If, on or within eighteen (18) months after the effective date of a Change in Control (as defined herein), either (i) the Company terminates Executive's employment without Cause (as defined herein) and other than as a result of Executive's death or Disability, or (ii) Executive resigns for Good Reason (as defined herein), and provided in any case (a) such termination or resignation constitutes a "separation from service" (within the meaning of Treasury Regulation Section 1.409A-l(h)), (b) Executive signs the Company's standard form of release within the time period specified by the Company and allows it to become effective in accordance with its terms (but in no event later than sixty (60) days following Executive's termination or resignation), and (c) Executive complies with Executive's obligations under Executive's Proprietary Information Agreement, then the Company shall provide Executive with the following severance benefits:

   1.1 **Salary and Benefit Continuation.** The Company will pay Executive severance in the form of Base Salary continuation for a six (6) month period following Executive's last day of employment. These salary continuation payments will be paid on the Company's regular payroll schedule and subject to standard deductions and withholdings over the applicable period following termination or resignation; *provided, however,* that no payments will be made prior to the sixtieth (60^{th}) day following Executive's termination or resignation. On the sixtieth (60^{th}) day following Executive's termination or resignation date, the Company will pay Executive in a lump sum the salary continuation payments that Executive would have received on or prior to such date under the original schedule but for the delay while waiting for the release deadline, with the balance of the cash severance being paid as originally scheduled. In addition, Executive shall have the right to continue Executive's health insurance benefits pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985 ("COBRA") or successor statute and any analogous provisions of applicable state law. Provided that Executive makes a timely and accurate election for continued health insurance coverage (including medical, dental, vision and prescription) under COBRA (or any state law of similar effect), the Company will pay the premiums for such continued coverage for Executive and Executive's eligible dependents for the first six (6) months of such coverage, or such earlier date as Executive (or Executive's dependents, as applicable) ceases to be eligible for such continuation coverage (such payment period, the "COBRA Payment Period").

   Notwithstanding the foregoing, if at any time the Company determines, in its sole discretion, that it cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then in lieu of paying COBRA premiums directly to the carrier on Executive's behalf, the Company will instead pay Executive on the last day of each remaining month of the COBRA Payment Period a fully taxable cash payment equal to the value of Executive's monthly COBRA premium for the first month of COBRA coverage, subject to applicable tax withholding (such amount, the "Special Severance Payment"), such Special Severance Payment to be made without regard to Executive's election of COBRA coverage or payment of COBRA premiums and without regard to Executive's continued eligibility for COBRA coverage during the COBRA Payment Period. Such Special Severance Payment shall end upon expiration of the COBRA Payment Period.

   1.2 **Accelerated Vesting.** The Company will accelerate the vesting of the Stock Rights, to the extent then-outstanding and unvested, such that all shares subject to the Stock Rights shall be deemed immediately vested and exercisable as of Executive's termination or resignation date.

2. **Section 409A Compliance.** It is intended that each installment of the severance payments and benefits provided for in this Addendum is a separate "payment" for purposes of Section 409A ("Section 409A") of the Internal Revenue Code of 1986, as amended (the "Code"). For the avoidance of doubt, it is intended that the severance satisfies, to the greatest extent possible, the exemptions from the application of Section 409A provided under Treasury Regulation 1.409A-l(b)(4) and 1.409A-l(b)(9). Notwithstanding the foregoing, if the

Company (or, if applicable, the successor entity thereto) determines that the severance payment provided above upon a separation from service constitute "deferred compensation" under Section 409A and if Executive is a "specified employee" of the Company or any successor entity thereto as of the separation from service, as such term is defined in Section 409A(a)(2)(B)(i) (a "Specified Employee"), then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the severance (or any portion thereof) shall be delayed as follows: on the earlier to occur of (i) the date that is six (6) months and one (1) day after the date of separation of service or (ii) the date of Executive's death (such earlier date, the "Delayed Initial Payment Date"), the Company (or the successor entity thereto, as applicable) shall (A) pay to Executive a lump sum amount equal to the sum of the severance payments that Executive would otherwise have received through the Delayed Initial Payment Date if the commencement of the payment of the severance had not been delayed pursuant to this paragraph and (B) commence paying the balance of the severance in accordance with the payment schedule set forth above.

3. **Definitions.** For purposes of this Addendum, the following terms used herein have the definitions set forth below.
   - 3.1 "**Base Salary**" means base pay (excluding incentive pay, premium pay, commissions, overtime, bonuses and other forms of variable compensation) as in effect immediately prior to Executive's termination or resignation triggering benefits under this Addendum, except that base pay shall exclude any reduction that would give rise to Executive's right to a resignation for Good Reason (if applicable).
   - 3.2 "**Cause**" has the meaning ascribed to such term in the Plan.
   - 3.3 "**Change in Control**" has the meaning ascribed to such term in the Plan.
   - 3.4 "**Disability**" has the meaning ascribed to such term in the Plan.
   - 3.5 "**Good Reason**" means: if any of the following actions are taken by the Company or a successor corporation or entity without Executive's consent, provided that Executive notifies the Company (or successor, as applicable) in writing, within ten (10) days after the occurrence of one of the following actions, that Executive intends to terminate Executive's employment no earlier than thirty (30) days after providing such notice, and the Company (or successor, as applicable) fails to cure such actions within thirty (30) days after receipt of such notice, and Executive's resignation is effective not later than (30) days after the Company (or successor, as applicable) fails to cure the issue: (a) a substantial reduction of Executive's base salary; (b) a material reduction in Executive's duties; (c) a material breach by the Company (or a successor corporation or entity, if applicable) of any provision of the Offer Letter, including this Addendum; or (d) a relocation of Executive's principal place of employment to a place that increases Executive's one-way commute by greater than fifty (50) miles as compared to Executive's then-current principal place of employment prior to such relocation (excluding regular travel in the ordinary course of business); provided that (i) if Executive's principal place of employment is Executive's personal residence, this clause (d) shall not apply and (ii) if Executive works remotely during any period in which Executive's regular principal office location is a Company office that is closed, then neither Executive's relocation to remote work or back to the office from remote work will be considered a relocation of Executive's principal office location for purposes of this definition.
   - 3.6 "**Plan**" means the Company's Amended and Restated 2018 Equity Incentive Plan, as amended from time to time, or any successor plan thereto.
   - 3.7 "**Stock Rights**" means all of Executive's options, restricted stock, restricted stock units or rights to acquire vested ownership of shares of the Company's Common Stock under plans, agreements or arrangements that are compensatory in nature, including, without limitation, the Option, the Plan and other agreements between the Company and Executive.

IN WITNESS WHEREOF, the parties hereto have executed this Addendum on and as of the day and year first above written.

NGM BIOPHARMACEUTICALS, INC.

By: /s/ David J. Woodhouse

David J. Woodhouse, Ph.D.

Chief Executive Officer

/s/ Hsiao Lieu

Hsiao D. Lieu, M.D.

Exhibit 10.15

August 6, 2019

Valerie L. Pierce, Esq.

Dear Valerie,

On behalf of NGM Biopharmaceuticals, Inc. ("NGM" or the "Company"), we are pleased that you will be joining the Company as Senior Vice President, General Counsel and Chief Compliance Officer reporting to me. We believe this position represents an extraordinary opportunity, and we look forward to your joining our exceptional team.

Below are details of the compensation and benefits program we are offering as part of your employment with NGM, as well as other terms of your employment. Should you have questions regarding any part of this offer, or wish to receive additional details, please let us know. Your annual base salary will be $390,000.00, less payroll deductions and all required withholdings, paid semi- monthly over 24 pay periods per year. In addition, you will be eligible to participate in the NGM Incentive Bonus Plan. You will also be eligible to receive a one-time sign-on bonus of $75,000.00, payable within the first two pay periods of your employment with NGM. Should you voluntarily resign from NGM within two (2) years from your start date, you will be required to repay the pro-rated portion of the sign-on bonus payment based on the number of months you were employed by the Company following receipt of the sign-on bonus payment. In addition, you will be eligible to receive a one-time retention bonus of $75,000.00 payable within the first two pay periods following the one-year anniversary of your employment. Should you voluntarily resign from NGM within two (2) years from the receipt of your retention bonus payment, you will be required to repay the pro-rated portion of the retention bonus payment based on the number of months you were employed by the Company following receipt of the retention bonus payment.

NGM provides all eligible employees with a comprehensive benefits program. You will have the opportunity to participate in these benefits, which include medical, dental and vision coverage for you and your eligible dependents, if you choose to enroll in them. In addition, we provide life insurance, LTD and AD&D coverage, along with a comprehensive 401(k) program. NGM also provides benefits including Company holidays, vacation, sick leave and Health Care and Dependent Flexible Spending Accounts. The Company may change compensation and benefits from time to time in its discretion. There is a formal performance review period once a year.
An important component of your compensation includes the opportunity for ownership in the Company. After you commence employment, and subject to the approval of our Board of Directors (the "Board"), NGM will grant you an option to purchase 200,000 shares of the Company's common stock (subject to adjustment for stock splits, stock dividends, reclassification and the like) at the fair market value determined by the Board as of the date of grant (the "Option"). The Option will be subject to the terms and conditions of the Company's Equity Incentive Plan (the "Plan") and your grant agreement. Your grant agreement will reflect a four year vesting schedule, under which 25% of your Option will vest after 12 months and 1/48th of the total will vest at the end of each month thereafter, until either the Option is fully vested or your employment ends, whichever occurs first.

As a condition of your employment, you will be required to abide by the Company's policies and procedures, including those outlined in our employee handbook. You also agree to read, sign and comply with the Company's Employee Proprietary Information and Inventions Agreement ("Proprietary Information Agreement").

In your work for the Company, you will be expected to not make any unauthorized use of, or disclose, the confidential information or materials, including trade secrets, of any former employer or other third party to whom you owe an obligation of confidentiality. Rather, you will be expected to use only that information generally known

and used by persons with training and experience comparable to your own, which information is common knowledge in the industry or otherwise legally available in the public domain, or which is otherwise provided or developed by the Company. By accepting employment with the Company, you are representing to us that you will be able to perform your duties within the guidelines described in this paragraph. You represent further that you have disclosed to the Company any contract you have signed that may restrict your activities on behalf of the Company in any manner.

This offer is contingent upon our verification of your employment history. Any intentional misrepresentation concerning your employment history may result in actions up to and including revocation of this offer or termination of your employment at NGM.

Your employment relationship is at-will. Accordingly, you may terminate your employment with the Company at any time and for any reason whatsoever simply by notifying the Company. Likewise, the Company may terminate your employment at any time and for any reason, with or without cause or advance notice.

This letter, together with your Proprietary Information Agreement, forms the complete and exclusive statement of your agreement with the Company concerning this offer. The terms of this letter supersede any other representations or agreements made to you by any party, whether oral or written. The terms of our agreement cannot be changed (except those changes expressly reserved to the Company's discretion in this letter) other than by a written agreement signed by you and a duly authorized officer of the Company. This agreement is to be governed by the laws of the state of California without reference to its conflicts of law principles. In case any provision contained in this agreement shall, for any reason, be held invalid or unenforceable in any respect, such invalidity or unenforceability will not affect the other provisions of this agreement, and such provision will be construed and enforced so as to render it valid and enforceable consistent with the general intent of the parties insofar as possible under applicable law. With respect to the enforcement of this agreement, no waiver of any right hereunder will be effective unless it is in writing. This agreement may be executed in more than one counterpart , and signatures transmitted electronically will be deemed equivalent to originals. As required by law, this offer is subject to satisfactory proof of your identity and right to work in the United States.

Valerie, we are thrilled that you have decided to accept our employment offer. Under the terms described above, please sign and date this letter and the Proprietary Information Agreement, and return them by August 13, 2019. It is our expectation that you will join NGM in September 2019.

NGM is an ambitious undertaking, and we fully expect our company to become a force in the development and commercialization of pharmaceutical therapies. To this end, we are assembling a team of uniquely qualified individuals with extraordinary knowledge, skills and drive. Your leadership of the legal area will be a critical part of our success and we look forward to you joining our team.

Sincerely,

/s/ David J. Woodhouse
David J. Woodhouse, Ph.D.
Chief Executive Officer

Exhibit A — Employee Proprietary Information and Inventions Agreement

Understood and Accepted

/s/ Valerie L. Pierce
Valerie L. Pierce, Esq.

8/6/19
Date

ADDITIONAL INFORMATION REGARDING SEVERANCE AND CHANGE IN CONTROL ARRANGEMENTS

In addition to the employment offer letter with Ms. Pierce entered into on August 6, 2019, in May 2020 the Compensation Committee of the NGM Biopharmaceuticals, Inc. Board of Directors determined that, in the event of a termination without cause (and other than as a result of death or disability) or resignation for good reason, in either case on or within 18 months after the effective date of a change in control, and contingent on execution of an effective release of claims against us and satisfaction of certain other conditions, Ms. Pierce will be entitled to (i) continued payment of her base salary for 6 months; (ii) payment or reimbursement of COBRA premiums for her and her eligible dependents for up to 6 months; and (iii) full vesting of any unvested equity awards held by Ms. Pierce.

Severance Benefit Addendum

This Severance Benefit Addendum ("Addendum"), effective as of December 4, 2023, to the employment offer letter ("Offer Letter") dated August 6, 2019 by and between Valerie Pierce ("Executive") and NGM Biopharmaceuticals, Inc. ("NGM" or the "Company") sets forth the terms of Executive's severance benefits with the Company. This Addendum forms part of the Offer Letter. Capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Offer Letter.

1. **Termination Without Cause or Resignation for Good Reason Following a Change in Control.** If, on or within eighteen (18) months after the effective date of a Change in Control (as defined herein), either (i) the Company terminates Executive's employment without Cause (as defined herein) and other than as a result of Executive's death or Disability, or (ii) Executive resigns for Good Reason (as defined herein), and provided in any case (a) such termination or resignation constitutes a "separation from service" (within the meaning of Treasury Regulation Section 1.409A-l(h)), (b) Executive signs the Company's standard form of release within the time period specified by the Company and allows it to become effective in accordance with its terms (but in no event later than sixty (60) days following Executive's termination or resignation), and (c) Executive complies with Executive's obligations under Executive's Proprietary Information Agreement, then the Company shall provide Executive with the following severance benefits:

   1.1 **Salary and Benefit Continuation.** The Company will pay Executive severance in the form of Base Salary continuation for a six (6) month period following Executive's last day of employment. These salary continuation payments will be paid on the Company's regular payroll schedule and subject to standard deductions and withholdings over the applicable period following termination or resignation; *provided, however,* that no payments will be made prior to the sixtieth (60^{th}) day following Executive's termination or resignation. On the sixtieth (60^{th}) day following Executive's termination or resignation date, the Company will pay Executive in a lump sum the salary continuation payments that Executive would have received on or prior to such date under the original schedule but for the delay while waiting for the release deadline, with the balance of the cash severance being paid as originally scheduled. In addition, Executive shall have the right to continue Executive's health insurance benefits pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985 ("COBRA") or successor statute and any analogous provisions of applicable state law. Provided that Executive makes a timely and accurate election for continued health insurance coverage (including medical, dental, vision and prescription) under COBRA (or any state law of similar effect), the Company will pay the premiums for such continued coverage for Executive and Executive's eligible dependents for the first six (6) months of such coverage, or such earlier date as Executive (or Executive's dependents, as applicable) ceases to be eligible for such continuation coverage (such payment period, the "COBRA Payment Period").

   Notwithstanding the foregoing, if at any time the Company determines, in its sole discretion, that it cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then in lieu of paying COBRA premiums directly to the carrier on Executive's behalf, the Company will instead pay Executive on the last day of each remaining month of the COBRA Payment Period a fully taxable cash payment equal to the value of Executive's monthly COBRA premium for the first month of COBRA coverage, subject to applicable tax withholding (such amount, the "Special Severance Payment"), such Special Severance Payment to be made without regard to Executive's election of COBRA coverage or payment of COBRA premiums and without regard to Executive's continued eligibility for COBRA coverage during the COBRA Payment Period. Such Special Severance Payment shall end upon expiration of the COBRA Payment Period.

   1.2 **Accelerated Vesting.** The Company will accelerate the vesting of the Stock Rights, to the extent then-outstanding and unvested, such that all shares subject to the Stock Rights shall be deemed immediately vested and exercisable as of Executive's termination or resignation date.

2. **Section 409A Compliance.** It is intended that each installment of the severance payments and benefits provided for in this Addendum is a separate "payment" for purposes of Section 409A ("Section 409A") of the Internal Revenue Code of 1986, as amended (the "Code"). For the avoidance of doubt, it is intended that the severance satisfies, to the greatest extent possible, the exemptions from the application of Section 409A

provided under Treasury Regulation 1.409A-l(b)(4) and 1.409A-l(b)(9). Notwithstanding the foregoing, if the Company (or, if applicable, the successor entity thereto) determines that the severance payment provided above upon a separation from service constitute "deferred compensation" under Section 409A and if Executive is a "specified employee" of the Company or any successor entity thereto as of the separation from service, as such term is defined in Section 409A(a)(2)(B)(i) (a "Specified Employee"), then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the severance (or any portion thereof) shall be delayed as follows: on the earlier to occur of (i) the date that is six (6) months and one (1) day after the date of separation of service or (ii) the date of Executive's death (such earlier date, the "Delayed Initial Payment Date"), the Company (or the successor entity thereto, as applicable) shall (A) pay to Executive a lump sum amount equal to the sum of the severance payments that Executive would otherwise have received through the Delayed Initial Payment Date if the commencement of the payment of the severance had not been delayed pursuant to this paragraph and (B) commence paying the balance of the severance in accordance with the payment schedule set forth above.

3. **Definitions.** For purposes of this Addendum, the following terms used herein have the definitions set forth below.
   3.1 "**Base Salary**" means base pay (excluding incentive pay, premium pay, commissions, overtime, bonuses and other forms of variable compensation) as in effect immediately prior to Executive's termination or resignation triggering benefits under this Addendum, except that base pay shall exclude any reduction that would give rise to Executive's right to a resignation for Good Reason (if applicable).
   3.2 "**Cause**" has the meaning ascribed to such term in the Plan.
   3.3 "**Change in Control**" has the meaning ascribed to such term in the Plan.
   3.4 "**Disability**" has the meaning ascribed to such term in the Plan.
   3.5 "**Good Reason**" means: if any of the following actions are taken by the Company or a successor corporation or entity without Executive's consent, provided that Executive notifies the Company (or successor, as applicable) in writing, within ten (10) days after the occurrence of one of the following actions, that Executive intends to terminate Executive's employment no earlier than thirty (30) days after providing such notice, and the Company (or successor, as applicable) fails to cure such actions within thirty (30) days after receipt of such notice, and Executive's resignation is effective not later than (30) days after the Company (or successor, as applicable) fails to cure the issue: (a) a substantial reduction of Executive's base salary; (b) a material reduction in Executive's duties; (c) a material breach by the Company (or a successor corporation or entity, if applicable) of any provision of the Offer Letter, including this Addendum; or (d) a relocation of Executive's principal place of employment to a place that increases Executive's one-way commute by greater than fifty (50) miles as compared to Executive's then-current principal place of employment prior to such relocation (excluding regular travel in the ordinary course of business); provided that (i) if Executive's principal place of employment is Executive's personal residence, this clause (d) shall not apply and (ii) if Executive works remotely during any period in which Executive's regular principal office location is a Company office that is closed, then neither Executive's relocation to remote work or back to the office from remote work will be considered a relocation of Executive's principal office location for purposes of this definition.
   3.6 "**Plan**" means the Company's Amended and Restated 2018 Equity Incentive Plan, as amended from time to time, or any successor plan thereto.
   3.7 "**Stock Rights**" means all of Executive's options, restricted stock, restricted stock units or rights to acquire vested ownership of shares of the Company's Common Stock under plans, agreements or arrangements that are compensatory in nature, including, without limitation, the Option, the Plan and other agreements between the Company and Executive.

IN WITNESS WHEREOF, the parties hereto have executed this Addendum on and as of the day and year first above written.

NGM BIOPHARMACEUTICALS, INC.

By: /s/ David J. Woodhouse

David J. Woodhouse, Ph.D.

Chief Executive Officer

/s/ Valerie Pierce

Valerie Pierce

Exhibit 10.16

October 18, 2023
Jean-Frédéric Viret

Dear Jean:

On behalf of NGM Biopharmaceuticals, Inc. ("NGM Bio" or the "Company"), we are pleased to offer you employment with the Company as Chief Financial Officer reporting to me. We believe this position represents an extraordinary opportunity, and we look forward to you joining our exceptional team on November 3, 2023. Below are details of the offer. Should you have questions, or wish to receive additional details, please let us know.

Your annual base salary will be $480,000, less payroll deductions and all required withholdings, paid semi-monthly over 24 pay periods per year. In addition, you will be eligible to participate in the Company's annual performance-based bonus program. Your annual bonus target (at 100% achievement) will be 40% of your base salary. The amount of any bonus paid relative to your target will be based on your performance (as determined by the Company in its sole discretion) and the Company's achievement of its corporate goals and in the first year, will be prorated based on your start date. As your start date is after September 30th, you will not be eligible for a bonus this year. You must be employed on the bonus payout date to be eligible for a bonus.

You will be eligible to receive a one-time sign-on bonus of $25,000. This sign-on bonus, less deductions and withholdings, will be paid within the first two pay periods of your employment with NGM Bio. Should you resign from NGM Bio for any reason within two years after your start date, you will be required to repay a prorated portion of the sign-on bonus (the gross amount) based on the number of months you were employed by the Company following your start date.

NGM Bio provides all eligible employees with a comprehensive benefits program. You will have the opportunity to participate in any benefits we offer during your employment, subject to your enrollment or election to participate, if required, and meeting eligibility requirements. Our current benefits include medical, dental and vision coverage for you and your eligible dependents if you enroll in them. In addition, we provide life insurance, LTD and AD&D coverage and offer a comprehensive 401(k) program. Other current benefits include Company holidays, vacation, sick leave and access to Health Care and Dependent Care Flexible Spending Accounts.

An important component of your compensation includes the opportunity for equity ownership in the Company. After you commence employment, and subject to the approval of our Board of Directors, NGM Bio will grant you an option to purchase 450,000 shares of the Company's common stock (subject to adjustment for stock splits, stock dividends, reclassification, and the like) at the fair market on the date of grant (the "Option"). The Option will be subject to the terms and conditions of the Company's Equity Incentive Plan (the "Plan") and your grant agreement. Your grant agreement will reflect a four-year vesting schedule, under which 25% of the shares underlying your Option will vest after 12 months and the remainder in equal monthly installments over the next 36 months, subject to your continuous service. In addition, you will be eligible to participate in the Company's Employee Stock Purchase Plan ("ESPP"). The ESPP allows NGM Bio's employees to allocate a portion of their after-tax pay to purchase Company shares at a discount from the market price. Participation in this plan is strictly voluntary.

This offer is contingent upon our verification of your employment history and satisfactory clearance of background check. Any intentional misrepresentation concerning your employment history may result in disciplinary action up to and including revocation of this offer or termination of your employment at NGM Bio. In addition, as required by law, this offer is subject to satisfactory proof of your identity and right to work in the United States.

As a condition of your employment, you will be required to read, acknowledge, and abide by the Company's policies and procedures, including those outlined in our Employee Handbook, to read, sign and comply with the Company's Employee Confidential Information and Inventions Agreement ("Confidential Information Agreement") and to read and sign the Arbitration Agreement (the "Arbitration Agreement").

Your employment relationship is at-will. Accordingly, you may terminate your employment with the Company at any time and for any reason whatsoever simply by notifying the Company. Likewise, the Company may terminate your employment at any time and for any reason, with or without cause or advance notice. In addition, the Company may change your title, duties, reporting relationship, compensation, and benefits from time to time in its discretion. If, on or within 18 months after the effective date of a change in control, your employment is terminated without cause and other than as a result of your death and disability, or you resign for good reason, and subject to you signing the Company's standard form of release within the time period specified by the Company and allowing it to become effective in accordance with its terms and your compliance with your obligations under the Confidential Information Agreement, you will receive the following severance benefits: (a) continuation of your base salary for a six-month period, (b) payment of premiums for you and your eligible dependents to continue your health insurance benefits for the first six months of such coverage, or such earlier date as you (or your dependents, as applicable) cease to be eligible for continuation coverage, and (c) full vesting acceleration of any unvested outstanding equity awards (together, the "Severance Benefits"). The Severance Benefits will be subject to the definitions and additional terms and conditions set forth by the Company.

This letter, together with your Confidential Information Agreement and your Arbitration Agreement, forms the complete and exclusive statement of your agreement with the Company concerning this offer. The terms of this letter supersede any other representations or agreements made to you by any party, whether oral or written. The terms of our agreement cannot be changed (except those changes expressly reserved to the Company's discretion in this letter) other than by a written agreement signed by you and a duly authorized officer of the Company. This agreement is to be governed by the laws of the state of California without reference to its conflicts of law principles. In case any provision contained in this agreement shall, for any reason, be held invalid or unenforceable in any respect, such invalidity or unenforceability will not affect the other provisions of this agreement, and such provision will be construed and enforced to render it valid and enforceable consistent with the general intent of the parties insofar as possible under applicable law. This agreement may be executed in more than one counterpart, and signatures transmitted electronically will be deemed equivalent to originals.

Under the terms described above, please sign and date this letter, the Confidential Information Agreement, and the Arbitration Agreement, and return them to by October 20, 2023.

NGM Bio is an ambitious biopharmaceutical company focused on discovering and developing novel, life-changing medicines for people whose health and lives have been disrupted by disease. To this end, we are assembling a

team of uniquely qualified individuals with extraordinary knowledge, skills and drive. We look forward to you joining our team.

Sincerely,

/s/ David J. Woodhouse

David J. Woodhouse, Ph.D.
Chief Executive Officer

Understood and Accepted

/s/ Jean-Frédéric Viret

Jean-Frédéric Viret, Ph.D.

___October 20, 2023____

Date of Signature

ARBITRATION AGREEMENT

To aid the rapid and economical resolution of disputes that may arise in connection with your employment with NGM Biopharmaceuticals, Inc. (the "Company"), and in exchange for the mutual promises contained in your offer letter, you and the Company agree that any and all disputes, claims, or causes of action, in law or equity, including but not limited to statutory claims arising from or relating to the enforcement, breach, performance, or interpretation of your offer letter, your employment with the Company, or the termination of your employment, shall be resolved pursuant to the Federal Arbitration Act, 9 U.S.C. § 1-16, to the fullest extent permitted by law, by final, binding and confidential arbitration conducted by JAMS, Inc. ("***JAMS***") or its successor, under such arbitration service's then applicable rules and procedures appropriate to the relief being sought (available upon request and also currently available at the following web address(es):

(i) https://www.jamsadr.com/rules-employment-arbitration/ and

(ii) https://www.jamsadr.com/rules-comprehensive-arbitration/)

at a location closest to where you last worked for the Company or another mutually agreeable location. **You acknowledge that by agreeing to this arbitration procedure, both you and the Company waive the right to resolve any such dispute through a trial by jury or judge.**

This arbitration agreement shall not be mandatory for any claim or cause of action to the extent applicable law prohibits subjecting such claim or cause of action to mandatory arbitration and such applicable law is not preempted by the Federal Arbitration Act or otherwise invalid (collectively, the "***Excluded Claims***"), including claims or causes of action alleging sexual harassment or a nonconsensual sexual act or sexual contact, or unemployment or workers' compensation claims brought before the applicable state governmental agency. In the event you or the Company intend to bring multiple claims, including one of the Excluded Claims listed above, the Excluded Claims may be filed with a court, while any other claims will remain subject to mandatory arbitration. Nothing herein prevents you from filing and pursuing proceedings before a federal or state governmental agency, although if you choose to pursue a claim following the exhaustion of any applicable administrative remedies, that claim would be subject to this provision. In addition, with the exception of Excluded Claims arising out of 9 U.S.C., chapter 4, all claims, disputes, or causes of action under this section, whether by you or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person or entity. The arbitrator may not consolidate the claims of more than one person or entity and may not preside over any form of representative or class proceeding. To the extent that the preceding sentences regarding class or representative claims or proceedings are found to violate applicable law or are otherwise found unenforceable, any claim(s) alleged or brought on behalf of a class or in a representative capacity shall proceed in a court of law rather than by arbitration.

You will have the right to be represented by legal counsel at any arbitration proceeding. Questions of whether a claim is subject to arbitration under this arbitration agreement shall be decided by the arbitrator. Likewise,

procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. Notwithstanding the foregoing, provided however, that if required by applicable law, a court and not the arbitrator may determine the enforceability of the previous section with respect to Excluded Claims. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; and (b) issue a written statement signed by the arbitrator regarding the disposition of each claim and the relief, if any, awarded as to each claim, the reasons for the award, and the arbitrator's essential findings and conclusions on which the award is based. The arbitrator shall be authorized to award all relief that you or the Company would be entitled to seek in a court of law.

For California and Hawaii Employees Only: The Company shall pay all arbitration administrative fees in excess of the administrative fees that you would be required to pay if the dispute were decided in a court of law. Each party is responsible for its own attorneys' fees, except as may be expressly set forth in your employee confidential information and inventions assignment agreement or as otherwise provided under applicable law. Nothing in this arbitration agreement is intended to prevent either you or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Any awards or orders in such arbitrations may be entered and enforced as judgments in the federal and state courts of any competent jurisdiction.

This arbitration agreement will be effective as of my first day of employment with the Company.

EMPLOYEE:	**COMPANY:**
I HAVE READ, UNDERSTAND AND ACCEPT THIS ARBITRATION AGREEMENT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW IT WITH INDEPENDENT LEGAL COUNSEL. **/s/ Jean-Frédéric Viret**	**ACCEPTED AND AGREED.** **/s/ Valerie Pierce**
(Signature)	*(Signature)*
By: Jean-Frédéric Viret	By: Valerie Pierce
Title: CFO	Title: General Counsel
Date: October 20, 2023	Date: October 20, 2023
Address: [redacted]	Address: 333 Oyster Point Boulevard South San Francisco, CA 94080

Severance Benefit Addendum

This Severance Benefit Addendum ("Addendum"), effective as of December 4, 2023, to the employment offer letter ("Offer Letter") dated October 18, 2023 by and between Jean-Frederic Viret, Ph.D. ("Executive") and NGM Biopharmaceuticals, Inc. ("NGM" or the "Company") sets forth the terms of Executive's severance benefits with the Company. This Addendum forms part of the Offer Letter. Capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Offer Letter.

1. **Termination Without Cause or Resignation for Good Reason Following a Change in Control.** If, on or within eighteen (18) months after the effective date of a Change in Control (as defined herein), either (i) the Company terminates Executive's employment without Cause (as defined herein) and other than as a result of Executive's death or Disability, or (ii) Executive resigns for Good Reason (as defined herein), and provided in any case (a) such termination or resignation constitutes a "separation from service" (within the meaning of Treasury Regulation Section 1.409A-l(h)), (b) Executive signs the Company's standard form of release within the time period specified by the Company and allows it to become effective in accordance with its terms (but in no event later than sixty (60) days following Executive's termination or resignation), and (c) Executive complies with Executive's obligations under Executive's Proprietary Information Agreement, then the Company shall provide Executive with the following severance benefits:

   1.1 **Salary and Benefit Continuation.** The Company will pay Executive severance in the form of Base Salary continuation for a six (6) month period following Executive's last day of employment. These salary continuation payments will be paid on the Company's regular payroll schedule and subject to standard deductions and withholdings over the applicable period following termination or resignation; *provided, however,* that no payments will be made prior to the sixtieth (60^{th}) day following Executive's termination or resignation. On the sixtieth (60^{th}) day following Executive's termination or resignation date, the Company will pay Executive in a lump sum the salary continuation payments that Executive would have received on or prior to such date under the original schedule but for the delay while waiting for the release deadline, with the balance of the cash severance being paid as originally scheduled. In addition, Executive shall have the right to continue Executive's health insurance benefits pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985 ("COBRA") or successor statute and any analogous provisions of applicable state law. Provided that Executive makes a timely and accurate election for continued health insurance coverage (including medical, dental, vision and prescription) under COBRA (or any state law of similar effect), the Company will pay the premiums for such continued coverage for Executive and Executive's eligible dependents for the first six (6) months of such coverage, or such earlier date as Executive (or Executive's dependents, as applicable) ceases to be eligible for such continuation coverage (such payment period, the "COBRA Payment Period").

   Notwithstanding the foregoing, if at any time the Company determines, in its sole discretion, that it cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then in lieu of paying COBRA premiums directly to the carrier on Executive's behalf, the Company will instead pay Executive on the last day of each remaining month of the COBRA Payment Period a fully taxable cash payment equal to the value of Executive's monthly COBRA premium for the first month of COBRA coverage, subject to applicable tax withholding (such amount, the "Special Severance Payment"), such Special Severance Payment to be made without regard to Executive's election of COBRA coverage or payment of COBRA premiums and without regard to Executive's continued eligibility for COBRA coverage during the COBRA Payment Period. Such Special Severance Payment shall end upon expiration of the COBRA Payment Period.

   1.2 **Accelerated Vesting.** The Company will accelerate the vesting of the Stock Rights, to the extent then-outstanding and unvested, such that all shares subject to the Stock Rights shall be deemed immediately vested and exercisable as of Executive's termination or resignation date.

2. **Section 409A Compliance.** It is intended that each installment of the severance payments and benefits provided for in this Addendum is a separate "payment" for purposes of Section 409A ("Section 409A") of the Internal Revenue Code of 1986, as amended (the "Code"). For the avoidance of doubt, it is intended that the severance satisfies, to the greatest extent possible, the exemptions from the application of Section 409A provided under Treasury Regulation 1.409A-l(b)(4) and 1.409A-l(b)(9). Notwithstanding the foregoing, if the Company (or, if applicable, the successor entity thereto) determines that the severance payment provided above upon a separation from service constitute "deferred compensation" under Section 409A and if Executive is a "specified employee" of the Company or any successor entity thereto as of the separation from service, as such term is defined in Section 409A(a)(2)(B)(i) (a "Specified Employee"), then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the severance (or any portion thereof) shall be delayed as follows: on the earlier to occur of (i) the date that is six (6) months and one (1) day after the date of separation of service or (ii) the date of Executive's death (such earlier date, the "Delayed Initial Payment Date"), the Company (or the successor entity thereto, as applicable) shall (A) pay to Executive a lump sum amount equal to the sum of the severance payments that Executive would otherwise have received through the Delayed Initial Payment Date if the commencement of the payment of the severance had not been delayed pursuant to this paragraph and (B) commence paying the balance of the severance in accordance with the payment schedule set forth above.

3. **Definitions.** For purposes of this Addendum, the following terms used herein have the definitions set forth below.
   3.1 "**Base Salary**" means base pay (excluding incentive pay, premium pay, commissions, overtime, bonuses and other forms of variable compensation) as in effect immediately prior to Executive's termination or resignation triggering benefits under this Addendum, except that base pay shall exclude any reduction that would give rise to Executive's right to a resignation for Good Reason (if applicable).
   3.2 "**Cause**" has the meaning ascribed to such term in the Plan.
   3.3 "**Change in Control**" has the meaning ascribed to such term in the Plan.
   3.4 "**Disability**" has the meaning ascribed to such term in the Plan.
   3.5 "**Good Reason**" means: if any of the following actions are taken by the Company or a successor corporation or entity without Executive's consent, provided that Executive notifies the Company (or successor, as applicable) in writing, within ten (10) days after the occurrence of one of the following actions, that Executive intends to terminate Executive's employment no earlier than thirty (30) days after providing such notice, and the Company (or successor, as applicable) fails to cure such actions within thirty (30) days after receipt of such notice, and Executive's resignation is effective not later than (30) days after the Company (or successor, as applicable) fails to cure the issue: (a) a substantial reduction of Executive's base salary; (b) a material reduction in Executive's duties; (c) a material breach by the Company (or a successor corporation or entity, if applicable) of any provision of the Offer Letter, including this Addendum; or (d) a relocation of Executive's principal place of employment to a place that increases Executive's one-way commute by greater than fifty (50) miles as compared to Executive's then-current principal place of employment prior to such relocation (excluding regular travel in the ordinary course of business); provided that (i) if Executive's principal place of employment is Executive's personal residence, this clause (d) shall not apply and (ii) if Executive works remotely during any period in which Executive's regular principal office location is a Company office that is closed, then neither Executive's relocation to remote work or back to the office from remote work will be considered a relocation of Executive's principal office location for purposes of this definition.
   3.6 "**Plan**" means the Company's Amended and Restated 2018 Equity Incentive Plan, as amended from time to time, or any successor plan thereto.
   3.7 "**Stock Rights**" means all of Executive's options, restricted stock, restricted stock units or rights to acquire vested ownership of shares of the Company's Common Stock under plans, agreements or arrangements that are compensatory in nature, including, without limitation, the Option, the Plan and other agreements between the Company and Executive.

IN WITNESS WHEREOF, the parties hereto have executed this Addendum on and as of the day and year first above written.

NGM BIOPHARMACEUTICALS, INC.

By: /s/ David J. Woodhouse

David J. Woodhouse, Ph.D.

Chief Executive Officer

/s/ Jean-Frédéric Viret

Jean-Frederic Viret, Ph.D.

Exhibit 21.1

SUBSIDIARIES

Subsidiary Name	Jurisdiction of Incorporation or Organization
NGM Biopharmaceuticals Australia Pty Ltd.	Australia

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

1. Registration Statements (Form S-8 Nos. 333-230725 and 333-270121) pertaining to NGM Biopharmaceuticals, Inc. Amended and Restated 2018 Equity Incentive Plan and NGM Biopharmaceuticals, Inc. 2019 Employee Stock Purchase Plan;
2. Registration Statements (Form S-8 Nos. 333-237243, 333-254295 and 333-263155) pertaining to NGM Biopharmaceuticals, Inc. Amended and Restated 2018 Equity Incentive Plan; and
3. Registration Statement (Form S-3 No. 333-272509) and related prospectus and prospectus supplements of NGM Biopharmaceuticals, Inc.

of our report dated March 11, 2024, with respect to the consolidated financial statements of NGM Biopharmaceuticals, Inc., included in this Annual Report (Form 10-K) of NGM Biopharmaceuticals, Inc. for the year ended December 31, 2023.

/s/ Ernst & Young LLP

San Mateo, California
March 11, 2024

Exhibit 31.1

CERTIFICATION BY THE CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, David J. Woodhouse, certify that:

1. I have reviewed this Annual Report on Form 10-K of NGM Biopharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 11, 2024

By: /s/ David J. Woodhouse, Ph.D.

David J. Woodhouse, Ph.D.
Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION BY THE CHIEF FINANCIAL OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Jean-Frédéric Viret, certify that:

1. I have reviewed this Annual Report on Form 10-K of NGM Biopharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 11, 2024

By: /s/ Jean-Frédéric Viret

Jean-Frédéric Viret, Ph.D.
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. § 1350), David J. Woodhouse, Chief Executive Officer of NGM Biopharmaceuticals, Inc. (the "Company"), and Jean-Frédéric Viret, Chief Financial Officer of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2023, to which this Certification is attached as Exhibit 32.1 (the "Annual Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 11, 2024

/s/ David J. Woodhouse, Ph.D.
David J. Woodhouse, Ph.D.
Chief Executive Officer and Director
(Principal Executive Officer)

/s/ Jean-Frédéric Viret, Ph.D.
Jean-Frédéric Viret, Ph.D.
Chief Financial Officer
(Principal Financial Officer)

This certification accompanies the Annual Report to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of NGM Biopharmaceuticals, Inc. under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Annual Report), irrespective of any general incorporation language contained in such filing.

Exhibit 97.1

INCENTIVE COMPENSATION RECOUPMENT POLICY

The Board of Directors (the "***Board***") of NGM Biopharmaceuticals, Inc., a Delaware corporation (the "***Company***"), has determined that it is in the best interests of the Company and its stockholders to adopt this Incentive Compensation Recoupment Policy (this "***Policy***") providing for the Company's recoupment of Recoverable Incentive Compensation (as defined below) that is received by Covered Officers (as defined below) of the Company under certain circumstances.

This Policy is designed to comply with, and shall be interpreted to be consistent with, Section 10D of the U.S. Securities Exchange Act of 1934, as amended (the "***Exchange Act***"), Rule 10D-1 promulgated thereunder ("***Rule 10D-1***") and Nasdaq Listing Rule 5608 (the "***Listing Standards***").

Definitions

"***Accounting Restatement***" means an accounting restatement that the Company is required to prepare 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.

"***Accounting Restatement Date***" means the earlier to occur of (a) the date that the Board, a committee of the Board authorized to take such action, 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 an Accounting Restatement, or (b) the date that a court, regulator or other legally authorized body directs the Company to prepare an Accounting Restatement.

"***Administrator***" means the Compensation Committee or, in the absence of such committee, the Board.

"***Code***" means the U.S. Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

"***Compensation Committee***" means the Compensation Committee of the Board.

"***Covered Officer***" means each current and former Executive Officer.

"***Exchange***" means the Nasdaq Stock Market.

"***Executive Officer***" means the Company's president, principal financial officer, principal accounting officer (or if there is no such accounting officer, the controller), any vice president of the Company in charge of a principal business unit, division or function (such as sales, administration, or finance), any other officer who performs a policy-making function, or any other person who performs similar policy-making functions for the Company. Executive officers of the Company's parent(s) or subsidiaries are deemed executive officers of the Company if they

perform such policy-making functions for the Company. Policy-making function is not intended to include policy-making functions that are not significant. Identification of an executive officer for purposes of this Policy would include at a minimum executive officers identified pursuant to Item 401(b) of Regulation S-K promulgated under the Exchange Act.

"***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 derived wholly or in part from such measures, including Company stock price and total stockholder return ("***TSR***"). A measure need not be presented in the Company's financial statements or included in a filing with the SEC in order to be a Financial Reporting Measure.

"***Incentive Compensation***" means any compensation that is granted, earned or vested based wholly or in part upon the attainment of a Financial Reporting Measure. For clarity, Incentive Compensation does not include base salaries, bonuses or equity awards paid solely upon satisfying one or more subjective standards, strategic or operational measures, or continued employment, unless such base salaries, bonuses, or equity awards were granted, paid, or vested (as applicable) based in part on a Financial Reporting Measure.

"***Lookback Period***" means the three completed fiscal years immediately preceding the Accounting Restatement Date, as well as any transition period (resulting from a change in the Company's fiscal year) within or immediately following those three completed fiscal years (except that a transition period of at least nine months shall count as a completed fiscal year). Notwithstanding the foregoing, the Lookback Period shall not include fiscal years completed prior to the Effective Date.

"***Recoverable Incentive Compensation***" means Incentive Compensation received by a Covered Officer during the Lookback Period that exceeds the amount of Incentive Compensation that would have been received had such amount been determined based on the Accounting Restatement, computed without regard to any taxes paid (*i.e.*, on a gross basis without regarding to tax withholdings and other deductions). For any compensation plans or programs that take into account Incentive Compensation, the amount of Recoverable Incentive Compensation for purposes of this Policy shall include, without limitation, the amount contributed to any notional account based on Recoverable Incentive Compensation and any earnings to date on that notional amount. For any Incentive Compensation that is based on stock price or TSR, where the Recoverable Incentive Compensation is not subject to mathematical recalculation directly from the information in an Accounting Restatement, the Administrator will determine the amount of Recoverable Incentive Compensation based on a reasonable estimate of the effect of the Accounting Restatement on the stock price or TSR upon which the Incentive Compensation was received. The Company shall maintain documentation of the determination of that reasonable estimate and provide such documentation to the Exchange in accordance with the Listing Standards.

"***SEC***" means the U.S. Securities and Exchange Commission.

Effective Date

This Policy shall apply to all Incentive Compensation that is received by a Covered Officer on or after October 2, 2023 (the "***Effective Date***"). Incentive Compensation is deemed "***received***" in the Company's fiscal period in which the Financial Reporting Measure specified in the Incentive Compensation award is attained, even if the payment or grant of such Incentive Compensation occurs after the end of that period.

Recoupment

Applicability of Policy

This Policy applies to Incentive Compensation received by a Covered Officer (a) after beginning services as an Executive Officer, (b) who served as an Executive Officer at any time during the performance period for such Incentive Compensation, (c) while the Company had a class of securities listed on a national securities exchange or a national securities association, and (d) during the Lookback Period.

Recoupment Generally

Pursuant to the provisions of this Policy, if there is an Accounting Restatement, the Company must reasonably promptly recoup the full amount of the Recoverable Incentive Compensation, unless the conditions of one or more subsections of the section of this Policy entitled "***Impracticability of Recovery***" are met and the Compensation Committee, or, if such committee does not consist solely of independent directors, a majority of the independent directors serving on the Board, has made a determination that recoupment would be impracticable. Recoupment is required regardless of whether the Covered Officer engaged in any misconduct and regardless of fault, and the Company's obligation to recoup Recoverable Incentive Compensation is not dependent on whether or when any restated financial statements are filed.

Impracticability of Recovery

Recoupment may be determined to be impracticable if, and only if:

(a) the direct expense paid to a third party to assist in enforcing this Policy would exceed the amount of the applicable Recoverable Incentive Compensation; provided that, before concluding that it would be impracticable to recover any amount of Recoverable Incentive Compensation based on expense of enforcement, the Company shall make a reasonable attempt to recover such Recoverable Incentive Compensation, document such reasonable attempt(s) to recover, and provide that documentation to the Exchange in accordance with the Listing Standards; or

(b) recoupment of the applicable Recoverable Incentive Compensation 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 Code Section 401(a)(13) or Code Section 411(a) and regulations thereunder.

Sources of Recoupment

To the extent permitted by applicable law, the Administrator shall, in its sole discretion, determine the timing and method for recouping Recoverable Incentive Compensation hereunder, provided that such recoupment is undertaken reasonably promptly. The Administrator may, in its discretion, seek recoupment from a Covered Officer from any of the following sources or a combination thereof, whether the applicable compensation was approved, awarded, granted, payable or paid to the Covered Officer prior to, on or after the Effective Date: (a) direct repayment of Recoverable Incentive Compensation previously paid to the Covered Officer; (b) cancelling prior cash or equity-based awards (whether vested or unvested and whether paid or unpaid); (c) cancelling or offsetting against any planned future cash or equity-based awards; (d) forfeiture of deferred compensation, subject to compliance with Code Section 409A; and (e) any other method authorized by applicable law or contract. Subject to compliance with any applicable law, the

Administrator may effectuate recoupment under this Policy from any amount otherwise payable to the Covered Officer, including amounts payable to such individual under any otherwise applicable Company plan or program, *e.g.*, base salary, bonuses or commissions and compensation previously deferred by the Covered Officer. The Administrator need not utilize the same method of recovery for all Covered Officers or with respect to all types of Recoverable Incentive Compensation.

No Indemnification of Covered Officers

Notwithstanding any indemnification agreement, applicable insurance policy or any other agreement or provision of the Company's certificate of incorporation or bylaws to the contrary, no Covered Officer shall be entitled to indemnification or advancement of expenses in connection with any enforcement of this Policy by the Company, including paying or reimbursing such Covered Officer for insurance premiums to cover potential obligations to the Company under this Policy.

Indemnification of Administrator

Any members of the Administrator, and any other members of the Board who assist in the administration of this Policy, shall not be personally liable for any action, determination or interpretation made with respect to this Policy and shall be indemnified by the Company to the fullest extent under applicable law and Company policy with respect to any such action, determination or interpretation. The foregoing sentence shall not limit any other rights to indemnification of the members of the Board under applicable law or Company policy.

No "Good Reason" for Covered Officers

Any action by the Company to recoup or any recoupment of Recoverable Incentive Compensation under this Policy from a Covered Officer shall not be deemed (a) "good reason" for resignation or to serve as a basis for a claim of constructive termination under any benefits or compensation arrangement applicable to such Covered Officer, or (b) to constitute a breach of a contract or other arrangement to which such Covered Officer is party.

Administration of Policy

Except as specifically set forth herein, this Policy shall be administered by the Administrator. The Administrator shall have full and final authority to make any and all determinations required under this Policy. Any determination by the Administrator with respect to this Policy shall be final, conclusive and binding on all interested parties and need not be uniform with respect to each individual covered by this Policy. In carrying out the administration of this Policy, the Administrator is authorized and directed to consult with the full Board or such other committees of the Board as may be necessary or appropriate as to matters within the scope of such other committee's responsibility and authority. Subject to applicable law, the Administrator may authorize and empower any officer or employee of the Company to take any and all actions that the Administrator, in its sole discretion, deems necessary or appropriate to carry out the purpose and intent of this Policy (other than with respect to any recovery under this Policy involving such officer or employee).

Severability

If any provision of this Policy or the application of any such provision to a Covered Officer shall be adjudicated to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Policy, and the invalid, illegal or unenforceable provisions shall be deemed amended to the minimum extent necessary to render any such provision or application enforceable.

No Impairment of Other Remedies

Nothing contained in this Policy, and no recoupment or recovery as contemplated herein, shall limit any claims, damages or other legal remedies the Company or any of its affiliates may have against a Covered Officer arising out of or resulting from any actions or omissions by the Covered Officer. This Policy does not preclude the Company from taking any other action to enforce a Covered Officer's obligations to the Company, including, without limitation, termination of employment and/or institution of civil proceedings. This Policy is in addition to the requirements of Section 304 of the Sarbanes-Oxley Act of 2002 ("***SOX 304***") that are applicable to the Company's Chief Executive Officer and Chief Financial Officer and to any other compensation recoupment policy and/or similar provisions in any employment, equity plan, equity award or other individual agreement to which the Company is a party or which the Company has adopted or may adopt and maintain from time to time; provided, however, that compensation recouped pursuant to this Policy shall not be duplicative of compensation recouped pursuant to SOX 304 or any such compensation recoupment policy and/or similar provisions in any such employment, equity plan, equity award or other individual agreement except as may be required by law.

Amendment; Termination

The Administrator may amend, terminate or replace this Policy or any portion of this Policy at any time and from time to time in its sole discretion. The Administrator shall amend this Policy as it deems necessary to comply with applicable law or any Listing Standard.

Successors

This Policy shall be binding and enforceable against all Covered Officers and, to the extent required by Rule 10D-1 and/or the applicable Listing Standards, their beneficiaries, heirs, executors, administrators or other legal representatives.

Required Filings

The Company shall make any disclosures and filings with respect to this Policy that are required by law, including as required by the SEC.

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Adopted by the Company's Board of Directors on November 8, 2023

NGM Biopharmaceuticals, Inc.
Incentive Compensation Recoupment Policy
Form of Executive Acknowledgment

I, the undersigned, agree and acknowledge that I am bound by, and subject to, the NGM Biopharmaceuticals, Inc. Incentive Compensation Recoupment Policy, as may be amended, restated, supplemented or otherwise modified from time to time (the "***Policy***"). In the event of any inconsistency between the Policy and the terms of any employment agreement, offer letter or other individual agreement with NGM Biopharmaceuticals, Inc. (the "***Company***") to which I am a party, or the terms of any compensation plan, program or agreement, whether or not written, under which any compensation has been granted, awarded, earned or paid to me, the terms of the Policy shall govern.

In the event that the Administrator (as defined in the Policy) determines that any compensation granted, awarded, earned or paid to me must be forfeited or reimbursed to the Company pursuant to the Policy, I will promptly take any action necessary to effectuate such forfeiture and/or reimbursement. I further agree and acknowledge that I am not entitled to indemnification, and hereby waive any right to advancement of expenses, in connection with any enforcement of the Policy by the Company.

Agreed and Acknowledged:

Name: _____

Title: _____

Date: _____