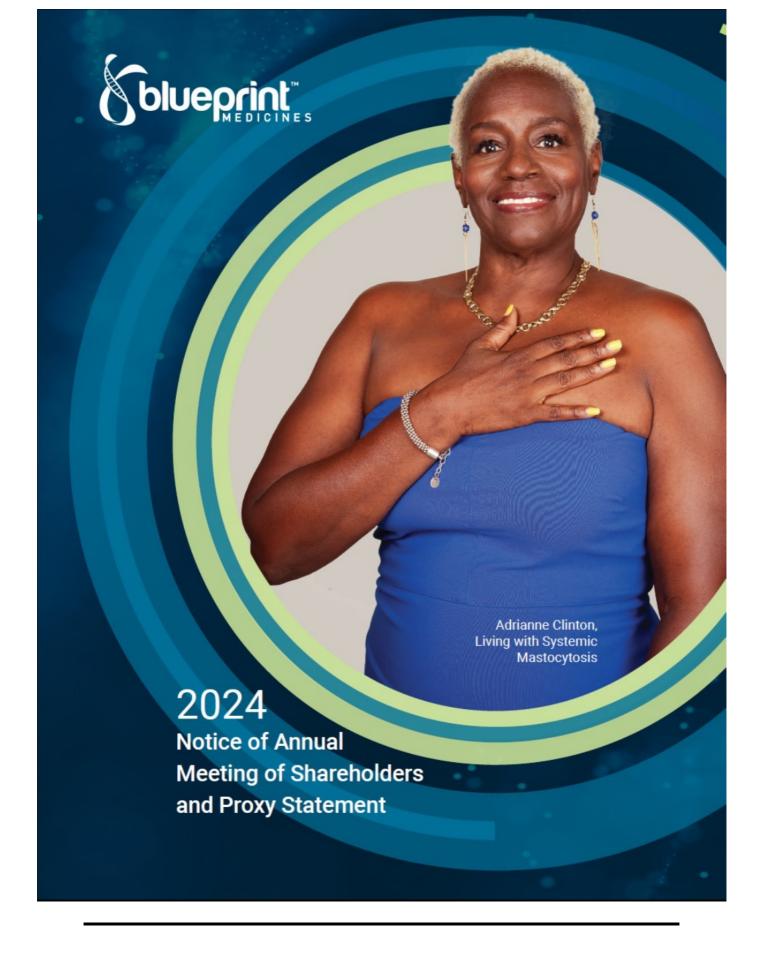
UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934

| Filed | by the Registrant 🖾 | Filed by a Party other than the Registrant $\ \Box$ |
|-------------|--|--|
| Che | ck the appropriate box: | |
| | Preliminary Proxy Statement | |
| | Confidential, for Use of the Commiss | sion Only (as permitted by Rule 14a-6(e)(2)) |
| \boxtimes | Definitive Proxy Statement | |
| | Definitive Additional Materials | |
| | Soliciting Material Pursuant to §240.14 | a-12 |
| Payı | (Name | MEDICINES CORPORATION of Registrant as Specified In Its Charter)) Filing Proxy Statement, if Other Than the Registrant) apply): |
| \boxtimes | No fee required. | |
| | Fee paid previously with preliminary ma | aterials. |
| | Fee computed on table in exhibit require | ed by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11. |
| | | |



Dear Stockholders.

We had a tremendous year in 2023, achieving our 2023 corporate milestones across discovery, development, and commercial. We received U.S. and European regulatory approval for AYVAKIT®/AYVAKYT® (avapritinib) in indolent systemic mastocytosis, or indolent SM, and subsequently launched in both geographies; we nominated our development candidate BLU-808, an oral, potent, selective wild-type KIT inhibitor, for mast cell diseases; we advanced multiple early-stage clinical programs to inform a pipeline prioritization for 2024; and we did this all with financial discipline. Our strong execution has demonstrated that we can realize the harmony between our mission of bringing new, innovative medicines to patients while also building a strong and thriving business to create substantial value for our stockholders.

As we enter 2024, AYVAKIT continues to be the foundation of our expanding business, with our early launch momentum putting AYVAKIT firmly on the path to achieve its potential as a greater than \$2 billion product. With AYVAKIT's continued success, our growing revenue is enabling us to invest in compelling opportunities within our pipeline to drive longer-term growth as we strive to deliver additional transformational medicines in the future.

To achieve our goals this year, we are focusing on three key aspects of our business:

Our first area of focus is to continue the successful launch of AYVAKIT as the first and only approved treatment for indolent SM in the United States and Europe. Indolent SM is a debilitating, lifelong disease that requires chronic treatment to control burdensome symptoms that can severely impact a person's ability to work, take care of their family, and live a full life. AYVAKIT provides durable and clinically meaningful improvement across a broad range of symptoms with a well-tolerated, once-daily pill available in a range of doses to meet the medical needs across a spectrum of indolent SM and advanced SM patients. Indolent SM represents a sizeable, rare disease population of approximately 70,000 prevalent patients in the United States and Europe alone, roughly 15 times larger than the advanced SM population (for which AYVAKIT is also approved).

In 2023, catalyzed by the first few months of launch, we delivered results in both our ability to reach patients and drive revenue, generating AYVAKIT net product revenues of \$204.2 million for fiscal year 2023, up 84% from fiscal year 2022. At peak, AYVAKIT represents a greater than \$2 billion potential market opportunity, and AYVAKIT's early launch trajectory toward this goal is on par with other successful rare disease medicines.

Our second area of focus is to advance our portfolio of innovative, investigational medicines by scaling our SM leadership position to target additional allergic-inflammatory diseases where mast cells play a central role and advancing development of innovative therapies targeting cyclin dependent kinases in solid tumors. Our prioritized investments in these focused areas allow us to address areas of high medical needs in large patient populations where we can also leverage our expertise and infrastructure.

A core component of our growth strategy is to build on our leadership position in SM by expanding to other diseases where mast cells play a core role in disease biology. We are uniquely positioned to build a franchise in mast cell-mediated diseases because of our scientific leadership and proprietary insights into mast cell and KIT biology, and our clinical and commercial capability and infrastructure. AYVAKIT and elenestinib, our next-generation candidate in development for SM, allow us to comprehensively address mast cell diseases driven by mutated KIT. Building on our success in SM, we are expanding into additional mast cell diseases representing much larger opportunities, beginning with chronic urticaria, where inhibition of wildtype KIT with BLU-808 represents a compelling therapeutic approach to impact fundamental disease biology. We believe the BLU-808 program can move quickly, building on the established proof-of-concept for KIT inhibition in these diseases and our track record of clinical execution and commercial success.

We are also making strides in developing treatments for breast cancer and other solid tumors, by advancing the development of our CDK franchise anchored by the CDK2 inhibitor BLU-222, which has the potential to serve as the backbone of front-line combination therapy in breast cancer. Given the large market potential for BLU-222, we are seeking to collaborate with a partner who has a shared view of the importance of this target and in the compelling profile of BLU-222 as a potential best- and first-in-class CDK2 inhibitor. The BLU-222 program is an important near-term value driver for us, with key emerging clinical data expected this year and into early 2025. Beyond BLU-222, we have multiple early research efforts ongoing with potential to expand our CDK franchise, including BLU-956, a next-generation CDK2 kinase inhibitor, as well as targeted protein degradation efforts aimed at CDK2 and other undisclosed targets. This franchise approach, leveraging both our kinase inhibitor and targeted

protein degradation platforms, uniquely positions our company to drive comprehensive innovation in targeting cyclin dependent kinases and has the potential to generate significant long-term value.

Our third area of focus is to maintain a strong and durable financial position with cash management continuing to be a priority focus area for us in 2024. We anticipate that the combination of our strong revenue ramp and disciplined approach to our operating expenses will result in a continued decrease in cash burn throughout 2024, providing us with a clear pathway to potential profitability. The real value is what we can achieve over the long-term. As we grow AYVAKIT revenue throughout this year, we will still be just scratching the surface of the SM opportunity. We are confident that our early launch trajectory positions us squarely on the path to building a greater than \$2 billion potential market opportunity with AYVAKIT in SM, as we continue to reach the thousands of patients who could potentially benefit from treatment with AYVAKIT this year and beyond.

We know that our people are driving the success of our business, and we are committed to providing tools and fostering culture to drive high performance. We were named a "2024 Top Workplace USA" by USA Today for the third year running, and also recognized by Fast Company as one of the 10 most innovative companies in medicines and therapeutics in 2024. These recognitions span both the incredible impact we are having on patients globally as well as the impact our unique culture has on our "Blue Crew" team members and their ability to do their best work. We were also named as one of the "Top 100 Women-Led Businesses in Massachusetts" in 2023 by The Women's Edge, reflecting our commitment to diversity and championing strong corporate values. More importantly, our team members tell us directly how they feel about working at our company: In early 2024, 97% of our global workforce participated in our annual Engagement and Enablement survey, with 94% of our employees reporting that they were proud to work at Blueprint Medicines and 94% understanding how their role contributes to our goals.

Today, we are well positioned to drive compelling near-term growth and invest in future innovation while maintaining financial discipline and enhancing stockholder value. I am confident that we have the right people, portfolio, and capabilities in place to achieve our goals in 2024 and realize our mission of changing the outcomes and extending the lives of patients while building a strong and thriving business for the long-term.

On behalf of our board of directors, team members, patients and healthcare partners, thank you for your continued support and investment in Blueprint Medicines.

Sincerely.

Hora

President, Chief Executive Officer, and Director On Behalf of the Board of Directors

- Hund

Cambridge, Massachusetts April 25, 2024



Notice of Annual Meeting of Stockholders to be held on June 12, 2024

Dear Stockholders

You are cordially invited to attend the 2024 annual meeting of stockholders of Blueprint Medicines Corporation to be held on Wednesday, June 12, 2024, at 3:00 p.m., Eastern Daylight Time, virtually via live webcast at http://www.virtualshareholdermeeting.com/BPMC2024, where you will be able to vote electronically and submit questions. You will need the 16-digit control number included with these proxy materials to attend the annual meeting. At the annual meeting, stockholders will consider and vote on the following matters:

| Proposal No. | Description | Board Recommendation |
|--------------|---|----------------------|
| PROPOSAL 1 | Election of the three Class III directors named herein to our board of directors, each to serve for a three-year term, or until their successor has been duly elected and qualified | FOR All Nominees |
| PROPOSAL 2 | Approve a non-binding advisory vote on the frequency of future advisory votes on the compensation paid to our named executive officers | FOR One Year |
| PROPOSAL 3 | Approve a non-binding advisory vote on the compensation paid to our named executive officers | FOR |
| PROPOSAL | Approve the Blueprint Medicines Corporation 2024 Stock Incentive Plan | FOR |
| PROPOSAL 5 | Ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2024 | FOR |

In addition to the foregoing items of business, stockholders will be asked to consider and vote on any other business that may properly come before the annual meeting or any adjournment or postponement thereof.

The foregoing items of business are more fully described in the proxy statement accompanying this notice.

Stockholders of record at the close of business on April 12, 2024 will be entitled to notice of and to vote at the annual meeting or any adjournment or postponement thereof. We encourage you to access the annual meeting before it begins. Online checkin to access the meeting will start shortly before the meeting on June 12, 2024. If you attend the annual meeting at http://www.virtualshareholdermeeting.com/BPMC2024, you may vote electronically during the meeting even if you have previously returned a proxy. Stockholders will also have the opportunity to submit questions during the annual meeting through http://www.virtualshareholdermeeting.com/BPMC2024. A technical support telephone number will be posted on the log-in page that you can call if you encounter any difficulties accessing the virtual meeting during the check-in or during the meeting.

We have elected to provide access to our proxy materials over the Internet under the Securities and Exchange Commission's "notice and access" rules. We believe that providing our proxy materials over the Internet expedites stockholders' receipt of proxy materials, lowers costs and reduces the environmental impact of our annual meeting.

We encourage all stockholders to attend the annual meeting online. However, whether or not you plan to attend the annual meeting, we encourage you to read this proxy statement and submit your proxy or voting instructions as soon as possible. Please review the instructions on each of your voting options described in the proxy statement.

Thank you for your ongoing support and continued interest in Blueprint Medicines Corporation.

By Order of the Board of Directors,

Tracey L. McCain, Esq.

Chief Legal and Compliance Officer

Trong L Mcain

Cambridge, Massachusetts April 25, 2024

IMPORTANT NOTICE REGARDING INTERNET AVAILABILITY OF PROXY MATERIALS

We are furnishing proxy materials to our stockholders primarily via the Internet. On April 25, 2024, we mailed to our stockholders a Notice of Internet Availability, or Notice, containing instructions on how to access our proxy materials, including this proxy statement and our 2023 annual report to stockholders. The Notice also instructs you on how to submit your proxy or voting instructions through the Internet or to request a paper copy of our proxy materials, including a proxy card or voting instruction form that includes instructions on how to submit your proxy or voting instructions by mail or telephone. Other stockholders, in accordance with their prior requests, have received e-mail access to our proxy materials and instructions to submit their vote via the Internet, or have been mailed paper copies of our proxy materials and a proxy card or voting instruction form.

A copy of this proxy statement and our 2023 annual report to stockholders are available at www.proxyvote.com.

Internet distribution of our proxy materials is designed to expedite receipt by stockholders, lower the cost of the annual meeting, and conserve natural resources. However, if you would prefer to receive printed proxy materials, please follow the instructions included in the Notice. If you have previously elected to receive our proxy materials electronically, you will continue to receive these materials via e-mail unless you elect otherwise.



About Blueprint Medicines

2023 marked a new era of accelerating growth at Blueprint Medicines. We launched AYVAKIT/AYVAKYT in the U.S. and Europe in indolent SM, growing our product revenue by 84% and putting us on the path to achieve a potential blockbuster opportunity of greater than \$2 billion; we advanced and prioritized investments across our development and discovery portfolio; and we did all of this efficiently—decreasing our year-over-year costs and operating expenses. Our execution gives us strong momentum to drive additional success in 2024.

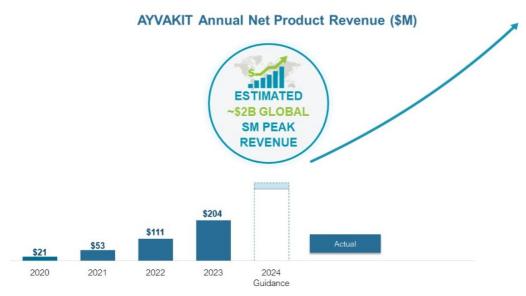
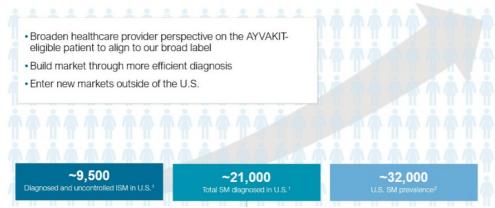


Figure is provided as a graphical representation and is not intended as financial guidance.

WE ARE CAPTURING A BLOCKBUSTER OPPORTUNITY WITH AYVAKIT IN SYSTEMIC MASTOCYTOSIS

In 2023, we received U.S. Food and Drug Administration, or FDA, and European Medicines Agency approval to market AYVAKIT/AYVAKIT as the first and only approved therapy for adults with indolent SM. Indolent SM represents a rare disease market of approximately 70,000 prevalent patients with high medical need in the United States and Europe. Supported by early launch momentum, we see significant headroom for strong and steady long-term revenue growth by treating more patients, continuing to grow the market, and expanding to new geographies, with AYVAKIT serving as the foundational driver of topline revenue growth for the company into the next decade. For example, we have seen approximately 280% growth over the last five years in diagnosed patients observable in claims data, who are being managed by an accessible prescriber base.

AYVAKIT's compelling efficacy and safety profile, coupled with the chronic nature of indolent SM, mean that both new patient starts and the cumulative effect of patients staying on therapy for longer durations are important drivers of revenue this year and beyond.



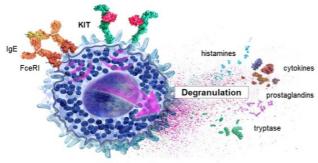
(1) Blueprint Medicines data on file, based upon visibility of unique patients in US claims data. (2) Cohen et al 2014.

WE ARE INVESTING IN SUSTAINABLE INNOVATION, AND FOCUSING OUR INVESTMENT TO DRIVE LONG-TERM **GROWTH**

Our research and development strategy focuses on designing and developing life-changing medicines in two core, strategic areas of allergy/inflammation and hematology/oncology. We pursue discovery, development, and commercialization of therapies that potently and selectively target known drivers of disease, with focused investment in therapeutic areas to build portfolio scale in areas where we can leverage our core expertise and business infrastructure.

We have a pipeline of research and development programs that range from early science to advanced clinical trials in mast cell-mediated diseases, including SM and chronic urticaria, breast cancer, and other solid tumors vulnerable to CDK2 inhibition.

KIT is a clinically validated Mast Cell Target



Mast cell

- KIT-mediated signaling plays a central role in survival, proliferation, and activation of mast cells
- When degranulation occurs, release of inflammatory molecules leads to a broad range of physiological effects

A primary area of focus for us this year is to advance our portfolio of approved and investigational programs targeting mast-cell mediated diseases. We are uniquely positioned to drive novel science in this space, because of our scientific leadership in targeting KIT and our unique insights into mast cell biology, an important area of science that has been historically underappreciated. With AYVAKIT and elenestinib we are comprehensively covering mast

cell diseases driven by mutated KIT, and this year we are expanding into much larger opportunities driven by wild-type KIT with BLU-808. We are particularly excited about the potential for BLU-808 to address the fundamental biology in a number of large diseases with significant medical need, starting with chronic urticaria. We believe this program will move quickly, building on our track record of successfully translating our discovery expertise in targeting KIT into clinical impact and now commercial

Operating Cash Burn Will Continue to Decline in 2024+

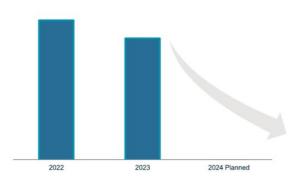


Figure is provided as a graphical representation and is not intended as financial guidance.

As we focus our investment and resource allocation to exciting research and development programs, where we have the opportunity to address high medical needs in large patient populations, and where we have existing expertise and infrastructure, we are ensuring that we maintain a strong and durable financial position. We anticipate that the combination of our strong revenue ramp and disciplined operating expenses may result in a continued decrease in cash burn in 2024, providing us with a clear pathway to potential profitability.

WE ARE PURPOSEFULLY EVOLVING OUR CORPORATE GOVERNANCE AS WE CONTINUE TO GROW

| Board Evolution | Over the past few years, we thoughtfully and purposefully evolved the composition of our board to welcome additional independent directors who have extensive expertise in strategic leadership, commercial growth, and organizational scale across global pharmaceutical and growing biotechnology companies. Today, our board appropriately reflects the breadth of experience and expertise necessary to inform our comprehensive business, including discovering, developing, and commercializing innovative therapies to market across multiple geographies and therapeutic areas. In addition, in 2022, we adopted an average tenure goal of ten years or less for independent directors in our corporate governance guidelines. The average tenure of our current independent directors is approximately 7 years. |
|-------------------------------|--|
| Director Over-boarding Policy | Last year, we implemented an over-boarding policy that limits our directors to service on 4 public company boards (including ours), or 3 public company boards (including ours) for directors who are sitting public company chief executive officers. Today, all directors are in compliance with our over-boarding policy. For additional information, please see "Board Response to Stockholder Feedback" below. |
| Director Resignation Policy | This year, in response to stockholder feedback, we adopted a director resignation policy, set forth in our corporate governance guidelines, pursuant to which any director nominee who receives more "withhold" votes than "for" votes in an uncontested election of directors is required to tender their resignation promptly following the certification of election results. For more information, see "Code Of Business Conduct And Ethics And Corporate Governance Guidelines—Director Resignation Policy" below. |

| Director Independence | 80% of our directors are independent, including all of the chairs and members of our audit, compensation, and nominating and corporate governance committees. |
|----------------------------------|---|
| Director Diversity | We continued our commitment to diversity with five of ten directors (50%) being diverse by gender or race/ethnicity and 80% of our board leadership roles, including all of our board committee leadership roles, being held by women or racial/ethnic minorities. For additional information, please see "Criteria, Qualifications, Experience and Diversity" and "Board Diversity Matrix." |
| Executive Pay for Performance | We continue to use performance-based restricted stock unit, or PSU, awards, introduced in 2023, in our equity incentive program, to further align the interests of our executive officers with our stockholders. |
| Stock Ownership Guidelines | We have maintained our stock ownership guidelines so that shares underlying vested and unexercised in-the-money stock options and unvested and unearned PSUs are excluded from the ownership calculation that is used to determine whether each covered person's stock ownership requirement has been met |
| Proxy Access Rights | We have included a proxy access provision to our amended and restated bylaws, or bylaws, providing that a stockholder (or a group of up to 20 stockholders) that has held at least three percent of the voting power of our stock for three or more years may include up to two directors in our proxy statement. |
| Corporate Sustainability | We have published an annual Sustainability Report to highlight our long-standing commitment to Environmental, Social and Governance, or ESG, risk management since 2021. In 2024, we are publishing our third Sustainability Report in conjunction with this proxy, including an ESG materiality assessment of potential business risks and in-depth summaries of our ESG strategy and practices including Sustainability Accounting Standards Board performance metrics. |

WE CONTINUE TO DRIVE OUR ENVIRONMENTAL, SOCIAL AND GOVERNANCE INITIATIVES FORWARD

We are committed to an ESG strategy that prioritizes efforts in areas most closely aligned with our business. In 2023, we conducted a materiality assessment to evaluate perspectives from internal and external stakeholders around key ESG topics. Aligned with the results of this assessment, we focus our disclosures around three key pillars.

Commitment to patients: Delivering medicines to patients is our core business purpose, and we do this in a way that builds trust with the patient and healthcare provider communities. Our access programs enable patients to fill their prescriptions rapidly, with many paying as little as zero dollars out of pocket, and for patients unable to pay, we provide free drug, which totaled approximately \$60 million in the United States in 2023. We strive to protect patient privacy by safeguarding clinical and commercial data across the organization.

Attracting, engaging and retaining our employees: We know our employees are central to the strength of our business, and we work hard to ensure they have the support they need to excel. We are intentional in how we build and nurture our culture, and cultivate a workplace that values well-being, continuous learning, and talent development. We aspire to become a biotech leader in practicing equity, sustaining diversity, strengthening inclusion, and emphasizing ongoing learning and meaningful initiatives to elevate employees from marginalized communities and enhance employees' sense of belonging.

Responsible business practices: We protect the company by planning ahead where possible and preparing for the unknown. In 2023, we updated cybersecurity initiatives and training to guard against cyber-attacks and safeguard our employee, patient and customer data. We also recognize that climate change presents risk to the organization and are in the process of evaluating methods and means to quantify and report our greenhouse gas emissions in accordance with the recently adopted Securities and Exchange Commission, or SEC, regulations and the other state and federal regulations, as applicable.

Table Of Contents

| INFORMATION CONCERNING SOLICITATION AND VOTING | 1 |
|--|----|
| PROPOSAL 1 ELECTION OF DIRECTORS | 2 |
| Vote Required and Recommendation of the Board of Directors | 2 |
| Information Regarding Directors | 2 |
| CORPORATE GOVERNANCE | 14 |
| Corporate Governance Highlights | 14 |
| Corporate Governance Strengths | 15 |
| Corporate Governance Materials | 15 |
| Code of Business Conduct and Ethics and Corporate Governance Guidelines | 15 |
| Risk Oversight | 16 |
| Board Determination of Independence | 17 |
| Director Nomination Process | 17 |
| Criteria, Qualifications, Experience and Diversity | 17 |
| Board Diversity | 19 |
| Stockholder Nominations | 20 |
| Board Leadership Structure | 21 |
| Board of Director Meetings and Attendance | 21 |
| Committees of the Board of Directors | 21 |
| Communicating with the Board of Directors | 24 |
| Board Response to Stockholder Feedback | 24 |
| <u>DIRECTOR COMPENSATION</u> | 26 |
| PROPOSAL 2 NON-BINDING ADVISORY VOTE ON THE FREQUENCY OF FUTURE ADVISORY VOTES ON NAMED EXECUTIVE OFFICER COMPENSATION | 28 |
| PROPOSAL 3 | 29 |
| NON-BINDING ADVISORY VOTE ON EXECUTIVE COMPENSATION | |
| Vote Required and Recommendation of the Board of Directors | 29 |
| EXECUTIVE OFFICERS | 30 |
| EXECUTIVE COMPENSATION | 34 |
| Compensation Discussion and Analysis | 34 |
| Report of the Compensation Committee the Board of Directors | 50 |
| 2023 Summary Compensation Table | 51 |
| Grants of Plan-Based Awards for Fiscal Year 2023 | 52 |
| Outstanding Equity Awards at 2023 Fiscal Year-End | 53 |
| Option Exercises and Stock Vested | 54 |
| Employment, Severance and Change-in-Control Arrangements | 54 |
| Other Agreements | 55 |
| Potential Payments Upon Termination or Change-in-Control | 56 |

| <u>Limitation of Liability and Indemnification</u> | 57 |
|--|-----|
| Compensation Committee Interlocks and Insider Participation | 58 |
| CHIEF EXECUTIVE OFFICER PAY RATIO DISCLOSURE | 59 |
| PAY VERSUS PERFORMANCE | 60 |
| SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS | 64 |
| PROPOSAL 4 | 65 |
| APPROVAL OF THE BLUEPRINT MEDICINES CORPORATION 2024 STOCK INCENTIVE | |
| <u>PLAN</u> | |
| Considerations for Approval of the 2024 Plan | 65 |
| Summary Of Key Features Of the 2024 Plan | 66 |
| Rationale For Approving the 2024 Plan | 66 |
| Summary of the 2024 Plan | 68 |
| New Plan Benefits | 71 |
| Tax Aspects Under the Code | 72 |
| Equity Compensation Plan Information | 73 |
| Vote Required and Board Recommendation | 73 |
| PROPOSAL 5 | 74 |
| RATIFICATION OF THE APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM | |
| Audit Fees and Services | 74 |
| Pre-Approval Policies and Procedures | 74 |
| Vote Required and Recommendation of the Board of Directors | 75 |
| REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS | 76 |
| CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS | 77 |
| STOCK OWNERSHIP AND REPORTING | 78 |
| STOCKHOLDER PROPOSALS | 80 |
| STOCKHOLDERS SHARING THE SAME ADDRESS | 80 |
| OTHER MATTERS | 81 |
| FREQUENTLY ASKED QUESTIONS REGARDING THE ANNUAL MEETING AND VOTING | 82 |
| APPENDIX A | A-1 |

Information Concerning Solicitation and Voting

This proxy statement and the enclosed proxy card are being furnished in connection with the solicitation of proxies by the board of directors of Blueprint Medicines Corporation for use at the annual meeting of stockholders to be held online on Wednesday, June 12, 2024, at 3:00 p.m., Eastern Daylight Time, and at any adjournment or postponement thereof. The annual meeting will be held entirely online this year at http://www.virtualshareholdermeeting.com/BPMC2024. We encourage all stockholders to attend the annual meeting online. However, whether or not you plan to attend the annual meeting, we encourage you to read this proxy statement and submit your proxy or voting instructions as soon as possible. Additional details regarding attending the virtual annual meeting and voting at the meeting are provided below in section entitled "Frequently Asked Questions Regarding the Annual Meeting and Voting.'

Unless otherwise stated, all references to "us," "our," "Blueprint," "Blueprint Medicines," "we," the "company" and similar designations refer to Blueprint Medicines Corporation and its consolidated subsidiaries. References to our website are inactive textual references only, and the contents of our website are not incorporated by reference into this proxy statement.

This proxy statement summarizes information about the proposals to be considered at the meeting and other information you may find useful in determining how to vote. The proxy card is the means by which you actually authorize another person to vote your shares in accordance with your instructions. We are making this proxy statement, the related proxy card and our 2023 annual report to stockholders available to stockholders for the first time on or about April 25, 2024.

A copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as filed with the SEC, except for exhibits, will be furnished without charge to any stockholder upon written or oral request to Blueprint Medicines Corporation, 45 Sidney Street, Cambridge, Massachusetts 02139 or by calling 1-800-579-1639, by emailing sendmaterial@proxyvote.com or by submitting a request over the Internet at www.proxyvote.com. This proxy statement and our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 are also available on the SEC's website at www.sec.gov and the "Investors & Media—SEC Filings" section of our website, which is located at http://ir.blueprintmedicines.com.



Our board of directors is divided into three classes, with one class of our directors standing for election each year. Directors in each class are elected at the annual meeting of stockholders held in the year in which the term for their class expires and hold office for a three-year term and until their resignation or removal or their successors are duly elected and qualified. In accordance with our certificate of incorporation and bylaws, our directors may fill existing vacancies on the board of directors.

The term of office of our Class III directors, Daniella Beckman, Habib Dable, and Lynn Seely, will expire at the 2024 annual meeting of stockholders. The nominees for Class III directors for election at the 2024 annual meeting of stockholders are Ms. Beckman, Mr. Dable and Dr. Seely. If any of Ms. Beckman, Mr. Dable and Dr. Seely are elected at the 2024 annual meeting of stockholders, such individual will be elected to serve for a three-year term that will expire at our 2027 annual meeting of stockholders and until such individual's successor is elected and qualified.

If no contrary indication is made, proxies in the accompanying form will be voted for Ms. Beckman, Mr. Dable and Dr. Seely or, in the event that any of Ms. Beckman, Mr. Dable and Dr. Seely is not a candidate or is unable to serve as a director at the time of the election (which is not currently expected), for any nominee who is designated by our board of directors to fill the vacancy.

VOTE REQUIRED AND RECOMMENDATION OF THE BOARD OF DIRECTORS

The three nominees receiving the highest number of affirmative votes of the shares present in person or represented by proxy at the 2024 annual meeting of stockholders and entitled to vote on the election of directors will be elected to the board of directors. If a nominee receives a greater number of votes "withheld" than votes "for" such election, the nominee is required to promptly tender their resignation to the board of directors in accordance with our director resignation policy, as described in our corporate governance guidelines. The nominating and corporate governance committee will consider all factors it deems relevant in determining whether to recommend to the board of directors to accept any resignation offer. The board of directors will act on the nominating and corporate governance committee's recommendation within 90 days following certification of the election results. In deciding whether to accept the resignation offer, the board of directors will evaluate the factors considered by the nominating and governance committee and any additional information and factors that the board of directors believes to be relevant. The company will promptly publicly disclose the board of directors' decision in a periodic or current report filed with the SFC

Votes withheld from any director are counted for purposes of determining the presence or absence of a quorum, but have no other legal effect under Delaware law. Broker non-votes will have no effect on the outcome of this proposal.



OUR BOARD OF DIRECTORS RECOMMENDS THAT STOCKHOLDERS VOTE "FOR" THE ELECTION OF EACH OF DANIELLA BECKMAN, HABIB DABLE AND LYNN SEELY TO SERVE AS CLASS III DIRECTORS.

INFORMATION REGARDING DIRECTORS

Set forth below are the names and certain information for each member of our board of directors, including the nominees for election as Class III directors, as of March 31, 2024. The information presented includes each director's and nominee's principal occupation and business experience for the past five years, and the names of other public companies of which the individual has served as a director during the past five years. The information presented below regarding the specific experience, qualifications, attributes and skills of each director and nominee led our board of directors to conclude that the individual should serve as a director. In addition, we believe that all of our directors and nominees possess the attributes or characteristics that the nominating and corporate governance committee expects of each director, which are described under the section titled "-Director Nomination Process."

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

| Name | Age | Position(s) |
|---------------------------------------|-----|---|
| Class I Directors | | |
| Jeffrey W. Albers | 52 | Chairperson of the Board |
| Mark Goldberg, M.D. ⁽¹⁾⁽²⁾ | 69 | Director |
| Nicholas Lydon, Ph.D. | 67 | Director |
| John Tsai, M.D. | 56 | Director |
| Class II Director Nominees | | |
| Alexis Borisy | 52 | Director |
| Lonnel Coats ⁽¹⁾⁽³⁾ | 59 | Director |
| Kathryn Haviland | 48 | President and Chief Executive Officer, Director |
| Class III Directors | | |
| Daniella Beckman (1) | 45 | Director |
| Habib Dable (2)(3) | 54 | Director |
| Lynn Seely, M.D. ⁽²⁾⁽³⁾ | 65 | Lead Independent Director |

⁽¹⁾ Member of the audit committee. (2) Member of the compensation committee. (3) Member of the nominating and corporate governance committee.

CLASS III DIRECTORS TERM EXPIRING AT THE 2024 ANNUAL MEETING OF STOCKHOLDERS



Beckman

Chief Financial Officer, **Tango Therapeutics**

Age: 45

Independent Director since: 2021

Designated Audit Committee Financial Expert

Committees:

Audit, Chair

Experience

- Chief Financial Officer (since 2019), Tango Therapeutics, Inc., a biotechnology company focused on precision medicine in oncology
- Provided consulting services and served as the interim Chief Financial Officer for biotechnology companies (2015 – 2019)
- Chief Financial Officer (2011 2014 when acquired by Merck & Co., or Merck), Corporate Controller (2008 2011), **Idenix Pharmaceuticals, Inc.**, a biopharmaceutical company focused on viral diseases
- Held various finance positions at Coley Pharmaceutical Group, Inc. (2006-2008), Biogen Inc. (2004-2006), and PricewaterhouseCoopers (2000-2004)

Qualifications

Ms. Beckman's expertise with investor relations and cybersecurity oversight, along with her business and financial experience, make her a strong contributor to our board of directors. Ms. Beckman has worked in both private and publicly traded companies in the biotechnology industry and has honed her leadership experience while serving as the Chief Financial Officer of Tango Therapeutics. Ms. Beckman's experiences provide a valuable perspective on the current issues facing the company.

Education

B.A., Business Administration and Accounting, Boston University

Other Current Public Boards

Vor Biopharma Inc., chair of the audit committee and member of the compensation committee (since 2020)

Former Public Boards

- Translate Bio, Inc., chair of both the audit and nominating and corporate governance committees
- 5:01 Acquisition Corp., chair of the audit committee and member of the nominating committee (2020

 – 2022)



Habib Dable

Part-time Venture Partner, RA Capital Management, L.P.

Age: 54

Independent Director since: 2022

Committees:

Nominating and Corporate Governance Education

Experience

- Part-time Venture Partner (since 2022), RA Capital Management, L.P., a multi-stage investment
 management firm that invests in public and private healthcare and life science companies
- Advisor (since 2022), GLG Institute, a firm providing leadership and operational guidance to healthcare and life sciences companies
- President and Chief Executive Officer (2016 2021 when acquired by Merck), **Acceleron Pharma Inc.**, a biopharmaceutical company targeting leading-edge therapies for patients with serious and rare diseases
- Held positions of increasing responsibility (1994 2016), **Bayer**, including President of U.S. Pharmaceuticals; Executive Vice President, Global Head Specialty Medicine; Vice President, Ophthalmology; Global Launch Team Head, EYLEA®; Global Head, Neurology and Ophthalmology; and Vice President, Regional Head, Hematology and Cardiology

Qualifications

Mr. Dable brings deep commercial expertise across multiple therapeutic categories from a successful 20-year career at Bayer, along with operational, investor relations and M&A experience as Chief Executive Officer of Acceleron Pharma and a board member for multiple public companies. With a diverse set of perspectives on our industry, he provides valuable guidance and support to our executive team and board of directors.

- B.B.A., Marketing and Finance, University of New Brunswick
- . M.B.A., University of New Brunswick

Other Current Public Boards

- PepGen Inc. (since 2022)
- Aerovate Therapeutics, Inc., chair of the board of directors (since 2023)
- Day One Biopharmaceuticals, Inc. (since 2024)

Former Public Boards

- Albireo Pharma (2022 2023)
- Acceleron Pharma Inc. (2016 2021 when acquired by Merck)
- Millendo Therapeutics (2018 2021)



Lynn Seely, M.D.

President and Chief Executive Officer, Lyell Immunopharma

Age: 65

Independent Director since: 2016

Lead Independent Director since: 2021

Committees:

Compensation, Chair Nominating and Corporate Governance

Experience

- President and Chief Executive Officer (since 2022), Lyell Immunopharma, Inc., a clinical-stage T-cell reprogramming company advancing a diverse pipeline of cell therapies for patients with solid
- President and Chief Executive Officer (2016 2021), Myovant Sciences, Inc., a biopharmaceutical company focused on developing and commercializing innovative therapies for women's and men's
- Chief Medical Officer (2005 2015), **Medivation, Inc.**, prior to its acquisition by Pfizer
- Held various finance positions at **Anevisa, Inc.** (formerly Corgentech Inc.) (2002 2005), **Cytyc Health Corporation** (2001 2002), and **ProDuct Health, Inc.** (2000 2001)
- Began her career in the industry as an Associate Director of Clinical Development (1996 2000), Chiron Corporation

Qualifications

Dr. Seely's leadership experience and industry knowledge, developed during her extensive career in the healthcare and life sciences sector, make her a valuable contributor as our lead independent director. Her service as Chief Executive Officer of Myovant Sciences and Chief Medical Officer of Medivation give her a unique understanding of the operations of a company at our stage of growth. Her experiences with pipeline development and commercialization provide her with a valuable understanding of the scientific and regulatory landscape and potential issues we may face throughout the commercialization process.

Education

- . B.A., Journalism, University of Oklahoma
- . M.D., University of Oklahoma College of Medicine
- Completed residency and served as chief resident in internal medicine, Yale-New Haven Hospital
- Completed fellowship in endocrinology and metabolism, University of California, San Diego

Other Current Public Boards

Lyell Immunopharma, Inc. (since 2021)

Former Public Boards

Myovant Sciences, Inc. (2016 – 2021)

CLASS I DIRECTORS TERM EXPIRING AT THE 2025 ANNUAL MEETING OF STOCKHOLDERS



Jeffrey W. **Albers**

Venture Partner, Atlas Venture

Age: 52

Director since: 2014

Chairperson of the Board since: 2021

Committees:

None

Experience

- Chairperson of the Board (since 2021), Executive Chairman (2022 2023), President and Chief Executive Officer (2014 – 2022), Blueprint Medicines Corporation
- Venture Partner (since 2023), Atlas Venture, an early-stage venture capital firm that invests in life sciences startup companies in the U.S.
- President (2012 2014), Algeta ASA, a Norwegian biopharmaceutical company focused on novel targeted oncology therapies
- Held positions (2005 2011), most recently Vice President of the U.S. Hematology and Oncology business unit, at Genzyme Corporation, a biotechnology company that is now a wholly-owned subsidiary of Sanofi

Qualifications

Mr. Albers has demonstrated strong leadership qualities throughout his service as a senior executive in the biopharmaceutical industry, as well as a venture capitalist and attorney. He has extensive experience in commercialization, research and development, business development and investor relations. As our former chief executive officer and executive chairman, he brings an innovative global perspective to our business and the issues facing our company. He also provides strong guidance to our board of directors and executive team with respect to our corporate strategy and future growth.

Education

- B.S., Indiana University
- . M.B.A., Georgetown University
- J.D., Georgetown University

Other Current Public Boards

- Kymera Therapeutics, Inc. (since 2020), chair of the compensation committee (since 2022)
- Spyre Therapeutics, Inc., member of the audit and compensation committees (since 2023)

Former Public Boards

Magenta Therapeutics, Inc., member of the audit and compensation committees (2017 – 2023 when merged with Dianthus Therapeutics, Inc.)



Mark Goldberg, M.D.

Lecturer in Medicine, Medicine at Harvard Medical School, and Faculty Member, Hematology Division, Brigham and Women's Hospital

Age: 69

Independent Director since: 2015

Committees:

Audit

Compensation

Experience

- · Board certified hematologist/oncologist (retired)
- Lecturer in Medicine, Harvard Medical School (since 2021)
- Faculty Member, Hematology Division, Brigham and Women's Hospital (since 1987)
- Associate Professor in Medicine, Harvard Medical School (1996 2021)
- Staff Physician, Dana-Farber Cancer Institute (1996 2018)
- Advisor (2018 present), Acting Chief Medical Officer (2015 2018), CANbridge Life Sciences Ltd., a biopharmaceutical company focused on rare diseases and rare oncology
- Member (2019 present), **National Board of Directors of American Cancer Society (ACS)**; Chair (2017 2020) and member (2017 present) **ACS Eastern New England Area Board**; Member (2010 - 2017), ACS New England Division Board
- Served as an advisor and previously held various executive positions of increasing responsibility (2011-2015 when acquired by Alexion), including as Executive Vice President, Medical and Regulatory Strategy, at **Synageva BioPharma Corp.**, a biopharmaceutical company focused on rare diseases
- Served in various management capacities of increasing responsibility (1996 2011), including as Senior Vice President, Clinical Development and Global Therapeutic Head, Oncology, Genetic Health, and Chairman of the Early Product Development Board, at **Genzyme Corporation**, a biotechnology company that is now a wholly-owned subsidiary of Sanofi

Qualifications

Dr. Goldberg has extensive industry knowledge and healthcare experience acquired through his career as a physician and scientist, as well as senior leadership roles held through all stages of early product development in oncology and rare diseases. His scientific and medical expertise provide our board of directors and executive team with invaluable perspective on the issues facing our company as we continue to advance a broad pipeline of innovative therapies.

Education

- · A.B., Biochemical Sciences, Harvard College
- . M.D., Harvard Medical School

Other Current Public Boards

- GlycoMimetics, Inc., chair of the nominating and corporate governance and member of the compensation committee (since 2014)
- Avacta Group plc (since 2021)

Former Public Boards

- ImmunoGen, Inc., member of the compensation and governance and nominating committees (2011
 2024 when acquired by AbbVie Inc.)
- Idera Pharmaceuticals, Inc. (2014 2022)
- Audentes Therapeutics, Inc. (2017 2020 when acquired by Astellas Pharma Inc.)
- aTyr Pharma, Inc. (2015 2017)



Nicholas Lydon, Ph.D., FRS

Scientific Founder, Blueprint Medicines

Age: 67

Director since: 2011

Committees: None

Experience

- · Scientific Founder, Blueprint Medicines Corporation
- Co-Founder, IDRx, Inc. (formed in 2021), a biopharmaceutical company focused on precision combination oncology therapies
- Co-Founder, Scientific Advisor and board member (since 2019), Recludix Pharma Inc., a drug discovery company focused on STAT3 and STAT6 inhibitors
- Co-Founder and Managing Member (since 2019), VB Therapeutics LLC, a biotechnology company developing targeted T-cell mediated clonal diseases
- Co-Founder and Managing Member (since 2019), Staurus Biopharma, LLC, a privately held biopharmaceutical company developing antibody treatments for MRSA infections
- Co-Founder, Scientific Advisor and board member (2006 2019), AnaptysBio Inc., a biotechnology company focused on autoimmune disease
- Scientific Advisor and board member (2003 2011), Ambit Biosciences Corp., a biopharmaceutical company focused on kinase inhibitor therapeutics to treat a range of diseases
- Vice President, Small Molecule Drug Discovery (2000 2002), Amgen Inc.
- Founder and Chief Executive Officer (1997 2000 when acquired by Amgen), Kinetix
 Pharmaceuticals, Inc., a biotechnology company focused on the discovery and development of selective protein kinase inhibitors
- Oversaw tyrosine protein kinase program, including the discovery and preclinical development of imatinib (1985 – 1997), at Ciba-Giegy AG (now Novartis AG)

Qualifications

Dr. Lydon is a renowned scientific leader in the field of kinase drug discovery and development, who made central contributions to the discovery of Gleevec (imatinib), one of the most successful targeted therapies developed to date, as well as other approved medicines. Beyond his scientific expertise, he also has extensive industry knowledge and leadership experience garnered from forming and leading multiple life science companies over the last two decades. His research and development expertise, along with his experience on public company boards, provides important perspective to our executive team and board of directors informing our research and development and corporate strategy.

Education

- B.S., Biochemistry and Zoology, University of Leeds, England
- Ph.D., Biochemistry, Medical Sciences Institute, University of Dundee, Scotland

Former Public Boards

AnaptysBio Inc. (2006 – 2019)



John Tsai, M.D.

Chief Executive Officer, Forcefield Therapeutics

Age: 56

Independent Director since: 2023

Committees: None

Experience

- Chief Executive Officer (since 2023), Forcefield Therapeutics Limited
- Executive Partner (since 2023), Syncona Limited
- President, Global Drug Development and Chief Medical Officer (2018 2022), Novartis AG
- Chief Medical Officer and Senior Vice President of Global Medical Affairs (2017 2018), Amgen
- Held positions of increasing responsibility within the Medical and Drug Development organizations at Bristol-Myers Squibb (2006 – 2017), including Head of Late Phase Development and Oncology Development Leader, Head of Worldwide Medical Affairs, Chief Medical Officer Europe, Head of U.S. Medical, and Vice President, Cardiovascular and Metabolic Disease Area
- Held drug development roles at Pfizer and management development roles at GE

Qualifications

Dr. Tsai's industry knowledge developed during his nearly two decades in the biotechnology and pharmaceutical industry make him an important contributor to our board of directors. As Chief Medical Officer at both Novartis AG and Amgen, Dr. Tsai gained deep experience and insight overseeing strategy across broad portfolios, early- to late- stage research and development, commercial launches, medical affairs best practices, the global regulatory landscape for new medicines, engineering work across cutting edge technologies and leading teams through breakthrough advancements, all of which are highly valuable to a company at our stage of growth.

Education

- B.S., Electrical Engineering, Washington University in St. Louis
- . M.D., University of Louisville School of Medicine

CLASS II DIRECTOR NOMINEES TERM EXPIRING AT THE 2026 ANNUAL MEETING OF STOCKHOLDERS



Alexis Borisy

Co-Founder and Operating Chairman, Curie.Bio

Age: 52

Director since: 2011

Committees: None

Experience

- Co-Founder, Operating Chairman (since 2022), Curie.Bio, Inc., a venture capital firm focused on helping entrepreneurial founders launch therapeutics companies
- Co-Founder (formed in 2021), IDRx, Inc., a biopharmaceutical company focused on precision combination oncology therapies
- Co-Founder, Executive Chairman (2021 2023), Chairman and Chief Executive Officer (2020 2021), EQRx Inc., a pharmaceutical company focused on developing and expanding access to innovative medicines in prevalent disease areas
- Co-Founder, Interim Chief Executive Officer (2013 2014), Blueprint Medicines Corporation
- $Partner\ (2010-2019), \textbf{Third Rock Ventures}, a \ life\ sciences\ venture\ capital\ firm\ focused\ on$ the formation, development, and strategy of new companies
- Co-Founder, Chairman (2011 2017 when acquired by Roche), Interim Chief Executive Officer (2009 2011), **Foundation Medicine, Inc.**, a molecular insights company focused on genomic
- Founder, Chief Executive Officer (2000 2009), CombinatoRx, Inc., a biopharmaceutical company focused on synergistic combination pharmaceuticals

Qualifications

Mr. Borisy brings strong business judgment and industry knowledge acquired over the past 25 years through his time spent building, operating and investing in breakthrough life sciences-based companies. Mr. Borisy has extensive corporate leadership experience, which he gained as a cofounder, chief executive officer, chairman or founding investor of more than 15 life sciences companies, 10 of which were listed on the Nasdaq, as well as M&A expertise acquired while in such leadership positions.

Education

- B.S., Chemistry, University of Chicago
- M.S., Chemistry and Chemical Biology, Harvard University

Other Current Public Boards

- Revolution Medicines, Inc., member of the compensation and nominating and corporate governance committees (since 2014)
- Relay Therapeutics, Inc., chairman of the board of directors and member of the audit, compensation, and research and development committees (since 2016)
- Tango Therapeutics, Inc., chairman of the board of directors and member of the audit and compensation committees (since 2017)

Former Public Boards

- OPKO Health, Inc. (2022 2024)
- EQRx Inc., Executive Chairman (2020 2023)
- Magenta Therapeutics, Inc. (2015 2022)
- CombinatoRx, Inc. (2000 2019)
- Editas Medicine, Inc. (2013 2018)
- Foundation Medicine (2009 2018)
- FORMA Therapeutics, Inc. (2007 2012)



Lonnel Coats

Chief Executive Officer, Lexicon Pharmaceuticals

Age: 59

Independent Director since: 2016

Designated Audit Committee Financial Expert

Committees:

Audit Nominating and Corporate Governance, Chair

Experience

- Chief Executive Officer (since 2014), Lexicon Pharmaceuticals, Inc., a biopharmaceutical company pioneering medicines for a range of diseases including neuropathic pain, heart failure, diabetes, and metabolism
- Served in a series of leadership positions at Eisai Inc. and Eisai Corporation of North America, both of which are U.S. subsidiaries of Tokyo-based pharmaceutical company Eisai Co., Ltd. (1996 – 2014), including Chief Executive Officer, Eisai Inc. (2010 – 2014), and President and Chief Operating Officer, Eisai Inc. (2004 – 2010)
- Held a variety of sales and management positions at Janssen Pharmaceuticals, Inc., a division of Johnson & Johnson (1988 1996)

Qualifications

Mr. Coats' industry knowledge, pipeline development and commercial experience, as well as his financial and leadership expertise make him a valuable contributor to our board of directors. He brings a practical perspective and provides in-depth industry knowledge on managing operations of a global life sciences company, including commercial and financial management strategies. Mr. Coats is a designated audit committee financial expert with experience in matters faced by the audit committee of a company with life sciences product revenues and related expenses.

. B.S., Public Administration, Oakland University

Other Current Public Boards

- Verve Therapeutics, Inc., member of the Audit Committee (since 2022)
- Lexicon Pharmaceuticals, Inc. (since 2014)



Kathryn Haviland

President and Chief Executive Officer, **Blueprint Medicines**

Age: 48

Director since: 2022

Committees: None

Experience

- President and Chief Executive Officer (since 2022), Chief Operating Officer (2019 2022), Chief Business Officer (2016 2019), Blueprint Medicines Corporation
- Vice President, Rare Diseases and Oncology Program Leadership (2014 2015), Idera
 Pharmaceuticals, Inc., a biopharmaceutical company focused on oncology and inflammation (now
- Head of Commercial Development (2012 2014), Sarepta Therapeutics, Inc., a biopharmaceutical company focused on rare diseases
- Executive Director of Commercial Development (2007 2012), PTC Therapeutics, Inc., a pharmaceutical company focused on small molecule drugs and gene therapy
- Held various corporate development and project management roles (2005 2007) at Genzyme Corporation, a biotechnology company that is now a wholly-owned subsidiary of Sanofi

Qualifications

Ms. Haviland brings strong business judgment to our company, honed through her extensive career with over 15 years' experience in senior executive positions at biopharmaceutical companies. Ms. Haviland has a deep understanding of our business, as well as the life sciences and biopharmaceutical industries, that informs and supports our vision, infrastructure and operations. In addition, Ms. Haviland has extensive expertise with financial management, corporate strategy, pipeline development, commercialization, business development and investor relations, which make her a valuable contributor to our board of directors and executive team.

Education

- B.A., Biochemistry/Molecular Biology and Economics, Wesleyan University
- M.B.A., Harvard Business School

Other Current Public Boards

Fulcrum Therapeutics, Inc., chairperson (since 2022) and member of the audit and nominating and corporate governance committees (since 2018)

Corporate Governance

Our board of directors believes that good corporate governance is important to ensure that our company is managed for the long-term benefit of stockholders. This section describes key corporate governance guidelines and practices that our board of directors has adopted.

CORPORATE GOVERNANCE HIGHLIGHTS

- In response to stockholder feedback following our 2023 annual meeting of stockholders, we adopted a director
 resignation policy, as provided in our corporate governance guidelines, pursuant to which any director nominee who
 receives more "withhold" votes than "for" votes in an uncontested election of directors is required to tender their
 resignation promptly following the certification of election results. For more information, see "Code of Business
 Conduct and Ethics and Corporate Governance Guidelines—Director Resignation Policy" below.
- Since April 2023, we have maintained an over-boarding policy that limits our directors to service on four public company boards (including ours) or three public company boards (including ours) for directors who are sitting public company chief executive officers with support of our board of directors. Consistent with the commitment he made in April 2023, Alexis Borisy has come into compliance with our over-boarding policy as of March 28, 2024 and, since he has come into compliance with our over-boarding policy prior to the deadline previously set by our nominating and corporate governance committee, he continues to serve on our board of directors. For more information, see "Board Response to Stockholder Feedback" below.
- Currently 80 percent of our directors are independent, including all the chairs and members of our audit, compensation, and nominating and corporate governance committees.
- We have maintained an average tenure goal of ten years or less for independent directors. The average tenure for our current independent directors is approximately 7 years.
- We have continued to maintain our commitment to board diversity currently, five of ten directors (50%) are diverse by gender or race/ethnicity and 80% of our board leadership roles, including all of our board committee leadership roles, are held by diverse board members either by gender or race/ethnicity.
- We are proposing our 2024 Stock Incentive Plan, or 2024 Plan, to support our performance-based compensation approach, in line with the stockholder feedback we received on the design of equity plans. Based on the stockholder feedback we received regarding the inclusion of evergreen provisions in equity plans, we chose not to include an evergreen provision in our 2024 Plan that automatically increases the share reserve on an annual basis. In contrast, our 2015 Stock Option and Incentive Plan, as amended from time to time, or 2015 Plan, includes an evergreen provision and is set to expire in 2025. In addition, based on stockholder feedback regarding the size and timeframe of equity plan share pools, our proposed 2024 Plan requests a share pool reserve that we expect to last approximately three years based on our current share price, historic burn rate of <4% for last three years, and anticipated equity grant practices, after which we will ask stockholders to approve future increases in the amount of shares available for grant under the 2024 Plan.</p>
- We have continued our trend of active stockholder engagement. Following our 2023 annual meeting, we reached out
 our top 30 stockholders, representing 86% of our shares outstanding as of December 31, 2023, to proactively engage
 in discourse around corporate governance matters and other topics that may be important to our stockholders.
- We are committed to aligning our executive officers' interests with that of our stockholders, including through our
 maintenance of meaningful minimum stock ownership guidelines for our executive officers and directors and granting
 performance-based equity awards to our executive officers in the form of PSU awards.
- · We prohibit hedging transactions by our directors and employees, including our executive officers.
- We adopted an updated clawback policy that allows us to recoup incentive-based compensation provided to our current
 or former executive officers that is granted, earned or vested based on attainment of financial reporting measures. For
 more information, see the section entitled "Clawback Policy."

CORPORATE GOVERNANCE STRENGTHS

We are committed to exercising good corporate governance practices. We believe that good governance promotes the longterm interests of our stockholders and strengthens the accountability of our board of directors and management. Our corporate governance practices are primarily designed to:

| Enhance independent oversight | Increase accountability to stockholders | Ensure a fit-for-purpose board of directors | Align interests with long- term stockholders |
|--|--|---|--|
| Eight of ten directors (80%) are independent* | Rigorous stockholder engagement program | Purposeful board evolution to continue to align director experience and skills with company growth plans | Significant portion of executive total compensation value dependent upon stock price performance |
| Board committees composed of all independent directors, including chairs | Periodically conduct board and committee self-evaluations | Commitment to ensuring the board represents diversity of tenure, gender, race/ethnicity, and experience | Stock ownership guidelines for directors and executives |
| Designated lead independent director | Annual advisory approval of executive compensation | Maintain a director over- boarding policy | No margin accounts, pledging or hedging of company shares |
| | Clawback policy for current and former executive officers as defined in Item 401(b) of Regulation S-K | Adopted a director resignation policy | |

^{*} This figure is based on the Nasdaq Listing Rules for director independence.

CORPORATE GOVERNANCE MATERIALS

Complete copies of our corporate governance guidelines, committee charters and code of conduct are available on the "Investors & Media — Corporate Governance" section of our website, which is located at http://ir.blueprintmedicines.com. Alternatively, you can request a copy of any of these documents by contacting us at Blueprint Medicines Corporation, 45 Sidney Street, Cambridge, Massachusetts 02139, Attn: Investor Relations, telephone: (617) 374-7580, e-mail: ir@blueprintmedicines.com.

CODE OF BUSINESS CONDUCT AND ETHICS AND CORPORATE GOVERNANCE **GUIDELINES**

Our board of directors has adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, and persons performing similar functions. A copy of our code of business conduct and ethics is available on the "Investors & Media — Corporate Governance" section of our website, which is located at http://ir.blueprintmedicines.com. We intend to disclose on our website any amendments to, or waivers from, our code of business conduct and ethics that are required to be disclosed pursuant to the disclosure requirements of Item 5.05 of Form 8-K.

Our board of directors has also adopted corporate governance guidelines to assist in the exercise of its duties and responsibilities and to serve the best interests of our company and our stockholders, which we periodically review and update, with the most recent update occurring in 2024. A copy of our corporate governance guidelines is available on the "Investors & Media — Corporate Governance" section of our website, which is located at http://ir.blueprintmedicines.com.

DIRECTOR RESIGNATION POLICY

In 2024, we implemented a director resignation policy, which is set forth in our corporate governance guidelines, a copy of which is available on the "Investors & Media — Corporate Governance" section of our website. The policy establishes that any director nominee who receives a greater number of "withhold" votes than "for" votes in an uncontested election of directors is required to tender their resignation promptly following the certification of the election results. Abstentions and broker non-votes, if any, are not counted as either a "withhold" or "for" vote.

The nominating and corporate governance committee will promptly consider whether to accept or reject the resignation offer, or whether other action should be taken, and make a recommendation to the board of directors. The board of directors will act on the recommendation of the nominating and corporate governance committee no later than 90 days following the certification of the election results. In deciding whether to accept the resignation offer, the board of directors will evaluate the factors considered by the nominating and corporate governance committee and any additional information and factors that the board of directors believes to be relevant. Any director who tenders a resignation offer pursuant to the director resignation policy will not participate in the proceedings of either the nominating and corporate governance committee or the board of directors with respect to their own resignation offer. However, the director will remain active and engaged in all other activities of the board of directors, deliberations and decisions of the board of directors and its committees during the evaluation process conducted by the nominating and corporate governance committee and board of directors.

We will promptly publicly disclose the board of directors' decision and, if applicable, the reasons for rejecting the tendered resignation in a periodic or current report filed with the SEC.

RISK OVERSIGHT

Our board of directors oversees the management of risks inherent in the operation of our business and the implementation of our business strategies. Our board of directors performs this oversight role by using several different levels of review. In connection with reviews of the operations and corporate functions of our company, our board of directors addresses the primary risks associated with those operations and corporate functions. In addition, our board of directors reviews the risks associated with our company's business strategies periodically throughout the year as part of its consideration of undertaking any such business strategies.

Each committee of our board of directors also oversees the management of our company risk that falls under the committee's particular purview and within its areas of responsibility. In performing this function, each committee has full access to management, as well as the ability to engage advisors. Our audit committee oversees our policies and programs related to our financial and accounting systems, accounting policies and investment strategies, internal audit function, investment strategies and cybersecurity. The audit committee also is responsible for addressing risks arising from related party transactions, if any. In connection with its risk management role, our audit committee meets privately with representatives from our independent registered public accounting firm and certain members of our executive team, as and when needed. The audit committee oversees the operation of our risk management program, including the identification of the primary risks associated with our business and periodic updates to such risks, and reports to our board of directors regarding these activities. Our compensation committee oversees risks associated with our compensation policies and practices to help ensure that such policies and practices do not incentivize or encourage excessive risk-taking. In early 2023, our board of directors engaged the compensation committee to assist in its oversight of human capital management, including recruiting, retention, career development, and equity, diversity and inclusion, or ED&I. Our nominating and corporate governance committee oversees risks related to our governance structure and succession planning, and our environmental, social and governance risk and reporting.

BOARD DETERMINATION OF INDEPENDENCE

Our board of directors annually undertakes a review of the composition of our board of directors and its committees and the independence of each director. Based upon information requested from and provided by each director concerning their background, employment and affiliations, including family relationships, our board of directors has determined that each of our directors, with the exception of Jeffrey W. Albers and Kathryn Haviland, is an "independent director" as defined under Rule 5605(a)(2) of the Nasdaq Listing Rules. Mr. Albers is not an independent director under Rule 5605(a)(2) because he was employed as our president and chief executive officer through April 3, 2022 and as our executive chairman through December 31, 2022, and was engaged as a consultant to the company until December 31, 2023. Ms. Haviland is not an independent director under Rule 505(a)(2) because she is currently employed as our president and chief executive officer and was previously employed as our chief operating officer from January 2019 through April 2022, and as our chief business officer from January 2016 to January 2019. Our board of directors also determined that each of: Daniella Beckman, Lonnel Coats and Mark Goldberg, who comprise our audit committee; Lynn Seely, Habib Dable and Mark Goldberg, who comprise our compensation committee; and Lonnel Coats, Habib Dable and Lynn Seely, who comprise our nominating and corporate governance committee, satisfies the independence standards for such committees established by the SEC and the Nasdaq Listing Rules, as applicable, including in the case of all members of the audit committee, the independence requirements contemplated by Rule 10A-3 under the Securities Exchange Act of 1934, or the Exchange Act, and in the case of all members of the compensation committee, the independence requirements contemplated by Rule 10C-1 under the Exchange Act. In making such determinations, our board of directors considered the relationships that each such non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining independence, including the beneficial ownership of our capital stock by each non-employee director.

DIRECTOR NOMINATION PROCESS

The process followed by our nominating and corporate governance committee of our board of directors to identify and evaluate director candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates and interviews of selected candidates by members of the nominating and corporate governance committee and our board of directors.

CRITERIA, QUALIFICATIONS, EXPERIENCE AND DIVERSITY

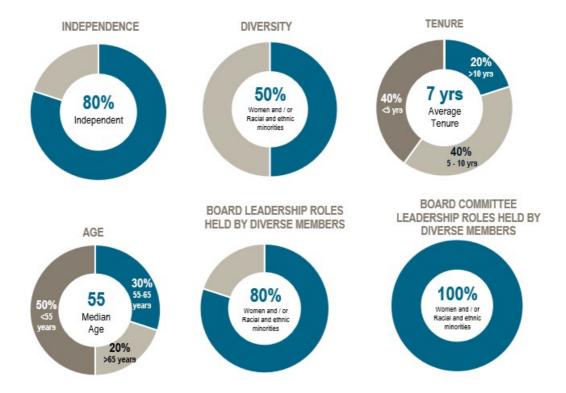
In considering whether to recommend to our board of directors any candidate for inclusion in our board of directors' slate of recommended director nominees, including candidates recommended by stockholders, the nominating and corporate governance committee applies the criteria set forth in our corporate governance guidelines. These criteria include the candidate's experience at a strategic or policymaking level in a business, government, non-profit or academic organization of high standing, accomplishments in the candidate's respective field, the candidate's reputation for high ethical and moral standards, the candidate's time and ability to devote to the affairs of the company, and to the extent applicable, the candidates history of actively contributing to any boards of directors on which the candidate previously served.

The director biographies on pages 4-13 of this proxy statement provide details regarding each nominee's experience, qualifications, attributes and skills that led our nominating and corporate governance committee and our board of directors to conclude such individual should continue to serve as a director. Our nominating and corporate governance committee and our board of directors believe that each of the nominees has the individual attributes and characteristics required of each of our directors, and the nominees collectively possess the skill sets and specific experience desired of our board of directors as a whole.

The following table and pie charts provide information regarding our board of directors:

| | Albers | Beckman | Borisy | Coats | Dable | Goldberg | Haviland | Lydon | Seety | Tsai |
|--|--------|---------|--------|-------|-------|----------|----------|-------|-------|------|
| Industry Knowledge Broad experience across leadership roles or functional expertise with respected life sciences companies or organizations. | • | • | • | • | • | • | • | • | • | • |
| Recent Experience as a Chief Executive Officer of a Public Company A track record of strategic thinking, growth or innovation through experience as a chief executive officer of a public company. | • | | • | • | • | | • | | • | |
| Commercialization Experience Experience developing commercial strategies or distinctive brands, including product launches, market development, geographical expansion, and lifecycle strategies. | • | | | • | • | • | • | | • | • |
| Research and Pipeline Development Experience Deep experience with discovering or advancing innovative therapies from the bench through clinical development. | • | | • | • | | • | • | • | • | • |
| Medical Experience Ability to leverage medical experience gained through earning an M.D. or through medical practice to help inform our strategy for bringing meaningful innovations to patients and healthcare providers. | | | | | | • | | | • | • |
| Regulatory Experience Experience shaping global regulatory strategies for breakthrough or innovative therapies. | • | | • | • | • | • | • | | • | • |
| Financial Experience* Financially knowledgeable through experience as a chief financial officer, as a chief executive officer, supervising chief financial officers, and/or service on public company audit committees. | • | • | • | • | • | • | • | | • | |
| Capital Markets and M&A Experience Deep experience in financings, capital allocation, investments or mergers and acquisitions (M&A) through public company or venture capital leadership roles or stewardship of M&A transactions. | • | • | • | • | • | • | • | • | • | • |
| Public Board Experience Experience through service on public company boards to help advise and oversee the strategic direction and continuing evolution of life sciences companies. | • | • | • | • | • | • | • | • | • | |
| Investor Perspective Insights and experience gained through overseeing investor relations functions. | • | • | | • | • | | • | | • | |
| Cybersecurity Oversight Experience Experience gained through oversight of information technology functions. | • | • | | | • | | • | | • | |
| Independence | | • | • | • | • | • | | • | • | • |
| Age | 52 | 45 | 52 | 59 | 54 | 69 | 48 | 67 | 65 | 56 |
| Tenure on Board (approx. years as of March 31, 2024) | 10 | 2 | 13 | 8 | 1 | 9 | 1 | 13 | 8 | 1 |
| Gender | M | F | M | M | M | M | F | M | F | M |
| Ethnic or Racial Minority | | | | • | | | | | | • |
| Blueprint Board Leadership Role** | • | • | | • | | | | | • | |

Ms. Beckman and Mr. Coats are our designated audit committee financial experts, pursuant to SEC rules and regulations.
 The Blueprint board leadership designation includes Chairperson of the Board, Lead Independent Director and/or Chair of a board committee.



BOARD DIVERSITY

Our nominating and corporate governance committee and our board of directors are committed to equity, diversity and inclusion. We believe that our board of directors, taken as a whole, should embody a diverse set of skills, experiences and backgrounds. While our nominating and corporate governance committee does not assign any particular weighting of diversity or any other characteristic, the committee and our board of directors consider diversity, including with respect to gender, race and national origin, in evaluating nominees and directors. Our nominating and corporate governance committee's and our board of directors' priority in selecting board members is identification of individuals who will further the interests of our stockholders.

The table below provides certain highlights relating to the composition and diversity of our board of directors. Each of the categories listed in the below table has the meaning ascribed to it in Nasdaq Listing Rule 5605(f).

BOARD DIVERSITY MATRIX (AS OF MARCH 31, 2024)

| Total Number of Directors | Female | Male | Non-Binary | Did not Disclose Gender |
|--|--------|------|------------|-------------------------|
| Directors | 3 | 7 | _ | _ |
| Number of Directors who Identify in Any of the Categories Below: | _ | | _ | _ |
| African American or Black | _ | 1 | _ | _ |
| Alaskan Native or Native American | _ | | _ | _ |
| Asian | _ | 1 | _ | _ |
| Hispanic or Latinx | _ | | _ | _ |
| Native Hawaiian or Pacific Islander | _ | | _ | _ |
| White | 3 | 5 | _ | _ |
| Two or More Races or Ethnicities | _ | | _ | _ |
| LGBTQ+ | _ | _ | _ | _ |
| Did not Disclose Demographic Background | _ | | _ | _ |

STOCKHOLDER NOMINATIONS

Stockholders may recommend individuals to our nominating and corporate governance committee for consideration as potential director candidates by submitting their names, together with appropriate biographical information and background materials and a statement as to the amount of our beneficially owned common stock held by the stockholder or group of stockholders making the recommendation as of the date such recommendation is made, to Blueprint Medicines Corporation, Attention: Nominating and Corporate Governance Committee, 45 Sidney Street, Cambridge, Massachusetts 02139. Assuming that appropriate biographical and background material has been provided on a timely basis, the nominating and corporate governance committee will evaluate stockholder-recommended candidates by following substantially the same process, and applying substantially the same criteria, as it follows for candidates submitted by others. If the board of directors determines to nominate a stockholder-recommended candidate and recommends their election, then their name will be included in our proxy card for the next annual meeting.

Our amended and restated bylaws, or bylaws, also provide for proxy access that allows qualifying stockholders to directly nominate director candidates for consideration at an annual meeting of stockholders and have such candidate be included in our proxy materials for the applicable annual meeting. The key elements of our proxy access bylaw provisions are as follows:

- Ownership Threshold and Holding Period
 Available to stockholders owning 3% or more of our shares continuously for three years or more.
- Number of Board Seats

Total number of proxy access nominees is capped at the greater of (i) two or (ii) 25% of the number of directors in office as of the last day on which a notice of nomination of a director nominee by a stockholder may be timely delivered pursuant to and in accordance with our bylaws.

- Aggregation Limits
 - 20-stockholder limit on the number of stockholders who can aggregate their shares to satisfy the 3% ownership requirement.
- Future Ineligibility

Any proxy access nominee who fails to receive at least 25% of the shares eligible to vote may not be re-nominated as a proxy access nominee for the next two annual meetings.

The above table is only a summary of our proxy access provisions in our bylaws and is qualified in its entirety by our bylaws. A stockholder who wishes to nominate a proxy access nominee to be considered for election as a director at the 2024 annual meeting of stockholders must follow the procedures set forth in our bylaws as well as under "Stockholder Proposals."

BOARD LEADERSHIP STRUCTURE

Under our corporate governance guidelines, the positions of chairperson of our board of directors and of chief executive officer may, but need not be, the same person. Additionally, our corporate governance guidelines provide that if the chairperson of the board of directors is not an independent director, then the independent directors may elect one independent director to serve as the lead independent director.

Jeffrey W. Albers has served as a director since 2014 and as the chairperson of our board of directors since June 2021. Mr. Albers possesses detailed and first-hand knowledge of the issues, opportunities, and challenges facing our business, making him well-suited to preside over meetings of, and oversee, our board of directors. Because Mr. Albers was employed by us in his role as president and chief executive officer through April 3, 2022, continued to be employed by us in his role as executive chairman through December 31, 2022, and was engaged as a consultant to the company until December 31, 2023, our board of directors does not currently consider him to be "independent" in his role as chairperson of the board of directors. Accordingly, in June 2021, our board of directors designated Lynn Seely as our lead independent director. Dr. Seely's service as lead independent director provides an effective independent voice in our leadership structure, encouraging objective oversight of management's performance and enhancing the effectiveness of the board of directors as a whole. As lead independent director, Dr. Seely presides over meetings of our independent directors, serves as a liaison between our chairperson and the independent directors and performs such additional duties as our board of directors may otherwise determine and delegate.

Our board of directors has three standing committees that currently consist of, and are chaired by, independent directors. Our board of directors delegates substantial responsibilities to the committees, which then report their activities and actions back to the full board of directors. We believe that the independent committees of our board of directors and their chairpersons promote effective independent governance. Meanwhile, the extensive company-specific experience and expertise of Mr. Albers and Ms. Haviland, together with the outside experience, oversight and expertise of our independent directors, allows for differing perspectives and roles regarding strategy development that benefit our stockholders.

We believe that our current leadership structure provides effective independent director oversight of management, while allowing our board to benefit from Mr. Albers' and Ms. Haviland's experience and leadership in our business, enabling Mr. Albers and Ms. Haviland to act as key links between our board of directors and other members of management and enhancing our ability to communicate our strategy clearly and consistently to our investors, employees and partners. We and our board of directors continue to review the leadership structure of the board on a regular basis.

BOARD OF DIRECTOR MEETINGS AND ATTENDANCE

Our board of directors held seven meetings and acted by unanimous written consent twice during the year ended December 31, 2023. During the year ended December 31, 2023, 80% of our directors then in office attended 100% of the aggregate number of meetings of our board of directors; all other directors then in office attended over 85% of the aggregate number of meetings of our board of directors; and each of our directors attended 100% of the number of meetings held by all committees of the board of directors on which such director then served.

Although we do not have a formal policy regarding attendance by members of our board of directors at our annual meeting of stockholders, we encourage all of our directors to attend. All members of our board of directors who were then directors attended our 2023 annual meeting of stockholders.

COMMITTEES OF THE BOARD OF DIRECTORS

We have established an audit committee, a compensation committee, and a nominating and corporate governance committee. Each of these committees operates under a charter that has been approved by our board of directors. A copy of each committee's charter can be found under the "Investors & Media — Corporate Governance" section of our website, which is located at http://ir.blueprintmedicines.com.

AUDIT COMMITTEE

Our audit committee's responsibilities include:

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

The current members of our audit committee are Daniella Beckman, Lonnel Coats and Mark Goldberg. Ms. Beckman serves as chair of the audit committee. Our board of directors has determined that each of Ms. Beckman and Mr. Coats qualifies as an audit committee financial expert within the meaning of applicable SEC rules. The audit committee held six meetings during the year ended December 31, 2023, and each meeting was attended by all of the members of our audit committee.

COMPENSATION COMMITTEE

Our compensation committee's responsibilities include:

- annually reviewing and approving corporate goals and objectives relevant to the compensation of our chief executive
- reviewing and evaluating the performance of our chief executive officer in light of such corporate goals and objectives, and approving the compensation of our chief executive officer;
- reviewing and evaluating the performance of and approving the compensation of our other executive officers;
- overseeing our overall equity and incentive-based compensations structure, policies and programs;
- annually reviewing and selecting a peer group of companies against which to assess our executive compensation program;

- overseeing and administering our compensation plans and policies;
- reviewing and making recommendation to the board of directors with regard to our policies and procedures for the grant of equity-based awards:
- reviewing the results of and providing recommendations to the board of directors on any say-on-pay and compensation-related votes and proposals to be considered at our annual meetings of stockholders, including equity compensation plans:
- reviewing and making recommendations to the board of directors with respect to director compensation;
- reviewing and discussing with management the Compensation Discussion and Analysis section to be included in our annual proxy statement or Annual Report on Form 10-K;
- periodically assisting the board of directors in its oversight of the development, implementation and effectiveness of our human capital management policies;
- reviewing and assessing the management of risks related to compensation of our executive officers and our overall compensation program;
- overseeing the application of our clawback policy for the recoupment of incentive-based compensation paid to our current and former executive officers;
- overseeing our stock ownership guidelines for the members of our board of directors, chief executive officer and other executive officers; and
- overseeing engagement with stockholders and proxy advisory firms on executive compensation matters.

The current members of our compensation committee are Lynn Seely, Habib Dable and Mark Goldberg. Dr. Seely serves as chair of the compensation committee. The compensation committee held nine meetings and acted by unanimous written consent 17 times (including 12 written consents approving monthly inducement grants to new hires as required by the inducement grant exception) during the year ended December 31, 2023. Each meeting was attended by all the compensation committee members.

The compensation committee may delegate its authority to our chief executive officer to grant certain equity awards to certain individuals, and our compensation committee has delegated such authority to Ms. Haviland with respect to certain equity awards. For more information, please see "Compensation Discussion and Analysis—Overview of Executive Compensation

NOMINATING AND CORPORATE GOVERNANCE COMMITTEE

Our nominating and corporate governance committee's responsibilities include:

- developing and recommending to the board of directors' criteria for board and committee membership;
- establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;
- identifying individuals qualified to become members of the board of directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the committees of the board of directors;
- developing and recommending to the board of directors a set of corporate governance guidelines;
- overseeing our over-boarding policy;
- making recommendations to our board of directors under our director resignation policy, when applicable;
- overseeing our ESG initiatives; and
- overseeing the evaluation of the board of directors and management.

The current members of our nominating and corporate governance committee are Lonnel Coats, Habib Dable and Lynn Seely. Mr. Coats serves as chair of the nominating and corporate governance committee. The nominating and corporate governance committee held five meetings and acted by unanimous written consent twice during the year

ended December 31, 2023. Each meeting was attended by all the members of the nominating and corporate governance committee.

COMMUNICATING WITH THE BOARD OF DIRECTORS

Our board of directors will give appropriate attention to written communications that are submitted by stockholders or other interested parties and will respond if and as appropriate. The chairperson of the board of directors is primarily responsible for monitoring communications from stockholders and other interested parties and for providing copies or summaries to the other directors as the chairperson considers appropriate.

Stockholders who wish to send communications on any topic to our board of directors (or any individual director) should address such communications to Blueprint Medicines Corporation, Attention: Board of Directors, 45 Sidney Street, Cambridge, Massachusetts 02139. Upon receipt of such communications, the correspondence will be directed to the appropriate person, including individual directors. A copy of any such written communication may also be forwarded to the company's legal counsel and a copy of such communication may be retained for a reasonable period of time. You may submit your concern anonymously or confidentially.

The audit committee oversees the procedures for the receipt, retention, and treatment of complaints received by the company regarding accounting, internal accounting controls or auditing matters, and the confidential, anonymous submission in the United States, and elsewhere as permitted by law, by employees of concerns regarding questionable accounting or auditing matters. The company has also established a toll-free telephone number, the "BlueCares" hotline, for the reporting of such activity, which is (844) 857-5642 or you can visit Blueprintmedicines.ethicspoint.com to submit any questions or concerns.

BOARD RESPONSE TO STOCKHOLDER FEEDBACK

At our 2023 annual meeting of stockholders, Alexis Borisy received less than 50% of the votes cast. Based on stockholder outreach following the 2023 annual meeting, the feedback we received regarding Mr. Borisy was not related to his experience or other qualifications; rather, it was specifically related to over-boarding concerns. In April 2023, shortly before our over-boarding policy became effective, Mr. Borisy committed to reducing his service on other public company boards to be in compliance with our over-boarding policy by the record date for our 2024 annual meeting of stockholders. In 2023, Mr. Borisy's service on the board of directors of EQRx, Inc. ended when EQRx was acquired by Revolution Medicines. In addition, Mr. Borisy did not stand for reelection to the board of directors of OPKO Health, Inc. at their 2024 annual meeting of stockholders. As a result, Mr. Borisy met his commitment to be in compliance with our over-boarding policy in a timely manner. Because Mr. Borisy has addressed these specific stockholder concerns and has continuously and consistently devoted the time and attention necessary to fulfill his responsibilities as a director, he continues to serve as a valued and active member of our board of directors. In 2023, Mr. Borisy attended 100% of the meetings of our board of directors. In addition, Mr. Borisy consistently makes himself available to our executive team and other company leaders outside of meetings. Further, Mr. Borisy brings unique and valuable experience and insights through his more than 25 years of experience with founding, financing and leading more than fifteen life sciences companies – including ten Nasdaq-listed companies – and serves a critical role in the continuing evolution of our company and strategic vision.

The following provides more detail on the various topics discussed and our responsive actions:

| What We Heard | What We Did |
|---|---|
| Stockholders expressed concern that Mr. Borisy was over-boarded. | Mr. Borisy reduced his public company board commitments and is in compliance with our over-boarding policy. |
| Stockholders expressed concern over our plurality voting standard for the election of nominees to our board of directors. | We adopted a director resignation policy that applies if a director fails to receive majority vote in an uncontested election. |
| Stockholders indicated that they disfavor evergreen provisions in equity plans for companies at similar stages of growth and maturity. | We did not include an evergreen provision in our proposed 2024 Plan. |
| Stockholders indicated support for a responsible share pool reserve that provides for equity compensation as part of our strategy to recruit and retain high-performing talent while minimizing stockholder dilution. | We have proposed the 2024 Plan, requesting a share pool reserve that we expect to last approximately three years, based on our current share price, historic burn rate of <4% for the last three years, and anticipated equity grant practices, after which we will ask stockholders to approve future increases in shares available for grant under the 2024 Plan. |
| Stockholders expressed concern that our chief executive officer's equity awards are not sufficiently performance-based. | In 2024, we continued our PSU program that we adopted in 2023, and granted additional PSU awards with a three-year cycle performance cycle to our chief executive officer and executive team members, deepening the alignment of incentives between our stockholders and executives |
| Stockholders expressed their desire to sunset our board classification. | The board considered this feedback as part of its regular evaluation of our corporate governance practices and is committed to having an ongoing dialogue about the appropriateness of the classified board and further evolving our governance structure as the company grows in alignment with our peers in the biopharmaceutical industry. |

Director Compensation

Our board of directors has adopted a non-employee director compensation policy, which is designed to provide a total compensation package that enables us to attract and retain, on a long-term basis, high caliber non-employee directors. Under our non-employee director compensation policy, our non-employee directors were compensated as follows in 2023, which amounts remain unchanged from the prior year policy amounts:

| Compensation Type | Amount |
|--|--------------|
| Annual Cash Fee for Each Non-Employee Director | \$50,000 |
| Additional Cash Fee for the Non-Executive Chairperson of the Board | \$35,000 |
| Additional Cash Fee for the Lead Independent Director | \$30,000 |
| Additional Cash Fee for the Committee Chairs: | |
| Audit | \$25,000 |
| Compensation | \$20,000 |
| Nominating and Corporate Governance | \$10,000 |
| Additional Cash Fee for the Non-Chair Committee Members: | |
| Audit | \$12,000 |
| Compensation | \$10,000 |
| Nominating and Corporate Governance | \$5,000 |
| Initial Stock Option Grant under the 2015 Plan | 7,950 shares |
| Initial RSU Grant under the 2015 Plan | 3,900 RSUs |
| Annual Stock Option Grant under the 2015 Plan | 5,300 shares |
| Annual RSU Grant under the 2015 Plan | 2,600 RSUs |

The stock options granted to our non-employee directors will have an exercise price equal to the closing price of our common stock as reported on the Nasdaq Global Select Market on the date of grant and will expire ten years after the date of grant. The initial stock options granted to new non-employee directors will vest in equal monthly installments over a three-year period following the grant date. The initial restricted stock units, or RSUs, granted to new non-employee directors will vest in equal annual installments over a three-year period beginning on the one-year anniversary of the grant date. The annual stock options and the annual RSUs granted to our non-employee directors will vest in full upon the earlier of the first anniversary of the date of grant or the date of the following annual meeting of stockholders. Any initial and annual equity awards granted to each of our non-employee directors will automatically accelerate and become fully vested and exercisable upon the non-employee director's termination due to death or disability or upon a sale event (as defined in the 2015 Plan or, if approved during our 2024 annual meeting of stockholders, the 2024 Plan). In addition, each non-employee director has the right to elect to receive all or a portion of their annual cash compensation under the non-employee director compensation policy in the form of stock options to purchase our common stock. Any such election must be made before the start of our fiscal year and any such stock options will vest quarterly over a one-year period. Except as mentioned above, vesting of all stock options and RSUs is subject to the nonemployee director's continued service on the board of directors or subject to continued service as a consultant, director or employee of the company or any of its affiliates, as applicable.

All cash fees will be paid quarterly, in arrears, or upon the earlier resignation or removal of the non-employee director. The amount of each payment will be prorated for any portion of a quarter that a non-employee director is not serving on our board of directors, based on the number of calendar days served by such non-employee director.

Each non-employee director is also entitled to reimbursement for reasonable travel and other expenses incurred in connection with attending meetings of the board of directors and any committee on which the director serves.

In December 2020, our board of directors adopted stock ownership guidelines designed to ensure that our directors and senior executive officers are focused on both short- and long-term objectives and to better align their interests with other stockholders. In April 2023, we amended and restated our stock ownership guidelines, eliminating shares underlying vested and unexercised "in-the-money" stock option awards from the calculation of requisite stock ownership levels for the covered parties. All of our directors remained in compliance following the amendment. See "Other Compensation Policies and Practices - Stock Ownership Guidelines" for more information.

The following table sets forth a summary of the compensation for our non-employee directors during 2023.

| | Fees Earned | Stock | Option | |
|-------------------------------|-----------------------------|---------|---------|------------------------------|
| | or Paid | Awards | Awards | All Other |
| Name | in Cash (\$) ⁽¹⁾ | (\$)(2) | (\$)(2) | Compensation (\$) Total (\$) |
| Jeffrey W. Albers, M.B.A. (3) | 63,750 | 165,516 | 181,815 | 115,000 (12) 526,081 |
| Daniella Beckman (4) | 75,000 | 165,516 | 181,815 | — 422,331 |
| Alexis Borisy (5) | 50,000 | 165,516 | 181,815 | — 397,331 |
| Lonnel Coats (6) | 72,000 | 165,516 | 181,815 | — 419,331 |
| Habib Dable, M.B.A. (7) | 65,000 | 165,516 | 181,815 | — 412,331 |
| Mark Goldberg, M.D. (8) | 72,000 | 165,516 | 181,815 | — 419,331 |
| Nicholas Lydon, Ph.D. (9) | 50,000 | 165,516 | 181,815 | 20,000 (13) 417,331 |
| Lynn Seely, M.D. (10) | 105,000 | 165,516 | 181,815 | — 452,331 |
| John Tsai, M.D. (11) | 37,500 | 348,309 | 383,990 | — 769,799 |

- (1) Amounts represent cash compensation for services rendered by each member of our board of directors for their services on our board of directors, and any applicable
- These amounts represent the aggregate grant date fair value of awards granted to our directors in 2023, computed in accordance with FASB ASC Topic 718. Such aggregate grant date fair values do not take into account any estimated forfeitures related to service-based vesting conditions. See Note 13 to the audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023 regarding assumptions underlying the valuation of equity awards.
- (3) As of December 31, 2023, Mr. Albers held options to purchase 670,873 shares of our common stock and 39,475 restricted stock units.
- (4) As of December 31, 2023, Ms. Beckman held options to purchase 17,600 shares of our common stock and 3,733 restricted stock units. As of December 31, 2023, Mr. Borisy held options to purchase 31,975 shares of our common stock and 2,600 restricted stock units.
- As of December 31, 2023, Mr. Coats held options to purchase 65,611 shares of our common stock and 2,600 restricted stock units.
- As of December 31, 2023, Mr. Dable held options to purchase 13,250 shares of our common stock and 5,200 restricted stock units.
- (8) As of December 31, 2023, Dr. Goldberg held options to purchase 42,884 shares of our common stock and 2,600 restricted stock units.
- (9) As of December 31, 2023, Dr. Lydon held options to purchase 42,884 shares of our common stock and 2,600 restricted stock units.
- (10) As of December 31, 2023, Dr. Seely held options to purchase 75,611 shares of our common stock and 2,600 restricted stock units.
- (11) As of December 31, 2023, Dr. Tsai held options to purchase 13,250 shares of our common stock and 6,500 restricted stock units.
- (12) Amount represents cash compensation for consulting services rendered by Mr. Albers.
- (13) Amount represents cash compensation for services rendered by Dr. Lydon for his service on our scientific advisory board



Pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd Frank Act, and Section 14A of the Exchange Act, at least once every six calendar years, our stockholders are entitled to vote on whether a non-binding advisory vote on the compensation of our named executive officers, commonly known as a "say-on-frequency" vote, should occur every year, every two years or every three years. At the 2018 annual meeting of stockholders, our board of directors, valuing good corporate governance and a regular dialogue on executive compensation, recommended that the stockholders approve a non-binding advisory vote on the frequency of future say-on-pay votes on an annual basis.

Approximately 94% of the stockholder votes cast at the 2018 annual meeting of stockholders were for the company's recommendation, and in response the company has since held an annual say-on-pay vote. At the 2024 annual meeting of stockholders, stockholders will once again be invited to specify one of the following options for this say-on-frequency proposal, as indicated on the proxy card: one year, two years, three years or abstain from voting. Stockholders are not voting to approve or disapprove the recommendation of the board of directors.

VOTE REQUIRED AND RECOMMENDATION OF THE BOARD OF DIRECTORS

The frequency option that receives the majority of the votes cast on the matter will be considered the frequency preferred by the stockholders. The advisory vote on the frequency of future advisory votes on named executive officer compensation is non-binding on the company and / or the board of directors. Although non-binding, our board of directors will consider the voting results when making future decisions regarding frequency of advisory votes on executive compensation. Abstentions and broker non-votes will have no effect on the outcome of this proposal.



OUR BOARD OF DIRECTORS RECOMMENDS THAT STOCKHOLDERS VOTE FOR "ONE YEAR" AS THE FREQUENCY OF FUTURE ADVISORY VOTES ON THE COMPENSATION PAID TO OUR NAMED EXECUTIVE OFFICERS.



PROPOSAL 3 Non-Binding Advisory Vote on Executive Compensation

We are providing our stockholders the opportunity to vote to approve, on an advisory non-binding basis, the compensation of our named executive officers as disclosed in this proxy statement in accordance with the SEC's rules. This proposal, which is commonly referred to as "say-on-pay," is required by the Dodd-Frank Act, which added Section 14A to the Exchange Act. Our executive compensation program is designed to reward value creation for stockholders and to attract, motivate, and retain a highly skilled team of executive officers, who are critical to our success. Under this program, our named executive officers are rewarded for the achievement of our short- and long-term strategic and financial goals, which we believe serves to enhance short- and long-term value creation for our stockholders.

The section of this proxy statement titled "Executive Compensation" beginning on page 34, including "Compensation Discussion and Analysis," describes in detail our executive compensation program and the decisions made by our compensation committee with regard to such program. As we describe in greater detail in the "Compensation Discussion and Analysis" section, we generally strive to provide our named executive officers with a mix of short-term and long-term performance-based incentives to encourage consistently strong performance, and our board of directors believes that this link between compensation and the achievement of our near- and long-term business goals has helped drive our performance over time. At the same time, we believe our program does not encourage excessive risk-taking by management.

Our board of directors is asking stockholders to approve the following resolution:

RESOLVED, that the stockholders of Blueprint Medicines Corporation approve, on a non-binding advisory basis, compensation paid to the company's named executive officers, as disclosed pursuant to Item 402 of Regulation S-K, including the "Compensation Discussion and Analysis," the compensation tables and narrative discussion included therein.

You are being asked to approve on a non-binding advisory basis, the compensation paid to our named executive officers as set forth in the Compensation Discussion and Analysis, Summary Compensation Table and related notes and narrative set forth in this proxy statement. This vote is not intended to address any specific compensation item, but rather the overall compensation paid to our named executive officers and the philosophy, policies and practices described herein.

VOTE REQUIRED AND RECOMMENDATION OF THE BOARD OF DIRECTORS

Approval of this resolution requires the affirmative vote of a majority of the votes cast on this proposal. As a non-binding advisory vote, the outcome of the vote on this proposal is non-binding and does not overrule any decision by the company or the board of directors (or any committee thereof), create or imply any change to the fiduciary duties of the company or the board of directors (or any committee thereof), or create or imply any additional fiduciary duties for the company or the board of directors (or any committee thereof). However, our compensation committee and board of directors value the opinions expressed by our stockholders in their vote on this proposal and intend to consider carefully the outcome of the vote when making future compensation decisions for named executive officers. Abstentions and broker non-votes will have no effect on the outcome of this proposal.



OUR BOARD OF DIRECTORS RECOMMENDS THAT STOCKHOLDERS VOTE "FOR" APPROVAL OF COMPENSATION PAID TO OUR NAMED EXECUTIVE OFFICERS.

Executive Officers

Certain information regarding our executive officers who are not also directors, as of March 31, 2024, is set forth below.

| Name | Age | Position(s) |
|--------------------------------|-----|---|
| Percy H. Carter, M.B.A., Ph.D. | 53 | Chief Scientific Officer |
| Debra Durso-Bumpus | 54 | Chief People Officer |
| Becker Hewes, M.D. | 58 | Chief Medical Officer |
| Ariel Hurley | 50 | Senior Vice President, Finance and Principal Accounting Officer |
| Michael Landsittel, M.B.A | 52 | Chief Financial Officer |
| Philina Lee, Ph.D. | 47 | Chief Commercial Officer |
| Tracey L. McCain, Esq. | 56 | Chief Legal and Compliance Officer |
| Christopher K. Murray, Ph.D. | 61 | Chief Technical Operations and Quality Officer |
| Fouad Namouni, M.D. | 55 | President, Research and Development |
| Christina Rossi, M.B.A. | 48 | Chief Operating Officer |

Percy H. Carter, M.B.A., Ph.D. has served as our chief scientific officer since May 2021. Dr. Carter previously served as chief scientific officer at FibroGen, Inc. from September 2020 to May 2021. From June 2019 to September 2020, he served as global head of discovery sciences at Janssen Pharmaceuticals, Inc., a division of Johnson & Johnson, where he led more than 700 employees comprising several key research and discovery functions and drove the synthetic discovery strategy in collaboration with partners across various therapeutic areas. From August 2001 to May 2019, Dr. Carter held roles of increasing responsibility in drug discovery, covering all therapeutic areas, drug platforms and stages of discovery at Bristol-Myers Squibb Company, or BMS. This included serving as senior vice president and head of discovery between November 2018 and May 2019, and head of discovery chemistry & molecular technologies from October 2016 to November 2018. Prior to his experience at BMS, he was senior research scientist in chemical and physical sciences at DuPont Pharmaceuticals Company, until it was acquired by BMS in 2001. Dr. Carter is an inventor or co-inventor on 28 U.S. patents and has authored or coauthored more than 80 peer-reviewed publications. Dr. Carter has served as a member of the board of directors of HiFiBio Therapeutics since 2022 and currently serves as an independent director. Dr. Carter received an A.B. in Chemistry from Dartmouth College and a Ph.D. in Organic Chemistry from Harvard University. In addition, he received an M.B.A. from Massachusetts Institute of Technology.

Debra Durso-Bumpus has served as our chief people officer since February 2020. She has been with us since April 2015 as a member of the executive team and previously served as our senior vice president, human resources. Bringing nearly 20 years of experience focused on providing strategic direction to companies on people matters, managing rapid growth and creating and maintaining high performance cultures, Ms. Durso-Bumpus has operated in a number of leadership positions. Prior to joining Blueprint Medicines, she served as the interim head of human resources at Cubist Pharmaceuticals, Inc. or Cubist, where she was appointed to lead the post-merger human resources integration following the acquisition of Cubist by Merck & Co. Between April 2009 and the acquisition, Ms. Durso-Bumpus served as the global senior director for talent management and organizational development at Cubist, where she was primarily responsible for building talent and leadership strength and depth while managing change on a global scale to create a cohesive and highly differentiated culture. Prior to Cubist, she served as the North American manager of talent acquisition and workforce planning at Holcim, Inc., in Waltham, MA. Ms. Durso-Bumpus serves as a member of the board of directors for the Massachusetts Biotechnology Education Foundation, a nonprofit organization committed to supporting science and biotechnology education in Massachusetts through school programs, workforce training and lifelong learning. Ms. Durso-Bumpus received a B.S. in business management from Bentley University.

Becker Hewes, M.D. has served as chief medical officer since January 2021. Dr. Hewes previously served as our senior vice president of clinical development from May 2020 to January 2021. Prior to joining us, he served as chief medical officer of Repertoire Immune Medicines, Inc. from February 2017 to May 2020, where he built their multidisciplinary clinical and biomarker team and advanced its immuno-oncology programs into clinical development. From June 2013 to February 2017, Dr. Hewes served as executive director of translational clinical oncology at the Novartis Institutes for BioMedical Research, or Novartis, where he led clinical development and translational medicine efforts for multiple early-stage oncology programs through clinical proof-of-concept, including Kisqali® (ribociclib), a targeted therapy approved to treat breast cancer, and other programs combining novel therapies. Prior to joining Novartis, he held roles of increasing responsibility related to clinical development in oncology and hematology within AstraZeneca PLC, Genzyme Corporation (which was later acquired by Sanofi S.A.) and Wyeth Pharmaceuticals Inc., including leading registration programs for Bosulif® (bosutinib) and Torisel® (temsirolimus) for chronic myelogenous leukemia and mantle cell lymphoma, respectively. Before joining industry, he conducted immuno-oncology research at the Emory Vaccine Center while treating patients as a pediatric oncologist at Children's Healthcare of Atlanta. Dr. Hewes holds an M.D. from the Georgetown University of Medicine and a B.S. from Vanderbilt University.

Ariel Hurley has served as our senior vice president, finance and principal accounting officer since January 2023. Ms. Hurley previously served as our vice president, finance, and controller and principal accounting officer from March 2019 to December 2022, as our senior director, controller from January 2016 to February 2019 and as our director, controller from September 2014 to December 2015. Prior to joining us, from December 2005 to September 2014, Ms. Hurley served in various accounting and finance roles at Millennium Pharmaceuticals, Inc. (now a wholly-owned subsidiary of Takeda Pharmaceutical Company Limited). Ms. Hurley began her career at Deloitte & Touche, LLP and earned her certified public accountant license in Massachusetts. Ms. Hurley received a B.S. in accounting from Providence College.

Michael Landsittel, M.B.A. has served as our chief financial officer since January 2019. Mr. Landsittel previously served as our vice president, finance from February 2016 to January 2019 and as our senior director, finance from September 2014 to February 2016. Prior to joining us, Mr. Landsittel served as senior director of finance at Algeta ASA, from October 2012 to July 2014, where he led the U.S. organization's finance and operations efforts, which ultimately supported the successful launch of the prostate cancer drug XOFIGO® (radium Ra 223 dichloride). Before joining Algeta ASA, from March 2012 to October 2012, he was the director of financial planning at Infinity Pharmaceuticals, Inc., or Infinity, where he was responsible for budgeting and forecasting, including support of Infinity's long-range planning and capital markets activities. Prior to Infinity, from August 2002 to March 2012, Mr. Landsittel held multiple business development and strategic planning roles of increasing responsibility at Genzyme Corporation (which was later acquired Sanofi S.A.). Mr. Landsittel began his career at Arthur Andersen LLP, and is a registered certified public accountant in Illinois. Mr. Landsittel received a B.B.A from the University of Michigan and an M.B.A. from the Tuck School of Business at Dartmouth College.

Phillina Lee, Ph.D. has served as our chief commercial officer since April 2022. Dr. Lee previously served as our senior vice president, head of portfolio strategy and program management from January 2021 to April 2022, where she was responsible for providing strategic and operational leadership across the company's portfolio, our vice president, marketing and precision medicine from August 2019 to December 2020, our vice president, commercial strategy and operations from July 2017 to August 2019 and as our senior director, new product strategy and development from August 2014 to June 2017. During her tenure, Dr. Lee has been instrumental in building the company's portfolio from research-stage onwards, laying the groundwork for the commercial strategy that is driving the successful launches of AYVAKIT® (avapritinib) and GAVRETO® (praisetinib). Previously, Dr. Lee held product strategy and marketing roles of increasing responsibility at Algeta ASA, Sanofi S.A. and Genzyme Corporation (which was later acquired by Sanofi S.A.). Dr. Lee has served on the board of Fusion Pharmaceuticals since February 2021 and currently serves as a member of their nominating and corporate governance and the research and development committees. Dr. Lee earned a B.S. in biochemistry from the University of Alberta, and a Ph.D. in cell biology from the Massachusetts Institute of Technology.

Tracey L. McCain, Esq. has served as our executive vice president and chief legal officer since September 2016 and as our chief compliance officer since June 2017. Prior to joining us, from January 2016 to September 2016, Ms. McCain served as senior vice president and head of legal of Sanofi Genzyme, a global business unit of Sanofi S.A., or Sanofi, Ms. McCain held roles of increasing responsibility after joining Genzyme Corporation in May 1997,

including becoming its general counsel after Genzyme Corporation was acquired by Sanofi in 2011. In her capacity as senior vice president and general counsel of Genzyme Corporation from May 2011 to December 2015, she oversaw all aspects of its legal department in the United States and Europe, including general corporate, commercial and intellectual property matters, and support of business development initiatives. Prior to Genzyme's acquisition, Ms. McCain was also responsible for managing the securities and employment law teams and support of non-patent litigation. Before joining Genzyme, Ms. McCain was an associate at the law firm Palmer & Dodge LLP. Ms. McCain has served as a member of the board of directors of Kiniksa Pharmaceuticals, Ltd. since February 2018 and currently serves on its audit committee. She also served as a member of the board of directors of ImmunoGen, Inc. and sat on its audit committee from November 2021 to February 2024 when ImmunoGen, Inc. was acquired by AbbVie, Inc. She also serves on the board of trustees of the Dana Farber Cancer Institute. Ms. McCain holds a B.A. from the University of Pennsylvania with a major in political science and a J.D. from Columbia University School of Law.

Christopher K. Murray, Ph.D. has served as our executive vice president and chief technical operations and quality officer since January 2023. Dr. Murray previously served as our senior vice president, technical operations from October 2017 to December 2022 with responsibility for overseeing all aspects of Chemistry, Manufacturing and Controls, or CMC, for the company's global commercial products and other compounds, as well as CMC management from early preclinical development to commercial launch and distribution. Prior to joining us, from January 2014 to May 2017, Dr. Murray served as vice president, technical operations at ARIAD Pharmaceuticals, Inc., or ARIAD. In this role, Dr. Murray oversaw all aspects of commercial and clinical manufacturing, supply chain and logistics, process development, quality control and analytical chemistry for ARIAD's approved products and product candidates, including ICLUSIG® (ponatinib) and ALUNBRIG® (brigatinib). From 2004 to December 2013, Dr. Murray held multiple roles of increasing responsibility at ARIAD related to process development, manufacturing and clinical supply. Prior to joining ARIAD, Dr. Murray served in various positions with Allos Therapeutics, Inc. and Hauser Inc. related to clinical and commercial manufacturing and supply of active pharmaceutical ingredients. Dr. Murray is an inventor or co-inventor on more than 25 U.S. patents. Dr. Murray holds a B.S. from Hope College with a major in chemistry and a Ph.D. in organic chemistry from the University of Chicago.

Fouad Namouni, M.D. has served as our president, research and development, since September 2020. Prior to joining us, Dr. Namouni served in leadership roles at Bristol Myers Squibb Company since 1999, including as the global development lead for the its practice-changing cancer immunotherapy franchise. Most recently, he served as senior vice president and head of oncology development from August 2016 to April 2020 with the responsibility for driving product development plans from earlystage clinical development through commercialization across a portfolio of nearly 30 drug candidates. Previously, Dr. Namouni served as head of global medical affairs overseeing 1,700 employees worldwide from September 2015 to September 2017 and head of development for OPDIVO® (nivolumab) and YERVOY® (ipilimumab), immunotherapy medications used in the treatment of cancer, from January 2011 to September 2015. Dr. Namouni brings more than 20 years of oncology and cancer immunotherapy drug development expertise, as well as clinical experience as a pediatric oncologist. He holds an M.D. from the University of Annaba Medical School in Algeria and a Pediatrics degree from Université Rene Descartes in Paris, France. Additionally, Dr. Namouni received a Pediatric Oncology and Hematology degree and an M.S. in clinical and experimental pharmacology from Université Paris-Sud in France.

Christina Rossi, M.B.A. has served as our chief operating officer since April 2022. She previously served as our chief commercial officer from October 2018 to April 2022 and has overseen the commercial launches of AYVAKIT® (avapritinib) and GAVRETO® (pralsetinib) across multiple indications and geographies, including the creation of commercial infrastructure and successful market access efforts in the U.S. and Europe. Prior to joining us, from January 2016 to October 2018, Ms. Rossi served as the Multiple Sclerosis business unit head, North America, at Sanofi Genzyme, a global business unit of Sanofi S.A. In this role, she was responsible for all aspects of the financial performance of Sanofi Genzyme's multiple sclerosis franchise and increased market share for existing products, led the launch of new therapies and optimized operations to accelerate patient access. Previously, Ms. Rossi served as vice president, Multiple Sclerosis Sales at Sanofi Genzyme from May 2014 to December 2015 and vice president, Multiple Sclerosis Patient and Provider Services at Sanofi Genzyme from June 2012 to May 2014. Prior to joining Sanofi Genzyme, Ms. Rossi served in various roles at Biogen, Inc., or Biogen, including head, commercial strategy for Eidetica Biopharma GmbH, Biogen's biosimilar-focused venture, and U.S. brand leader for TYSABRI® (natalizumab). In addition, Ms. Rossi consulted in the healthcare practice at the Boston Consulting Group. Ms. Rossi has served as a member of the board of directors of Xilio Therapeutics, Inc. since April 2021 and currently serves as a member of its audit committee and as chair of its compensation committee. Ms. Rossi holds a B.S. in biology, cum laude, from Duke University and an M.B.A. from Harvard Business School.

Blueprint Medicines Proxy Statement 2024 | 33

Executive Compensation

COMPENSATION DISCUSSION AND ANALYSIS

Our compensation committee is responsible for reviewing and approving the compensation of our named executive officers, including base salary, cash and equity incentive compensation levels, severance arrangements, change-in-control benefits and other forms of executive compensation. This committee is also responsible for evaluating our company's performance against its goals and making related recommendations to our board of directors, assessing the performance of our named executive officers, and ensuring our compensation program is aligned with the objectives described below and competitive with those of other companies in our industry that vie for talent with us. This section discusses the principles underlying our compensation committee's policies and decisions with respect to the compensation of our named executive officers.

For 2023, our named executive officers were as follows:

- Kathryn Haviland, M.B.A., our president and chief executive officer,
- Michael Landsittel, M.B.A., our chief financial officer;
- Christina Rossi, M.B.A., our chief operating officer;
- Fouad Namouni, M.D., our president, research and development; and
- Percy H. Carter, M.B.A., Ph.D., our chief scientific officer.

EXECUTIVE SUMMARY

We are a fully integrated, commercial-stage, global biopharmaceutical company that invents life-changing medicines in two core, strategic areas of allergy/inflammation and oncology/hematology. We pursue discovery, development, and commercialization of therapies that potently and selectively target known drivers of disease, with focused investment in therapeutic areas where we can leverage our core expertise and business infrastructure to bring scale to our science. We are bringing AYVAKIT®/AYVAKYT® (avapritinib) to people living with SM in the United States and Europe. Additionally, we have a pipeline of research and development programs that range from early science to advanced clinical trials in mast cell-mediated diseases, including SM and chronic urticaria, breast cancer, and other solid tumors vulnerable to CDK2 inhibition.

Since 2011, we have advanced a drug discovery approach that combines evolving biological insights with our proprietary research platform and drug design capabilities, which currently includes kinase inhibition and targeted protein degradation. We aim to rapidly and reproducibly translate science into a durable clinical benefit for broad populations of patients with significant medical needs, including patients with mast cell-mediated diseases, breast cancer and other solid tumors. Our focused business model integrates our research engine with robust clinical development and commercial capabilities in allergy/inflammation and solid tumors to create a sustainable cycle of innovation.

In 2023, we made substantial progress toward our vision to bring life-changing medicines to as many patients with allergy and inflammation, cancer and hematologic disorders as possible. We achieved a number of significant milestones in 2023, including the following, toward our corporate goals described below in this Compensation Discussion and Analysis section.

Enable a long-term positive impact for patients globally through the efficient, sustainable, and compliant execution of our business

In 2023, we achieved \$249.4 million in total revenues, including \$204.2 million in AYVAKIT/ AVYAKYT net product revenues, which represents more than 84% year-over-year growth in AYVAKIT/AYVAKYT net product revenues.

- In February 2023, at the American Academy of Allergy, Asthma and Immunology 2023 Annual Meeting, we presented the registrational PIONEER Part 2 data for AYVAKIT in indolent SM, showing that AYVAKIT has a broad and durable impact on all patient-reported symptoms of disease burden, with a favorable safety profile compared to placebo, supporting the potential for chronic treatment.
- In May 2023, the FDA approved AYVAKIT for the treatment of adults with indolent SM. After receiving FDA approval, we launched AYVAKIT as the first and only approved therapy for indolent SM in the U.S.
- In December 2023, the European Commission expanded the marketing authorization for AYVAKYT to include the treatment of adult patients with indolent SM with moderate to severe symptoms inadequately controlled on symptomatic treatment. After receiving the European Commission's approval, we launched AYVAKYT as the first and only approved therapy for indolent SM in Europe

Thoughtfully and urgently discover and develop transformative medicines that benefit broad patient populations with unmet need

- In December 2023, at the American Society of Hematology 2023 Annual Meeting, we presented data showing that elenestinib, our next-generation KIT inhibitor in development for indolent SM led to rapid improvements in patientreported symptoms as well as objective measures of mast cell burden at 12 weeks, and that elenestinib was welltolerated at all dose levels studied.
- In June 2023, at the American Society of Clinical Oncology 2023 Annual Meeting, we presented data showing that BLU-222, our CDK2 inhibitor in development as the backbone of combination therapy for HR+/HER2- breast and other CDK2-vulnerable cancers, was generally well-tolerated with evidence of cell-cycle modulation, including a confirmed partial response as monotherapy in a heavily pre-treated patient.
- In the second quarter 2023, we announced the nomination of BLU-808, an oral, highly potent and selective wild-type KIT inhibitor with first- and best-in-class potential, as a development candidate for the treatment of mast cell disorders, including chronic urticaria.
- In January 2024, we announced the 2023 development candidate nominations of BLU-956, a next-generation CDK2 inhibitor, and targeted protein degrader research programs for CDK2 and an undisclosed target to support long-term lifecycle management.

Sustain and reinforce our differentiated culture to attract and retain diverse and highly capable talent; and promote our leadership in precision medicine to expand our external engagements

- We maintained a high employee engagement rate, with 94% of employees reporting they are proud to work at the company, based on results in 2024 from our most recent employee engagement and enablement survey, and a turnover rate that was substantially below the industry average.
- We were recognized as a Top Place to Work by The Boston Globe and Energage in 2023. In addition, we were recognized by Energage with 2023 Top Workplaces Culture Excellence Awards for Compensation & Benefits, Employee Appreciation, Employee Well-Being, Innovation, Leadership, Professional Development, Purpose & Values, and Work-Life Flexibility; and by Newsweek as one of the most trustworthy companies in America.

COMPENSATION ELEMENTS

Our compensation committee seeks to ensure that our compensation program is aligned with the interests of our stockholders and our business goals and that the total compensation paid to each of our named executive officers is fair, reasonable and competitive. As described in more detail below, key elements of our compensation program include the following:

| Compensation Element | Purpose | Features |
|---|--|---|
| Base salary | To attract, motivate and retain exceptional executive talent. | Fixed component of pay to provide financial stability, based on responsibilities, experience, individual contributions and peer company data. |
| Annual performance- based cash incentive compensation | To provide incentives that motivate and reward the achievement of performance goals that are intended to help drive to the enhancement of stockholder value, as well as to facilitate executive retention. | Variable component of pay based on annual quantitative and qualitative achievement of predetermined corporate performance goals and, in the case of executive officers other than our chief executive officer, the achievement of predetermined individual performance goals. |
| Equity incentive compensation | To align executives' interests with those of stockholders through long-term incentives linked to the company's stock price performance, which we believe serves to enhance short- and long-term value creation for our stockholders. | Long-term compensation in the form of stock options, RSUs, and PSUs which seeks to align executive and stockholder interests and provides incentives for employee retention. |

In addition to our direct compensation elements, the following features of our compensation program are designed to align with stockholder interests and market best practices while being able to achieve our stated objectives and philosophy and support our ambitious business goals:

| WHAT WE DO | | |
|--|---|---------------------|
| specific and size-appropriate neer group for | ☑ | Allow bedging or pl |

- Maintain an industry-specific a benchmarking compensation **V** ic and size-appropriate peer group for
- **√** Target compensation based on market norms
- \checkmark Deliver executive compensation primarily through variable, at-risk short- and long-term incentive pay
- **V** Set challenging corporate performance goals
- Consult with an independent compensation advisor on **√** compensation levels and practices
- Offer market-competitive benefits for executives that are consistent **V** with the rest of our employees
- Use double trigger change-in-control protection for our executive officers and all employees
- \checkmark Cap annual cash incentive program payouts at 150% of the target payout level
- ☑ Cap PSU payouts at 200% of the target payout level
- Maintain a clawback policy that both complies with recently adopted regulatory requirements and applies to the recoupment of incentivebased compensation paid to our current and former executive
- $\ensuremath{\square}$ Maintain an equity ownership policy for non-employee directors and
- Structure our executive officer compensation program to minimize inappropriate, while encouraging appropriate, risk-taking behavior by executive officers
- Hold annual say-on-pay advisory votes

- $oxed{\boxtimes}$ Allow hedging or pledging
- ☑ Re-price stock options without prior stockholder approval
- ☑ Provide significant perquisites to our executive officers
- ☑ Provide supplemental executive retirement plans or special health and welfare benefits to our executive officers

WHAT WE DON'T DO

☑ Provide tax gross-up payments for any change-of-control payments

COMPENSATION OBJECTIVES AND PHILOSOPHY

Our compensation committee believes that the most effective compensation program is one that rewards value creation for stockholders and progress towards achieving our mission of delivering life-changing medicines to address unmet medical needs of our patients and that promotes company performance. The objectives of our compensation program are to:

- attract, engage and retain highly skilled executive talent;
- provide incentives that motivate and reward the achievement of performance goals directly tied to the achievement of our business objectives and increase in stockholder value; and
- align executives' interests with those of stockholders through long-term incentives linked to the performance and appreciation of the stock price of our company, which we believe serves to enhance short- and long-term value creation for our stockholders.

To achieve its objectives, our compensation committee evaluates our executive compensation program with the goal of setting total compensation at levels that align with our total rewards strategy, size and company life stage. Specifically, below are the key elements targeted by our compensation committee for our 2023 executive compensation programs:

Base salary

As discussed below, in seeking to ensure that base salaries reflect each executive's experience, performance and responsibility, our compensation committee applies judgment in establishing targeted pay levels, taking into account not only competitive market data, but also factors such as organizational and individual performance, scope of responsibility, critical needs and skill sets, leadership and succession planning. The committee believes the current base salaries for our named executive officers are competitive with the base salaries of other companies in our industry and region that compete with us for executive talent.

Annual performance-based cash incentive compensation

Our compensation program links a substantial portion of our named executive officers' annual compensation to the achievement of pre-determined corporate and individual performance goals as part of the annual executive bonus plan adopted by our board of directors, or the executive bonus plan. Those goals include: scientific, business, organizational and operational goals such as our commercialization activities; progress in our clinical trials and research programs; key research and development achievements; maintaining the strong financial health of the company, including implementation of appropriate financing strategies; maintaining and establishing key strategic relationships; sustaining and reinforcing our differentiated culture through retention of high-performing talent, and progressing our ED&I goals and practices; and achievement of desired financial metrics. Our compensation committee uses competitive compensation data from annual total compensation of peer companies generally to help make decisions on annual performance-based cash incentive compensation, and imposed caps on executive bonus plan payouts at 150% of the target payout level.

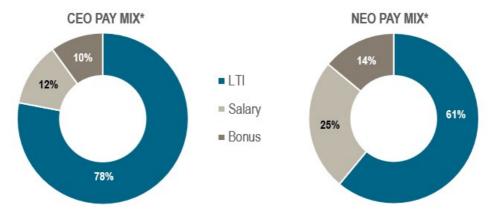
Equity incentive compensation

We provide a significant portion of our executive compensation in the form of stock options and RSUs that vest over time contingent upon continued service, which we believe helps to retain our executives and aligns their interests with those of our stockholders by allowing them to participate in the longer-term success of our company as reflected in the appreciation of our stock price. Additionally, in 2023 we also introduced PSUs for the executive officers serving on our executive team, which require both continued service and performance of our relative total stockholder return in order to vest, balancing both retention and further strengthened alignment with company performance and stockholder interests. When determining equity incentive compensation for our named executive officers, our compensation committee considers a host of factors in comparison to our peer group, including the following: annual long-term incentive target values, annual equity awards expressed as a percent of total shares outstanding, total annual and cumulative dilution, the retentive value of outstanding awards and total equity ownership, and the equity compensation practices and vehicles of other companies in our industry that compete with us for talent. Given the dynamic biopharmaceutical market, our compensation committee does not overemphasize any one of these perspectives. Rather, they take a holistic view, further considering the factors enumerated above, the achievement of our corporate goals and the impact on total stockholder return, when determining actual award levels for each of the named executive officers.

We believe that targeting and delivering overall compensation in this manner, including the strong emphasis on pay-forperformance and at-risk pay, are necessary and appropriate in order to attract and retain the quality of

talent we need to successfully grow our business, achieve our goals, sustain strong performance, and seek to ensure that compensation levels are competitive with other companies against which we compete for talent. In addition, we believe this approach to overall compensation creates a strong alignment with stockholder value and encourages long-term value creation. However, any individual employee's compensation may vary from the targeted pay framework, based on the unique responsibilities and requirements of the position, experience and other qualifications, internal parity relative to similar positions within the company, and individual or company performance relative to performance goals and our peer group to ensure appropriate pay-for-performance alignment. While we do not have a formal or informal policy for allocating between long-term and short-term compensation, between cash and non-cash compensation or among different forms of non-cash compensation, we generally strive to provide our named executive officers with a balance of short-term and long-term incentives to encourage consistently strong performance to help contribute sustained value over time.

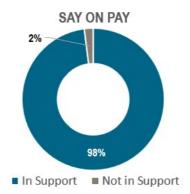
For 2023, 88% of our chief executive officer's and 75% of our other named executive officers' target compensation was performance-based through their pre-determined annual performance goals (through our corporate performance goals for our chief executive officer and corporate and individual performance goals for our named executive officers) tied to our executive bonus plan and long-term equity awards to incentivize performance to drive stock appreciation and, therefore, at-risk pay:



^{*} Based on 2023 annualized salary, bonus opportunity at target for 2023 performance, and grant date fair value of long-term equity incentive awards granted in 2023, all of which is averaged for our named executive officers other than our chief executive officer. Please note that the above excludes all other unspecified forms of compensation and therefore does not agree to the Summary Compensation Table.

ANNUAL SAY-ON-PAY VOTE ON EXECUTIVE COMPENSATION

The compensation committee considered the results of the non-binding stockholder advisory votes on the compensation of our named executive officers conducted at our 2023 annual meeting of stockholders, commonly referred to as a "say-on-pay" vote. As reported in our current report on Form 8-K, filed with the SEC on June 27, 2023, approximately 98% of the votes cast on the proposal expressed support for the compensation program offered to our named executive officers as disclosed in last year's proxy statement. The compensation committee appreciates this support and believes it indicates that our stockholders are supportive of our current executive compensation structure and policies. As such, the compensation committee made no changes to our 2023 executive compensation program as a result of the say-on-pay vote.



Further, our board of directors has elected to conduct the non-binding advisory say-on-pay vote annually, thereby giving our stockholders the opportunity to provide feedback on the compensation of our named executive officers each year. We will be conducting our annual say-on-pay vote as described in Proposal 3 of this proxy statement at our 2024 annual meeting of stockholders. Our board of directors and our compensation committee will consider the outcome of the say-on-pay vote, as well as feedback received throughout the year, when making compensation decisions for our named executive officers in the future.

OVERVIEW OF EXECUTIVE COMPENSATION PROCESS

ROLE OF THE COMPENSATION COMMITTEE

The compensation committee works closely with Aon's Human Capital Solutions practice, a division of Aon plc, or Aon (formerly known as Radford), throughout the year to develop our executive compensation program and to align pay with performance, stockholder interests, and pay at our peer companies. Annualized base salaries and annual performance-based cash incentives and equity incentive awards for all employees are generally determined in the first quarter of the year based on company and individual performance in the prior year, as well as other factors, including compensation trends in the biopharmaceutical industry and among our benchmark peers.

Our compensation committee has delegated authority to our chief executive officer to make equity awards under our 2015 Plan to employees of the company or any of its affiliates in connection with hiring, promotions, employee recognition or exceptional performance, in each case, subject to certain limitations. In particular, our chief executive officer is not authorized to grant equity awards to: (i) an employee who is a senior vice president (or above) or a direct report to the chief executive officer; (ii) an employee who is an officer or director of the company or its subsidiaries and is subject to Section 16 of the Exchange Act; (iii) an employee who is at the time of grant, or who is anticipated to become during the term of the applicable equity award, a "covered employee," as defined in Section 162(m)(3) of the Internal Revenue Code of 1986, as amended, or the Internal Revenue Code; (iv) the chief executive officer; or (v) any other person whom our board of directors or compensation committee, respectively, may from time to time designate in writing as not being eligible to receive equity awards under the authority delegated to the chief executive officer. In addition, the number of shares underlying any equity awards granted by our chief executive officer must be within the range specified by our compensation committee for these awards, and the aggregate number of shares underlying equity awards that our chief executive officer may grant in any one calendar year or to any person in any one calendar year must be within specified limits established by our compensation committee. The exercise price of stock options must be equal to the closing price of our common stock on the Nasdag Global Select Market on the date of grant, and all equity awards must have vesting terms consistent with those approved by our compensation committee. In addition, our chief executive officer is required to maintain a list of equity awards granted pursuant to such delegated authority and periodically report to our compensation committee regarding such awards.

With respect to any equity awards granted by our chief executive officer to new hires, our chief executive officer approves the awards in connection with such hires and, provides that the awards are generally to be granted to the

new hires on the first day of the first or second calendar month following the date of such new hires' first date of employment, depending upon where that start date falls within the month. With respect to any equity awards granted by our chief executive officer to employees in connection with mid-year promotions, our chief executive officer approves the awards in connection with such promotions and provides that the awards are to be granted on July 1 of the applicable year.

Notwithstanding the delegation of authority to our chief executive officer to grant certain equity awards in connection with certain new hires and mid-year promotions, our compensation committee approves all equity awards that are a) granted under our 2020 Inducement Plan, as amended, or the 2020 Plan or 2015 Plan and b) in connection with annual promotions as part of our annual compensation review process.

ROLE OF MANAGEMENT

Our chief executive officer makes performance and compensation recommendations to our compensation committee for our other named executive officers and certain members of our executive team. Our chief executive officer's performance is evaluated and approved directly by the compensation committee, considering input from our board of directors. Evaluations of each of our named executive officers and other members of our executive team are based on our overall corporate performance against the annual goals approved by the board of directors at the beginning of each year and, in the case of executive officers other than our chief executive officer, the achievement of individual goals, as discussed in more detail below. The evaluation of our chief executive officer is based solely on our corporate performance goals, in recognition of her overall responsibility for our corporate performance and to incentivize the chief executive officer to drive the execution of our strategic plans and achievement of our corporate goals.

ROLE OF THE COMPENSATION CONSULTANT

The compensation committee has the sole authority to retain, at our expense, one or more third-party compensation consultants to assist it in performing its responsibilities. The compensation committee may terminate the services of the consultant if the compensation committee deems it appropriate. In 2023, the compensation committee utilized the services of Aon to assist it in fulfilling its responsibilities. Aon was retained exclusively by the compensation committee and has not been retained by management to perform any work for the company other than projects performed at the direction of the compensation committee. Aon provides analysis and recommendations regarding:

- trends and emerging topics with respect to executive compensation;
- peer group selection for executive and director compensation benchmarking;
- compensation practices of our peer group;
- compensation philosophy and programs for executives and broad-based employees;
- stock utilization and other metrics; and
- board of directors' compensation.

In addition, we subscribe to Aon's various global annual and specialized life sciences and general industry compensation surveys on an ongoing basis. Aon advises the compensation committee on all of the principal aspects of executive compensation, including executive new hire compensation arrangements. Upon request, Aon consultants attend meetings of the compensation committee, including executive sessions in which executive compensation issues are discussed. Aon reports to the compensation committee and not to management, although it meets with management for purposes of gathering information for its analyses and recommendations. The compensation committee annually evaluates its engagement of compensation consultants, and selected Aon to advise with respect to compensation matters based on Aon's industry experience and reputation, which our compensation committee concluded continues to give Aon useful context and knowledge to advise it. The compensation committee has assessed the independence of Aon pursuant to SEC and Nasdaq Listing Rules and concluded that no conflict of interest exists that would prevent Aon from independently advising the compensation committee.

DEFINING AND COMPARING COMPENSATION TO MARKET BENCHMARKS

In evaluating the total compensation of our named executive officers, our compensation committee, using information provided by Aon, establishes a peer group of publicly traded companies in the biopharmaceutical and biotechnology industries that is selected based on a balance of the following criteria, of public companies:

- whose number of employees, stage of development, general therapeutic focus, revenue and market capitalization are similar, though not necessarily identical, to ours;
- with similar executive positions to ours;
- against which we believe that we compete for executive talent; and
- based in the United States or elsewhere whose compensation and financial data are available in proxy statements or through widely available compensation surveys.

Based on these criteria, our peer group for 2023 compensation setting, referred to as our 2023 peer group, as approved by our compensation committee, comprised the following 17 companies:

| ACADIA Pharmaceuticals Inc. | BioCryst Pharmaceuticals, Inc.* | Mirati Therapeutics, Inc.* | | |
|-------------------------------|---------------------------------|---------------------------------|--|--|
| Agios Pharmaceuticals, Inc. | CRISPR Therapeutics AG | Neurocrine Biosciences, Inc. | | |
| Alkermes, Inc. | Exelixis, Inc. | Sarepta Therapeutics, Inc. | | |
| Alnylam Pharmaceuticals, Inc. | Halozyme Therapeutics, Inc. | Ultragenyx Pharmaceutical Inc. | | |
| Amicus Therapeutics, Inc. | Ionis Pharmaceuticals, Inc. | United Therapeutics Corporation | | |
| Apollis Pharmacouticals* | lazz Pharmacouticals plo* | | | |

^{*} Addition to 2023 peer group from the 2022 peer group; removed Acceleron Pharmaceuticals Inc. (following its November 2021 acquisition), Biohaven Pharmaceutical Holding Company Ltd., Nektar Therapeutics, and Sage Therapeutics, Inc.

The compensation committee believes the compensation practices of our 2023 peer group provide us with appropriate benchmarks for evaluating the compensation of our named executive officers. Such information provides useful context as well as a solid reference point for making decisions. Notwithstanding the similarities of our 2023 peer group to our company, due to the nature of our business, we compete for executive talent with many companies that are larger and more established than we are or that possess greater resources than we do, as well as with prestigious academic and non-profit institutions. Other considerations, including market factors, the experience level of the executive and the executive's performance against established corporate goals and individual objectives, may require that our compensation committee vary from its compensation practices or general compensation philosophy under certain circumstances. We believe that the compensation practices of our 2023 peer group provided us with appropriate benchmarks for evaluating the compensation of our named executive officers for 2023.

For purposes of compensation for 2024, our compensation committee, with the advice of Aon, examined our 2023 peer group in light of our continued growth throughout 2023, with reference to market capitalization, therapeutic area, stage of development, number of employees and other key business metrics, as well as whether the companies in our 2023 peer group suffered any clinical setbacks or experienced reduced growth. Based on these considerations, our compensation committee added the following two companies to our 2024 peer group - Deciphera Pharmaceuticals, Inc. and PTC Therapeutics, Inc. and removed the following two companies that had been included in our 2023 peer group - Alnylam Pharmaceuticals, Inc. and United Therapeutics Corporation.

EXECUTIVE COMPENSATION ELEMENTS

As previously discussed above, the primary elements of our executive compensation program are base salary, annual performance-based cash incentives and equity incentive awards. Our compensation committee uses sound judgment to allocate long-term and short-term compensation for our named executive officers, in alignment with our pay-for-performance philosophy and the long-term interests of stockholders. After reviewing information provided

by our compensation consultant and other relevant data, our compensation committee exercises its judgment to determine what it believes to be the appropriate level and mix of the various compensation components. We generally strive to provide our named executive officers with a balance of short-term and long-term incentives to encourage consistently strong performance. For more information, please see "Executive Compensation—Compensation Objectives and Philosophy."

In addition, we provide our executives with benefits that are available to all employees, including medical, vision and dental insurance; life and disability insurance; medical and dependent care flexible spending accounts; a 401(k) plan; and an opportunity to invest in our company pursuant to our 2015 Employee Stock Purchase Plan, or 2015 ESPP. We offer our executives severance benefits upon an involuntary or constructive termination, as we believe such post-employment compensation protections are appropriate in light of similar benefits available to executive officers at companies in our peer group. We also offer our executives additional severance benefits in connection with involuntary or constructive terminations after a change-in-control. We believe that reasonable and competitive change-in-control payments and benefits are an important part of an executive compensation program to attract and retain senior executives. We also believe such payments and benefits are in the best interests of our stockholders because they incentivize senior executives to continue to strive to achieve stockholder value in connection with change-in-control situations, particularly where the possibility of a change-incontrol and the related uncertainty may lead to the departure or distraction of senior executives to the detriment of our company and our stockholders.

BASE SALARY

We use base salaries to recognize the experience, skills, knowledge and responsibilities required of all our employees, including our named executive officers. None of our named executive officers is currently party to an employment agreement or other agreement or arrangement that provides for automatic or scheduled increases in base salary. However, on an annual basis, our compensation committee reviews and evaluates, with input from our chief executive officer, the need for adjustment of the base salaries of our executive officers (other than our chief executive officer), and our compensation committee reviews and evaluates, without input from our chief executive officer, the need for adjustment of the base salary of our chief executive officer, in each case, based on among other things, changes and expected changes in the scope of an executive officer's responsibilities, including promotions, the individual contributions made by and performance of the executive officer during the prior year, the unique skills and experience of the executive officer, our overall growth and development as a company and general salary or other market trends in our industry.

In February 2023, our compensation committee approved salary increases for each of our named executive officers, effective January 2023, based on a review of market data provided by Aon, the compensation levels of our named executive officers, the company's performance against our 2022 corporate performance goals and, in the case of executive officers other than our chief executive officer, each executive officer's achievement of individual goals. The table below sets forth the adjustments to annualized base salary, in dollars and as a percentage, for each of our named executive officers:

| | 2022 | 2023 | |
|--------------------------------|-------------|-------------|----------------|
| | Base Salary | Base Salary | Increase from |
| Name | (\$) | (\$) | prior year (%) |
| Kathryn Haviland, M.B.A. | 745,000 | 782,250 | 5% |
| Michael Landsittel, M.B.A. | 513,300 | 551,532 | 7% |
| Christina Rossi, M.B.A. | 581,500 | 630,575 | 8% |
| Fouad Namouni, M.D. | 583,694 | 642,879 | 10% |
| Percy H. Carter, M.B.A., Ph.D. | 567,050 | 592,567 | 4% |
| | | | |

ANNUAL PERFORMANCE-BASED CASH INCENTIVES

Our board of directors has adopted the executive bonus plan, which provides for cash bonus payments to eligible executives based upon the annual attainment of performance targets established by the compensation committee for each executive during the first quarter of the applicable fiscal year. The payment targets are related to individual performance measures or objectives (other than for our chief executive officer), which we refer to as individual performance goals, and corporate financial and operational measures or objectives, which we refer to as corporate

performance goals. Target award split between company and individual achievement for both the chief executive officer and our named executive officers is as follows:



We believe this executive bonus plan provides incentive that motivates and rewards achievement of performance goals that directly correlates to serving our mission to deliver for our patients and further our company objectives for the short- and longterm, which we believe will lead to the enhancement of stockholder value, consistent with our compensation philosophy.

Each executive officer participating in the executive bonus plan is assigned a target award opportunity for the performance period. Subject to the rights contained in any agreement between the executive officer and the company, an executive officer must remain employed by the company through the bonus payment date to be eligible to receive a bonus. The executive bonus plan also permits the compensation committee to approve additional bonuses to executive officers in its sole discretion, but the compensation committee did not approve any such additional bonuses in 2023. Each of our named executive officers is eligible to participate in the executive bonus plan. Our compensation committee caps annual cash incentive program payouts in any given year at 150% of the target payout level.

CORPORATE PERFORMANCE

Below is the list of the company's 2023 corporate performance goals and relative weighting assigned to each goal, which were approved by our board of directors and considered by our executive leadership team and compensation committee in their respective assessment of the company's achievement of corporate performance goals for 2023:

Enable a long-term positive impact for patients globally through the efficient, sustainable, and compliant execution of our business [relative weighting: 50%]

- Achieve specified global product revenue targets for AVKAKIT and global total revenue.*
- Launch AYVAKIT in indolent SM in the United States, with a target number of patients on AYVAKIT therapy.
- End the year with an operating loss better than or equal to 2022.*
- Advance the SM franchise:*
 - U.S. FDA approval of AYVAKIT in indolent SM.*
 - Secure AYVAKYT EU CHMP positive opinion in indolent SM.*
 - Secure AYVAKYT pricing and reimbursement in advanced SM.*
- Define a KIT life-cycle strategy across avapritinib and BLU-263

Thoughtfully and urgently discover and develop transformative medicines that benefit broad patient populations with unmet need [relative weighting: 30%]

- Advance the BLU-222 development program.*
- Advance the EGFR franchise towards registration.*
- Achieve lead optimization for programs across internal and external collaboration efforts.*
- Nominate development candidates for research and development programs.
- File an Investigational New Drug application for BLU-525.*

Sustain and reinforce our differentiated culture to attract and retain diverse and highly capable talent; and promote our leadership in precision medicine to expand our external engagements [relative weighting: 20%]

- Achieve a certain percentage of favorability in overall employee engagement and enablement and sustain a certain voluntary turnover rate.*
- Further diversify our workforce through internal development and recruitment efforts.*
- Execute on certain key corporate and business development priorities in line with the corporate strategy.*

Based on the recommendation of our compensation committee (including the overachievement on some goals balanced against the underachievement of others), our board determined that our company achieved the 2023 corporate performance goals at 115%, as set forth in the table below.

| | Relative | Assessment of Actual Achievement for 2023 | Weighted |
|---|-----------|--|-------------|
| 2023 Corporate Goals | Weighting | (% of Target Award) | Performance |
| Positively impact patients' lives around the world through the sustainable and | | | |
| compliant delivery of our medicines | 50.0% | 126% | 63% |
| Leverage our organizational expertise and operational discipline to thoughtfully | | | |
| discover, develop, acquire and deliver transformative medicines | 30.0% | 93% | 28% |
| Sustain and reinforce our differentiated culture to attract and retain diverse and highly | | | |
| capable talent; and promote our leadership in precision medicine to expand our | | | |
| external engagements | 20.0% | 120% | 24% |
| Total | 100.0% | | 115% |

The individual objectives assigned in 2023 to our named executive officers other than our chief executive officer were as

Michael Landsittel, M.B.A.

Mr. Landsittel was assigned objectives related to (1) expanding corporate presence and influence, both externally and internally, including strengthening external relationships with our sell-side analysts and embracing initiatives to further expand accessibility and influence inside the company and (2) ensuring the continued evolution of the finance, information systems & facilities functional capabilities and processes to meet the needs of the company as we continue to expand globally. For 2023, the compensation committee determined that Mr. Landsittel achieved 115% of his individual objectives.

Fouad Namouni, M.D.

Dr. Namouni was assigned objectives related to (1) enabling the research and development organization to support the avapritinib go-to-market execution and drive pipeline progress, and (2) increasing in-person engagement with major stockholders and potential new ones. For 2023 the compensation committee determined that Dr. Namouni achieved 118% of his individual objectives.

Christina Rossi, M.B.A.

Ms. Rossi was assigned objectives related to (1) delivering a strong indolent SM launch and cross-functional execution, enabling the company to meet or exceed 2023 revenue targets and broadening focus towards other corporate priorities, and (2) fostering a differentiated company culture, including increased engagement and

^{*} These corporate performance goals include highly sensitive competitive data, including pre-clinical, clinical, regulatory and financial targets. We do not disclose these specific portions of our goals because we believe that such disclosure would result in competitive harm to us. We purposely set these goals at challenging levels. Revealing certain elements of these goals could potentially reveal insights about our pre-clinical, clinical, regulatory and strategic plans or objectives that our competitors or potential collaborators could use against us.

motivation around company mission, vision and strategy. For 2023, the compensation committee determined that Ms. Rossi achieved 121% of her individual objectives.

Percy H. Carter, M.B.A., Ph.D.

Dr. Carter was assigned objectives related to (1) advancing the pipeline and platform and (2) continuing to increase internal and external engagement, including with scientific leadership and the investment community. For 2023 the compensation committee determined that Dr. Carter achieved 115% of his individual objectives.

Based on company and individual performance in 2023, the compensation committee approved the following cash incentive payments under the executive bonus plan for each of our named executive officers:

| | | | | | | | | | 2023 |
|--------------------------------|-----------|-------|----------|-----------|------------|-------------|-------|---------|--------------|
| | | | | Target W | /eighting | Corporate | Indi | vidual | Actual Cash |
| | | Targe | et Award | Corporate | Individual | Performance | Perfo | rmance | Incentive |
| Name | Base (\$) | % | \$ | 100%/75% | 0%/25% | 115% | % | \$ | Payment (\$) |
| | 782,250 | % | 625,800 | 625,800 | 0 | 719,670 | 0 % | 0 | 719,670 |
| Kathryn Haviland, M.B.A. | | 80 | | | | | | | |
| | 551,532 | % | 275,766 | 206,825 | 68,942 | 237,848 | 115% | 79,283 | 317,131 |
| Michael Landsittel, M.B.A. | | 50 | | | | | | | |
| | 630,575 | % | 378,345 | 283,759 | 94,586 | 326,322 | 140% | 132,421 | 458,743 |
| Christina Rossi, M.B.A. | | 60 | | | | | | | |
| | 642,879 | % | 385,727 | 289,296 | 96,432 | 332,690 | 125% | 120,540 | 453,230 |
| Fouad Namouni, M.D. | | 60 | | | | | | | |
| | 592,567 | % | 296,284 | 222,213 | 74,071 | 255,545 | 115% | 85,181 | 340,726 |
| Percy H. Carter, M.B.A., Ph.D. | | 50 | | | | | | | |

EQUITY INCENTIVE AWARDS

We believe that equity grants provide our executives with a strong and direct connection to our long-term performance, create an ownership and performance culture and help to align the interests of our executives and our stockholders. In addition, we believe that equity grants with a time-based vesting feature promote executive retention and ultimately business continuity because this feature incentivizes our executive officers to remain in our employment during the vesting period. Accordingly, our compensation committee and board of directors periodically review the equity incentive compensation of our named executive officers and from time to time may grant equity incentive awards to them in the form of stock options, RSUs and PSUs.

Stock Options and RSUs

Equity compensation represents the largest at-risk component of our named executive officers' compensation arrangements. We believe it is appropriate to align the interests of our executives with those of our stockholders to achieve and sustain longterm stock price growth. For employees at or above the vice president level, including our executive officers, our compensation committee granted a combination of stock options and RSUs in connection with their annual equity awards at a fixed ratio. The compensation committee structured the mix of equity vehicles and the relative weight assigned to each type of award to motivate performance and drive stock price appreciation over the long-term through stock options, which deliver value only if the stock price increases, and to ensure some amount of value delivery through the RSUs, which are complementary because they have upside potential but deliver some value even if the stock price does not increase, while also reinforcing an ownership culture and commitment to our long-term success. We also expect to generally grant stock options and RSUs to executive officers in the form of initial grants upon new hire and on an annual basis in subsequent years. None of our named executive officers is currently party to an employment agreement that provides for an automatic equity award.

Any initial equity awards granted to executive officers in connection with the commencement of their employment, or new hire awards, are generally granted on the first day of the first or second calendar month following the date of such new hires' start date of regular employment depending upon the timing of such start date, and any annual equity awards granted to executive officers, or annual awards, are generally granted in the first quarter of the year following the applicable performance period. All stock options granted to our executive officers will: have an exercise price equal to the closing price of our common stock as reported on the Nasdaq Global Select Market on the date of grant; have time-based vesting; and expire ten years after the date of grant. New hire stock option awards vest as to 25% of the shares underlying the option on the first anniversary of the grant date and as to an additional 1/48th of the shares underlying the option monthly thereafter. Annual stock option awards vest monthly as to 1/48th of the shares underlying the option over four years, beginning on the one-month anniversary of the grant date. Upon a termination of employment (except due to death or disability), vesting for stock options granted to executive officers will generally cease and exercise rights will cease three months thereafter. Each RSU granted to our executive officers with time-based vesting will entitle the executive officer to one share of our common stock if and when the RSU vests. New hire RSU awards and any annual RSU awards vest as to 25% of the shares underlying the RSU award on the first anniversary of the grant date and as to an additional 25% of the shares

underlying the RSU award annually thereafter. Except as described above, vesting for all stock options and RSUs is subject to the executive officer's continued employment or continued service as an employee, consultant or director with the company or any of its affiliates, as applicable, and will cease upon termination of employment or service relationship, as applicable (except due to death or disability). In specified termination and change-in-control circumstances, equity awards held by our named executive officers are subject to accelerated vesting. See "-Employment, Severance and Change-in-Control Arrangements" below for further information.

Performance-Based Restricted Stock Unit Program

Beginning in 2023, we introduced a PSU program for the members of our executive team, including our chief executive officer and other named executive officers. We adopted our PSU program to offer a new equity vehicle to help further align our executive officers' interests with those of our stockholders, encourage long-term performance, and create an additional retention tool and incentive for our named executive officers. Consistent with our pay-for-performance philosophy, the number of awardable PSUs can increase or decrease depending on the company's performance, and ranges from 0% - 200% of the PSU target. Therefore, there is no guarantee that PSUs will vest, reinforcing the significant performance-based nature of these

The PSUs granted to our named executive officers in 2023 have a performance cycle of three calendar years and may be awarded contingent upon the performance of the company's relative total stockholder return, or rTSR, measured against the companies comprising the Standard & Poor's Biotech Industry Select Index, or the S&P Biotech Index, as of the first day of the performance cycle and that remain publicly traded for the duration of that cycle. For purposes of these PSU awards, the company rTSR is based on the total percentage return per share based on a 20-trading day average stock price beginning on the first trading day of the performance cycle and a 20-trading day average stock price ending on the last day of the performance cycle. The actual number of PSUs that can be earned is based on the company's rTSR performance as compared against the companies in the S&P Biotech Index as follows (with the percentage determined by linear interpolation for performance between the 25th and 100th percentiles):

| Company Relative Performance | Payout Percentage Relative to Target |
|------------------------------|--------------------------------------|
| <25 th percentile | 0% |
| 25 th percentile | 50% |
| 50 th percentile | 100% |
| 75 th percentile | 150% |
| 100 th percentile | 200% |

If the company's rTSR is negative over the performance period, the payout will not exceed 100% of the target number even if the percentile rank exceeds the 50th percentile as compared to the S&P Biotech Index companies.

Following the close of the three-year performance cycle, the board of directors or the compensation committee will determine and certify the number of PSUs that are awardable to each participating executive officer based on the above chart, known as the administrator determination. Awardable PSUs will vest on the third anniversary of the grant date contingent on the executive officer's continued service relationship through such date, or the grant vesting date. The three-year performance cycle and vesting period serve as additional retention tools and incentives for long-term sustained stock price performance to support long-term alignment with our stockholders.

In the event the executive officer's service relationship ends due to death or disability prior to the administrator determination, the PSU award shall immediately vest and become payable in the amount of the target award; if such termination occurs after the administrator determination, the grant will vest and become payable in the amount of the previously certified awardable PSUs. If a sale event of the company (as defined in the PSU award agreement) occurs prior to the administrator determination, the board of directors or compensation committee will determine the number of awardable PSUs to be the higher of the target or actual award, multiplied by the payout percentage in the above chart based on the company's rTSR over a shortened performance cycle ending on the sale event date and using the sale price. However, such awardable PSUs will not vest until the grant vesting date, contingent on the executive officer's continued service relationship. If the executive officer's service relationship terminates without cause or for good reason (as such terms are defined in the PSU award agreement) within one year after a change in control event and prior to the grant vesting date, the outstanding awardable PSUs will immediately vest and become payable provided the executive officer signs a separation agreement with a release of claims that becomes effective and enforceable.

Equity Awards to Executive Officers

In determining the size of the equity awards to our named executive officers, our compensation committee, with assistance from Aon, considers our company performance, individual performance, the potential for enhancing the creation of value for our stockholders, the company's broader organizational equity needs and overall dilution, as well as industry and peer group benchmark data. We evaluate our equity award program on an annual basis to ensure that it appropriately links to our longterm performance by aligning the interests of our executives and our stockholders, remains competitive with industry and peer benchmarks and is consistent with our overall equity needs and dilution levels.

In February 2023, our compensation committee granted stock options, RSUs and PSUs to our named executive officers in the amounts set forth in the table below.

| | | RSU Stock | PSU Stock |
|--------------------------------|-------------------------|-----------------|-----------------|
| Name | Option Award (# shares) | Unit (# shares) | Unit (# shares) |
| Kathryn Haviland, M.B.A. | 80,000 | 40,000 | 20,700 |
| Michael Landsittel, M.B.A. | 25,000 | 12,500 | 2,700 |
| Christina Rossi, M.B.A. | 30,000 | 15,000 | 5,400 |
| Fouad Namouni, M.D. | 30,000 | 15,000 | 5,400 |
| Percy H. Carter, M.B.A., Ph.D. | 25,000 | 12,500 | 2,700 |

Health and Welfare Benefits

Our named executive officers are eligible to participate in all of our employee benefit plans, including our medical, dental, vision, life and disability insurance plans and commuting benefits plan, in each case, on the same basis as other employees.

401(k) Plan

We maintain a 401(k) plan that is intended to qualify under Section 401(k) of the Internal Revenue Code. In general, all of our employees, including our named executive officers, are eligible to participate in the 401(k) plan. Under the 401(k) plan. employees may elect to defer their current compensation up to the statutorily prescribed annual limit. We currently match 100% of the first 2%, and 50% of the next 4% of compensation contributed by an employee to the plan. Matching contributions are 100% vested immediately. Matching contributions made for each of our named executive officers in 2023 are included in the "2023 Summary Compensation Table" below.

Employee Stock Purchase Plan

Pursuant to our 2015 ESPP, employees, including our named executive officers, have an opportunity to purchase our common stock at a discount on a tax-qualified basis through payroll deductions. Our 2015 ESPP is designed to qualify as an "employee stock purchase plan" under Section 423 of the Internal Revenue Code. The purpose of our 2015 ESPP is to encourage our employees, including our named executive officers, to become our stockholders and better align their interests with those of our other stockholders.

Perquisites

We do not provide perguisites or personal benefits to our named executive officers other than in connection with travel reimbursement and relocation assistance for new hires on a limited basis.

No Tax Gross-ups

We do not provide for any tax gross-up payments to our named executive officers other than in connection with the tax protection of certain relocation expenses.

OTHER COMPENSATION POLICIES AND PRACTICES

Clawback Policy

In 2023, we updated our clawback policy for the recoupment of incentive compensation paid after the policy's effective date to our current and former executive officers, whom we refer to as covered persons. The policy provides that if we are required to prepare a financial restatement, we are entitled to recover reasonably promptly all erroneously awarded compensation received by such covered person after the policy's effective date and during the three completed fiscal years immediately preceding the restatement date. For purposes of this policy, erroneously awarded compensation means incentive compensation, as defined in the policy, received by a covered

person in excess of the amount that otherwise would have been received had the compensation been determined based on restated amounts in the financial restatement, without regard to any taxes paid. Our 2019 clawback policy remains in effect with respect to incentive compensation received prior to the effective date of our updated policy.

Stock Ownership Guidelines

In December 2020, our board of directors adopted stock ownership guidelines designed to ensure that our directors and executive officers are focused on both short- and long-term objectives and to better align their interests with other stockholders.

The guidelines provide that each of our chief executive officer and other named executive officers should achieve the ownership level associated with their position within five years from the date of the appointment as the chief executive officer or designation as a named executive officer, as the case may be. Each non-employee director is required to achieve the ownership level required for non-employee directors within five years from the date of their initial election to our board. The guidelines are determined in comparison to base salary as follows.

| Named Executive Officer | Applicable Multiple |
|--------------------------------|-------------------------|
| Chief Executive Officer | 3x base salary |
| Other named executive officers | 1x base salary |
| Non-employee directors | 3x annual cash retainer |

When determining stock ownership levels, for 2022 we included shares beneficially owned, shares underlying restricted stock and RSUs (whether or not vested) and shares underlying "in-the-money" vested stock option awards. In April 2023, we amended and restated our stock ownership guidelines, eliminating shares underlying vested and unexercised "in-the-money" stock option awards from the calculation of requisite stock ownership levels for the covered parties. Unvested and unearned PSUs were also excluded from the calculation of such requisite stock ownership levels. As of December 31, 2023, our chief executive officer and other named executive officers and our non-employee directors had each satisfied the requirements of our stock ownership guidelines in effect as of that date (taking into account the April 2023 amendment and restatement of our stock ownership guidelines).

Insider Trading Policy

In 2024, the board of directors approved an amended and restated insider trading policy which can be found as Exhibit 19.1 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023. The policy expressly prohibits purchasing or selling any company securities (including, without limitation, a gift, loan, pledge or hedge, contribution to a trust, or any other sale or transfer, regardless of how the securities are held), while aware of material, non-public information concerning the company. The policy also includes pre-clearance procedures for our directors and certain employees, and disallows transactions designed to hedge or offset any decrease in the market value of the company's common stock.

Anti-Hedging and Pledging Policy

Our insider trading policy expressly prohibits all of our directors and employees, including our named executive officers, from engaging in speculative transactions in company common stock, including buying our securities on margin, borrowing against our securities held in a margin account, engaging in short sales of our securities, buying or selling derivatives on our securities or any other hedging transactions. Our insider trading policy prohibits all of our directors and employees, including our named executive officers, from pledging our securities as collateral for a loan.

TAX AND ACCOUNTING CONSIDERATIONS

We account for equity compensation paid to our employees under the rules of the Financial Accounting Standards Board Accounting Standards Codification Topic 718, or FASB ASC Topic 718, which rules require us to estimate and record an expense over the service period of any such award. Accounting rules also require us to record cash compensation as an expense at the time the obligation is accrued. To date, these accounting requirements have not impacted our executive compensation programs and practices.

Prior to January 1, 2018, when the Tax Cuts and Jobs Act of 2017, or the Tax Act, became effective, Section 162(m) of the Internal Revenue Code, or Section 162(m), generally limited to \$1 million the deduction that a public company could claim in any tax year with respect to compensation paid to each of its chief executive officer and three other named executive officers whose compensation was required to be disclosed in the proxy statement

(other than the chief financial officer), unless such compensation was performance-based as determined under the Section 162(m) regulations. Under the Tax Act, the performance-based compensation exception has been repealed, subject to certain transition rules. In addition, the deduction limitation now applies to anyone serving as the chief executive officer, the chief financial officer, and the top three other most highly compensated officers, and once an executive becomes a "covered employee" under Section 162(m), the individual will remain a "covered employee" forever (even after leaving the company, including after death). The new rules generally apply to taxable years beginning after December 31, 2017 but do not apply to compensation paid pursuant to a written binding contract in effect on November 2, 2017 that is not modified in any material respect after that date. As a result, for fiscal years beginning after December 31, 2017, all compensation in excess of \$1 million paid to the specified executives will not be deductible, subject to the transition relief. On March 11, 2021, The American Rescue Plan Act of 2021, or ARPA, was signed into law to assist in the economic and health recovery brought on by the COVID-19 pandemic. Beginning on or after December 31, 2026, the ARPA expands the applicability of Section 162(m) to also include the next five highest paid corporate officers so that the total number of covered employees subject to the \$1 million deduction limitation will be at least 10. In designing our executive compensation program and determining the compensation of our executive officers, including our named executive officers, our compensation committee considers a variety of factors, including the potential impact of the Section 162(m) deduction limit. However, to maintain flexibility to compensate our executive officers in a manner designed to promote our short-term and long-term corporate goals, our compensation committee has not adopted a policy that all compensation must be deductible. Our compensation committee believes that our stockholders' interests are best served if its discretion and flexibility in awarding compensation is not restricted, even though some compensation awards may result in non-deductible compensation expense.

Blueprint Medicines Proxy Statement 2024 | 49

Report of the Compensation Committee of the **Board of Directors**

The compensation committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with our management. Based on this review and discussion, the compensation committee recommended to our board of directors that the Compensation Discussion and Analysis be included in this proxy statement.

This report of the compensation committee is not "soliciting material," shall not be deemed "filed" with the SEC and shall not be incorporated by reference by any general statement incorporating by reference this proxy statement into any filing under the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing, except to the extent that we specifically incorporate this information by reference, and shall not otherwise be deemed filed under such acts.

By the compensation committee of the board of directors of Blueprint Medicines Corporation.

Lynn Seely, M.D. (chair)

Habib Dable, M.B.A.

Mark Goldberg, M.D.

Blueprint Medicines Proxy Statement 2024 | 50

2023 SUMMARY COMPENSATION TABLE

The following table sets forth information regarding total compensation, for service rendered in all capacities, earned by or paid to each of our named executive officers during the years indicated.

| Name and Principal Position | Year | Salary (\$) | Stock Awards (\$) ⁽¹⁾ | Option Awards (\$) ⁽¹⁾ | Non-Equity Incentive Plan Compensation (\$) ⁽²⁾ | All Other Compensatio | n Total (\$) |
|---|--------------|--------------------|--|---|---|--------------------------|--------------------------------|
| Kathryn Haviland, M.B.A. | 2023 | 782,250 | 2,953,924 | 1,962,968 | 719,670 | 13,200 | (3) 6,432,012 |
| President and Chief Executive Officer | 2022 | 700,976 | 2,452,400 | 2,597,688 | 454,430 | 12,200 | (3) 6,217,694 |
| | 2021 | 501,277 | 1,307,898 | 1,412,613 | 273,509 | 11,600 | (3) 3,506,897 |
| Michael Landsittel, M.B.A. Chief Financial Officer | 2023 2022 | 551,532 513,300 | 699,539 766,375 | 613,428 811,778 | 317,131 259,858 | 13,200 12,200 | (3) 2,194,830 (3) 2,363,511 |
| | 2021 | 435,000 | 1,307,898 | 1,412,613 | 232,453 | 11,600 | (3) 3,399,564 |
| Christina Rossi, M.B.A. | 2023 | 630,575 | 967,578 | 736,113 | 458,743 | 13,200 | (3) 2,806,209 |
| Chief Operating Officer | 2022 | 556,430 | 919,650 | 974,133 | 306,587 | 12,200 | (3) 2,769,000 |
| | 2021 | 465,127 | 1,307,898 | 1,412,613 | 248,552 | 11,600 | (3) 3,445,790 |
| Fouad Namouni, M.D. | 2023 | 642,879 | 967,578 | 736,113 | 453,230 | 1,978 | (3) 2,801,778 |
| President, Research and Development | 2022 | 583,694 | 919,650 | 974,133 | 332,705 | - | 2,810,182 |
| | 2021 | 555,899 | 1,307,898 | 1,412,613 | 300,185 | 130,437 | (4) 3,707,032 |
| Percy H. Carter, M.B.A., Ph.D. | 2023 | 592,567 | 699,539 | 613,428 | 340,726 | 53,567 | (5) 2,299,827 |
| Chief Scientific Officer | 2022 | 567,050 | 536,463 | 568,244 | 269,348 | 51,638 | (6) 1,992,743 |
| | 2021 | 344,808 (7) | 1,947,522 | 1,883,325 | 182,221 | 19,650 | (8) 4,377,526 |

These amounts represent the aggregate grant date fair value of stock option awards, RSU awards and PSU awards granted to our named executive officers in 2023, 2022 and 2021, as applicable, computed in accordance with FASB ASC Topic 718. Such aggregate grant date fair values do not take into account any estimated forfeitures related to service-based vesting conditions. See Note 13 to the audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023 regarding assumptions underlying the valuation of equity awards. These amounts reported may not represent the amounts that the named executive officers will actually realize from the awards. Whether, and to what extent, value is realized will depend on the named executive officers continued service, company performance and stock price changes. The aggregate grant date fair value of the 2023 PSU awards at the maximum levels of achievement are as follows for Ms. Haviland, Mr. Landsittel, Ms. Rossi, and Dr. Namouni and Dr. Carter: \$2,455,848; \$320,328; \$640,656; \$640,656; and \$320,328, respectively.

Amounts represent awards to our named executive officers under our executive bonus plan, which were earned for performance in 2023, 2022 and 2021 and paid in each respective following year. See "Annual Performance-Based Cash Incentives" for a description of that program.

Amount represents the dollar value of matching contributions made under our 401(k) plan.

Amount represents the reimbursements for expenses incurred in connection with Dr. Namouni's relocation to the Cambridge, MA area after joining us, including \$36,951 related to a tax gross-up, consistent with our relocation assistance practices.

Amount represents the dollar value of matching contributions made under our 401(k) plan equal to \$13,200 and travel reimbursement related to travel to the corporate headquarters equal to \$40,387

⁽⁵⁾

Amount represents the collar value of maching contributions made under our 401(k) plan equal to \$10,200 and travel reinibus entert related to travel to the corporate headquarters equal to \$40,367.

Amount represents the dollar value of matching contributions made under our 401(k) plan equal to \$12,200 and travel reinibus entert related to travel to the corporate headquarters equal to \$39,438.

Dr. Carter joined the company as our chief scientific officer in May 2021. Amount represents the salary actually paid to Dr. Carter for his services in 2021 and does not represent Dr. Carter's annualized base salary. His annualized base salary was \$550,000 for 2021.

Amount represents the salary actually paid to Dr. Carter for his services in 2021 and does not represent Dr. Carter's annualized base salary. His annualized base salary was \$550,000 for 2021.

Amount represents the salary actually paid to Dr. Carter for his services in 2021 and does not represent be dollar value of matching contributions made under our 401(k) plan equal to \$2,538 and travel reimbursement related to travel to the corporate headquarters equal to \$17,111. (7)

GRANTS OF PLAN-BASED AWARDS FOR FISCAL YEAR 2023

The following table sets forth information concerning each grant of an award made to a named executive officer during the fiscal year ended December 31, 2023 under any plan, contract, authorization or arrangement pursuant to which cash, securities, similar instruments or other property may be received.

| | Grant | Date of Compensation Committee | Payouts Equity | ated Future s Under Non y Incentive Awards ⁽¹⁾ Maximum | Pay Equ | nated Fu outs Un ity Incen n Award | der ative s (3) | Shares of | All Other Option Awards: Number of Securities Underlying | Base Price of Option | e Stock and |
|--------------------------------|----------|--------------------------------------|-------------------|---|------------|---|-----------------------|-----------|---|----------------------|-------------|
| Name | Date | Approval | (\$) | (\$) ⁽²⁾ | (#) | (#) | (#) | | Options (#) | (\$) ⁽⁵⁾ | (\$)(6) |
| Kathryn Haviland, M.B.A. | | | 625,800 | 938,700 | | | | | | | |
| | 3/1/2023 | 2/15/2023 | | | 10,350 | 20,700 | 41,400 | 40,000 | 80,000 | 43.15 | 4,916,892 |
| Michael Landsittel, M.B.A. | | | 275,766 | 413,649 | | | | | | | |
| | 3/1/2023 | 2/15/2023 | | | 1,350 | 2,700 | 5,400 | 12,500 | 25,000 | 43.15 | 1,312,967 |
| Christina Rossi, M.B.A. | | | 378,345 | 567,518 | | | | | | | |
| | 3/1/2023 | 2/15/2023 | | | 2,700 | 5,400 | 10,800 | 15,000 | 30,000 | 43.15 | 1,703,691 |
| Fouad Namouni, M.D., M.B.A. | | | 385,727 | 578,591 | | | | | | | |
| | 3/1/2023 | 2/15/2023 | | | 2,700 | 5,400 | 10,800 | 15,000 | 30,000 | 43.15 | 1,703,691 |
| Percy H. Carter, M.B.A., Ph.D. | | | 296,284 | 444,425 | | | | | | | |
| | 3/1/2023 | 2/15/2023 | | | 1,350 | 2,700 | 5,400 | 12,500 | 25,000 | 43.15 | 1,312,967 |

Amounts shown in the "Target (\$)" and "Maximum (\$)" columns reflect the target and maximum amounts payable to each named executive officer under our 2023 annual executive bonus plan as described under "Annual Performance-Based Cash Incentives" above. Actual payments attributable to performance in 2023 are provided in the "2023 Summary Compensation Table." As there are no threshold amounts with respect to these performance-based cash payments, the column "Threshold (\$)" is inapplicable and therefore has been omitted from this table.

Our compensation committee determined to formally cap annual executive bonus plan payouts at 150% of the target payout level.

The amounts shown in the "Threshold (#)", "Target (#)" and "Maximum (#)" columns reflect the threshold, target and maximum payout levels associated with the PSU awards granted pursuant to our 2015 Plan, as described under "Equity Incentive Awards" above.

The amounts shown represent the amount of RSUs granted pursuant to our 2015 Plan.

The exercise price of these stock options is equal to the closing price of our common stock as reported on the Nasdaq Global Select Market on the grant date.

These amounts represent the aggregate grant date fair value of stock option awards, RSU awards and PSU awards granted to our named executive officers in 2023, computed in accordance with FASB ASC Topic 718. Such aggregate grant date fair values do not take into account any estimated forfeitures related to service-based vesting conditions. See Note 13 to the audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023 regarding assumptions underlying the valuation of equity awards. These amounts reported may not represent the amounts that the named executive officers will actually realize from the awards. Whether, and to what extent, value is realized will depend on the named executive officers' continued service, company performance and stock price changes. The aggregate grant date fair value of the 2023 PSUs at the maximum levels of achievement are as follows for Ms. Haviland, Mr. Landsittel, Ms. Rossi, and Dr. Namouni and Dr. Carter: \$2,455,848; \$320,328; \$640,656; \$640,656; and \$320,328, respectively.

OUTSTANDING EQUITY AWARDS AT 2023 FISCAL YEAR-END

The following table sets forth information concerning outstanding equity awards held by each of our named executive officers as of December 31, 2023. Unless otherwise specified, the equity awards are subject to certain acceleration of vesting provisions as set forth in the applicable named executive officer's employment agreement, as amended, and respective equity award agreements as described in further detail below under "Employment, Severance and Change in Control Arrangements."

| | | Option Av | vards | | Stock Awards | | | | |
|---------------------|-------------|---------------|----------|----------------|---------------------------|----------------|-----------------|-----------------|--|
| | | | | | Equity Incentive Plan Awa | | | | |
| | | | | | | | | Market or | |
| | | | | | | | Number of | Payout Value | |
| | Number of | Number of | | | Number of | Market Value | Unearned | of Unearned | |
| | Securities | Securities | | | Shares or | of Shares | Shares, Units | Shares, Units | |
| | Underlying | Underlying | Option | | Units of Stock | Units of Stock | or Other Rights | or Other Rights | |
| | Unexercised | Unexercised | Exercise | Option | That Have | That Have | That Have | That Have | |
| | Options (#) | Options (#) | Price | Expiration | Not Vested | Not Vested | Not Vested | Not Vested | |
| Name | Exercisable | Unexercisable | (\$) | Date | (#) | (\$)(1) | (#) | (\$)(3) | |
| Kathryn Haviland, | 2 (4) | _ | 16.28 | 2/1/2026 (5) | _ | _ | _ | _ | |
| M.B.A. | 591 (4) | _ | 36.05 | 2/16/2027 (5) | _ | _ | _ | _ | |
| | 39,000 (4) | _ | 81.44 | 2/16/2028 (5) | | | | | |
| | 32,500 (4) | _ | 86.60 | 3/1/2029 (5) | | _ | _ | _ | |
| | 26,718 (6) | 1,782 | 54.13 | 3/1/2030 (5) | 3,562 (7) | 328,559 (5) | _ | _ | |
| | 17,960 (8) | 8,165 | 100.13 | 3/1/2031 (5) | 6,530 (9) | 602,327 (5) | | | |
| | 35,000 (10) | 45,000 | 61.31 | 3/1/2032 (5) | 30,000 (11) | | | | |
| | 15,000 (12) | 65,000 | 43.15 | 3/1/2033 (5) | 40,000 (13) | | 20,700 (14) | 3,602,023 (5 | |
| Michael Landsittel, | 26,363 (4) | | 1.87 | 10/8/2024 (15) | | | | | |
| M.B.A. | 1,818 (4) | | 8.80 | 2/10/2025 (15) | | | | | |
| | 10,000 (4) | | 15.01 | 2/3/2026 (5) | | | | | |
| | 20,000 (4) | | 36.05 | 2/16/2027 (5) | | | | | |
| | 26,000 (4) | | 81.44 | 2/16/2028 (5) | | | | | |
| | 19,500 (4) | | 86.60 | 3/1/2029 (5) | | | | | |
| | 23,437 (6) | 1,563 | 54.13 | 3/1/2030 (5) | 3,125 (7) | 288,250 (5) | | | |
| | 17,960 (8) | 8,165 | 100.13 | 3/1/2031 (5) | 6,530 (9) | 602,327 (5) | | | |
| | 10,937 (10) | 14,063 | 61.31 | 3/1/2032 (5) | 9,375 (11) | | | | |
| | 4,687 (12) | 20,313 | 43.15 | 3/1/2032 (5) | 12,500 (13) | | 2,700 (14) | 469,829 (5 | |
| Christina Rossi, | 80,000 (4) | 20,515 | 65.75 | 11/1/2028 (5) | 12,300 (13) | 1,133,000 (3) | 2,700 (14) | 407,027 (3 | |
| M.B.A. | 6,500 (4) | | 86.60 | 3/1/2029 (5) | | | | | |
| M.D.A. | 26,718 (6) | 1,782 | 54.13 | 3/1/2030 (5) | 3,562 (7) | 328,559 (5) | | | |
| | 17,960 (8) | 8,165 | 100.13 | 3/1/2031 (5) | 6,530 (9) | 602,327 (5) | | | |
| | 13,125 (10) | 16,875 | 61.31 | 3/1/2032 (5) | 11,250 (11) | | | | |
| | 5,625 (12) | | 43.15 | 3/1/2032 (5) | 15,000 (13) | | 5,400 (14) | 939,658 (5 | |
| Fouad Namouni, | 51,458 (16) | | 93.93 | 10/1/2030 (17) | | | | 757,036 (3 | |
| M.D. | 17,960 (8) | 8,165 | 100.13 | 3/1/2031 (5) | 6,530 (9) | 602,327 (5) | , – | | |
| IVI.LD. | 13,125 (10) | 16,875 | 61.31 | 3/1/2031 (5) | 11,250 (11) | | | | |
| | 5,625 (12) | 24,375 | 43.15 | 3/1/2032 (3) | 15,000 (13) | | 5,400 (14) | 939,658 (5 | |
| Percy H. Carter, | 24,500 (12) | | 89.16 | 6/1/2031 (17) | | | | 939,038 (3 | |
| | | | | | | | <u> </u> | | |
| M.B.A., Ph.D. | 7,656 (10) | | 61.31 | 3/1/2032 (5) | 6,562 (11) | | 2 700 (14) | 460 920 65 | |
| | 4,687 (12) | 20,313 | 43.15 | 3/1/2033 (5) | 12,500 (13) | 1,153,000 (5) | 2,700 (14) | 469,829 (5 | |

⁽¹⁾ Amounts shown are based on a price of \$92.24 per share, which was the closing price of our common stock as reported on the Nasdaq Global Select Market on

December 29, 2023, the last trading day of the year.

Equity Incentive Plan Awards under the Stock Awards umbrella are performance-based awards.

Amounts shown are based on the rTSR measured on December 29, 2023 and the resulting expected payout of 189% of the Target PSU awards held by the named (3) executive officer on December 29, 2023.

⁽⁴⁾ This option was fully vested as of December 31, 2023.

This equity award was granted under our 2015 Plan. (5)

This option vested with respect to 1/48th of the shares underlying the option on April 1, 2020 and vests as to an additional 1/48th of the shares underlying the option each month thereafter through March 1, 2024, subject to continued employment through each applicable vesting date.

This RSU vests in four equal installments on each of March 1, 2021, 2022, 2023 and 2024, subject to continued employment through each applicable vesting date.

This option vested with respect to 1/48th of the shares underlying the option on April 1, 2021 and vests as to an additional 1/48th of the shares underlying the option each month thereafter through March 1, 2025, subject to continued employment through each applicable vesting date.

This RSU vests in four equal installments on each of March 1, 2022, 2023, 2024 and 2025, subject to continued employment through each applicable vesting date.

⁽¹⁰⁾ This option vested with respect to 1/48th of the shares underlying the option on April 1, 2022 and vests as to an additional 1/48th of the shares underlying the option each month thereafter through March 1, 2026, subject to continued employment through each applicable vesting date.

⁽¹¹⁾ This RSU vests in four equal installments on each of March 1, 2023, 2024, 2025 and 2026, subject to continued employment through each applicable vesting date.

- (12) This option vested with respect to 1/48th of the shares underlying the option on April 1, 2023 and vests as to an additional 1/48th of the shares underlying the option each month thereafter through March 1, 2027, subject to a continued service relationship through each applicable vesting date.
- (13) This RSU vests in four equal installments on each of March 1, 2024, 2025, 2026 and 2027, subject to a continued service relationship through each applicable vesting
- This PSU vests on March 1, 2026, subject to a continued service relationship through the vesting date. The number of PSUs granted represents the target number of (14)units that are eligible to be earned based on the achievement of cumulative three-year performance measures. The actual number of shares awardable ranges between zero and 200.0% of the target number of PSUs granted.
- (15) This equity award was granted under our 2011 Plan (as defined below under "Securities Authorized For Issuance Under Equity Compensation Plans"), which was replaced by the 2015 Plan.
- (16) This option vested with respect to 25% of the shares underlying the option on October 1, 2021 and vests to an additional 1/48th of the shares underlying the option each month thereafter through October 1, 2024, subject to continued employment through each applicable vesting date.
- (17) This equity award was granted under our 2020 Plan.
- This RSU vests in four equal installments on each of October 1, 2021, 2022, 2023 and 2024, subject to continued employment through each applicable vesting date.
- (19) This option vested with respect to 25% of the shares underlying the option on June 1, 2022 and vests to an additional 1/48th of the shares underlying the option e month thereafter through June 1, 2025, subject to continued employment through each applicable vesting date.
 (20) This RSU vests in four equal installments on each of June 1, 2022, 2023, 2024 and 2025, subject to continued employment through each applicable vesting date.

OPTION EXERCISES AND STOCK VESTED IN 2023

The following table sets forth information concerning option exercises and the vesting of RSU/PSU awards for each of our named executive officers during the fiscal year ended December 31, 2023:

| | Option Aw | ards | Stock Awards | | |
|--------------------------------|----------------------|---------------------|---------------------|---------------------|--|
| | Number of Shares | Value Realized | Number of Shares | Value Realized | |
| | Acquired on Exercise | on Exercise | Acquired on Vesting | on Vesting | |
| | (#) | (\$) ⁽¹⁾ | (#) | (\$) ⁽²⁾ | |
| Kathryn Haviland, M.B.A. | _ | _ | 19,015 | 820,497 | |
| Michael Landsittel, M.B.A. | _ | _ | 10,828 | 467,229 | |
| Christina Rossi, M.B.A. | _ | _ | 11,015 | 475,297 | |
| Fouad Namouni, M.D. | _ | _ | 15,141 | 710,778 | |
| Percy H. Carter, M.B.A., Ph.D. | _ | _ | 7,649 | 404,542 | |

- (1) There were no option exercises by the named executive officers during the year ended December 31, 2023.
- The value realized upon vesting of RSUs is calculated by multiplying the number of RSUs vested by the closing price market price of a share of our common stock as reported on the Nasdaq Global Select Market on the vest date.

EMPLOYMENT, SEVERANCE AND CHANGE-IN-CONTROL ARRANGEMENTS

We have entered into at-will employment agreements, as amended, with each of our named executive officers in connection with their employment with us. Such employment agreements established the named executive officer's title, initial compensation arrangements and eligibility to participate in the employee benefit plans generally available to full-time employees, subject to the terms of those plans. We have also agreed under the employment agreements to provide severance benefits upon an involuntary or constructive termination, as we believe such post-employment compensation protections are appropriate in light of similar benefits available to executive officers at companies in our peer group. The employment agreements further provide change-in-control payments and benefits, which we believe are reasonable and competitive and are an important part of an executive compensation program to attract and retain senior executives. We also believe such payments and benefits are in the best interests of our stockholders because they incentivize senior executives to continue to strive to achieve stockholder value in connection with change-in-control situations, particularly where the possibility of a change-in-control and the related uncertainty may lead to the departure or distraction of senior executives to the detriment of our company and our stockholders.

Kathryn Haviland, Chief Executive Officer

On April 4, 2022, Ms. Haviland became our president and chief executive officer. In connection with Ms. Haviland's transition into the role of our president and chief executive officer, on January 4, 2022, we entered into an amended and restated employment agreement with her, effective as of April 4, 2022, which replaced each prior employment agreement entered into by the company and Ms. Haviland, as later amended by the parties effective September 23, 2022.

Pursuant to the amended and restated employment agreement, if Ms. Haviland's employment is terminated by us without cause or by Ms. Haviland for good reason (each term as defined in her employment agreement), and

subject to Ms. Haviland's execution of a release of potential claims against us, Ms. Haviland will be entitled to receive: (i) severance in an amount equal to one (1) time Ms. Haviland's annualized base salary then in effect, payable over a 12-month period and (ii) a monthly cash payment for medical and dental benefits for 12 months or Ms. Haviland's COBRA health continuation period, whichever ends earlier. Ms. Haviland's change-in-control payments and benefits were revised pursuant to her amended and restated employment agreement to provide that in the event that Ms. Haviland's employment is terminated by us without cause or by Ms. Haviland for good reason, in either case within 12 months following the occurrence of a sale event (as defined in Ms. Haviland's employment agreement), in lieu of the severance payments and benefits described in the preceding sentence and subject to Ms. Haviland's execution of a release of potential claims against us, she will be entitled to receive: (i) a lump sum in cash in an amount equal to the sum of (A) two (2) times her base salary then in effect (or in effect immediately prior to the sale event, if higher) plus (B) two (2) times her target annual incentive compensation then in effect (or in effect immediately prior to the sale event, if higher), (ii) a monthly cash payment for medical and dental benefits for 24 months or Ms. Haviland's COBRA health continuation period, whichever ends earlier, and (iii) full and immediate vesting and exercisability of all time-based stock options and other time-based stock-based awards held by Ms. Haviland.

If any payments and benefits to be paid or provided to Ms. Haviland, whether pursuant to the terms of her amended employment agreement or otherwise, would be subject to "golden parachute" excise taxes under the Code, the payments and benefits will be reduced to the extent necessary to avoid such excise taxes, but only if such a reduction of pay or benefits would result in a greater after-tax benefit to Ms. Haviland.

Named Executive Officers Other Than Chief Executive Officer

The employment agreements, as amended, with our named executive officers, other than Ms. Haviland, provide that in the event the executive's employment is terminated by us without cause or by the executive for good reason (as such terms are defined in the executive's employment agreement), and subject to the executive's execution of a release of potential claims against us, the executive will be entitled to receive: (i) severance in an amount equal to one (1) time the executive's annualized base salary then in effect, payable over a 12-month period and (ii) a monthly cash payment for medical and dental benefits for 12 months or the executive's COBRA health continuation period, whichever ends earlier. If the executive's employment is terminated by us without cause or by the executive for good reason, in either case within 12 months following the occurrence of a sale event (each term as defined in the executive's existing employment agreement), subject to the executive's execution of a release of potential claims against us, the executive will be entitled to receive: (i) a lump sum in cash in an amount equal to the sum of (A) one and one-half (1.5) times the executive's base salary then in effect (or in effect immediately prior to the sale event, if higher) plus (B) one and one-half (1.5) times the executive's target annual incentive compensation then in effect (or in effect immediately prior to the sale event, if higher), (ii) a monthly cash payment for medical and dental benefits for 18 months or the executive's COBRA health continuation period, whichever ends earlier, and (iii) full and immediate vesting and exercisability of all time-based stock options and other time-based stock-based awards held by the executive.

If any payment and benefits to be paid or provided to a named executive officer, whether pursuant to the terms of the employment agreement or otherwise, would be subject to "golden parachute" excise taxes under the Code, the payments and benefits will be reduced to the extent necessary to avoid such excise taxes, but only if such a reduction of pay or benefits would result in a greater after-tax benefit to the executive.

OTHER AGREEMENTS

Each of our named executive officers has entered into a standard form agreement with respect to confidential information and assignment of inventions. Among other things, this agreement obligates each named executive officer to refrain from disclosing any of our proprietary information received during the course of employment and to assign to us any inventions conceived or developed during the course of employment. Such agreement also provides that during the period of the named executive officer's employment and for 12 months thereafter, subject to specified terms and conditions and provisions required by law, the named executive officer will not compete with us and will not solicit our employees, consultants, customers or suppliers.

POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE-IN-CONTROL

The amount of compensation and benefits payable to each named executive officer under our employment agreements in various termination and/or change-in-control situations has been estimated in the table below, which assumes that such termination and/or change-in-control occurred on December 29, 2023, the last business day of the fiscal year ended December 31, 2023, and that no noncompetition-related payments will be made following any such termination. Such compensation and benefits amounts were calculated based on employment agreements, as amended, in effect on December 29, 2023. The value of the equity vesting acceleration was calculated based on the assumption that the change-in-control and/or the executive's employment termination occurred on December 29, 2023. For purposes of the following table, we have used \$92.24 per share, which was the closing price of our common stock as reported on the Nasdaq Global Select Market on December 29, 2023, the last trading day of the year 2023, to estimate the value of our common stock upon acceleration. The value of the option vesting acceleration was calculated by multiplying the number of unvested shares underlying stock options subject to vesting acceleration as of December 29, 2023 by the difference between the closing price of our common stock as reported on the Nasdaq Global Select Market on December 29, 2023 and the exercise price for such unvested stock options. The value of the RSU vesting acceleration was calculated by multiplying the number of unvested RSUs subject to vesting acceleration as of December 29, 2023 by the closing price of our common stock as reported on the Nasdag Global Select Market on December 29, 2023. The value of the PSU vesting acceleration was calculated by multiplying the number of unvested PSUs subject to vesting acceleration as of December 29, 2023 by the fair value of the PSUs as of December 29, 2023.

| | | Triggering Event | | | | | | | |
|---------------------|---|-----------------------------------|---|--|--|-----|--|------|--|
| Name | Benefit | Sale Event Without Termination of | Death or Disability Not In Connection with a Sale | Death or Disability In Connection with a Sale | Resignation for Good Reason or Termination Without Cause Before or More Than 12 Months Following a | | Resignation for Good Reason or Termination Without Cause Within 12 Months Following a | | |
| Kathryn Haviland. | | Employment (\$) | Event (\$) | Event (\$) | Sale Event (\$) 782,250 | (1) | Sale Event (\$) 1,564,500 | (2) | |
| M.B.A. | Severance payments Cash incentive payments | - | | | 762,230 | (-) | 1,251,600 | (3) | |
| W.D.A. | Health care continuation | - | - | | 26.057 | (4) | 52,113 | (5) | |
| | Acceleration of equity award vesting | - | 13,947,666 (6 | 9) 15,640,321 | (7) | () | 15,640,321 | (7) | |
| | Total | - | 13,947,666 | 15,640,321 | 808,307 | | 18,508,534 | | |
| Michael Landsittel, | Severance payments | | 13,947,000 | 13,040,321 | | (1) | 827,298 | (8) | |
| M.B.A. | Cash incentive payments | - | | | 331,332 | (-) | 413,649 | (9) | |
| | Health care continuation | | | | 26.246 | (4) | 39.369 | (10) | |
| | Acceleration of equity award vesting | - | 4,649,075 (6 | 9 4,869,856 | (7) | () | 4,869,856 | (7) | |
| | Total | - | 4,649,075 | 4,869,856 | 577,778 | | 6,150,172 | | |
| Christina Rossi. | Severance payments | <u> </u> | 4,049,073 | 4,009,030 | | (1) | 945,863 | (8) | |
| M.B.A. | Cash incentive payments | <u> </u> | | | 030,373 | (-) | 567,518 | (9) | |
| M.D.A. | Health care continuation | <u> </u> | | | - | | 307,318 | (-) | |
| | Acceleration of equity award vesting | | 5.636.707 (6 | 6.078.269 | (7) | | 6.078.269 | (7) | |
| | Total | - | 5.636.707 | 6.078.269 | 630.575 | | 7.591.650 | | |
| Fouad Namouni. | | - | 3,030,707 | 0,078,209 | | (1) | 964.319 | (8) | |
| M.D. | Severance payments Cash incentive payments | - | - | | 042,879 | (1) | 578.591 | (9) | |
| M.D. | Health care continuation | - | - | | 26.246 | (4) | 39,369 | (10) | |
| | Acceleration of equity award vesting | - | 5.989.686 (6 | 6,431,248 | (7) | (.) | 6.431.248 | (7) | |
| | Total | - | 5,989,686 | 6.431.248 | 669.125 | | 8,013,527 | | |
| Danier II. Cantan | | - | 3,989,080 | 0,431,248 | | (1) | 888.851 | (8) | |
| Percy H. Carter, | Severance payments | - | - | | 372,301 | (1) | , | (9) | |
| M.B.A., Ph.D. | Cash incentive payments | - | - | | 26.246 | (4) | 444,425 | (10) | |
| | Health care continuation | - | 4 361 596 (6 | 1 4 502 277 | 26,246 | (1) | 39,369 | (7) | |
| | Acceleration of equity award vesting | - | 1,501,570 | 1,502,577 | * * | | 4,582,377 | (7) | |
| | Total | - | 4,361,596 | 4,582,377 | 618,813 | | 5,955,022 | | |

- (1) Represents continued base salary in an amount equal to one (1) time the named executive officer's annualized base salary in effect as of December 29, 2023.
- Represents a lump sum in cash in an amount equal to two (2) times Ms. Haviland's annualized base salary in effect as of December 29, 2023.
- (3) Represents a lump sum in cash in an amount equal to two (2) times Ms. Haviland's target annual incentive compensation in effect on December 29, 2023.
- Represents the aggregate of monthly cash payments for 12 months for continued medical and dental benefits for the named executive officer.
- Represents the aggregate of monthly cash payments for 24 months for continued medical and dental benefits for Ms. Haviland.
- Represents the acceleration of vesting of 100% of the unvested equity awards held by the named executive officer on December 29, 2023.

- (7) Represents the acceleration of vesting of (1) 100% of the unvested equity awards other than PSUs held by the named executive officer on December 29, 2023 and (2) 189% of the unvested Target PSUs held by the named executive officer on December 29, 2023 as a result of the rTSR measured on December 29, 2023.
- (8) Represents a lump sum in cash in an amount equal to one and one-half (1.5) times the named executive officer's annualized base salary in effect as of December 29, 2023
- (9) Represents a lump sum in cash in an amount equal to one-and-one half (1.5) times the named executive officer's target annual incentive compensation in effect on December 29, 2023.
- (10) Represents the aggregate of monthly cash payments for 18 months for continued medical and dental benefits for the named executive officer.

LIMITATION OF LIABILITY AND INDEMNIFICATION

As permitted by Delaware law, our amended and restated certificate of incorporation, or certificate of incorporation, provides that no director of our company shall be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to us or our stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) in respect of unlawful dividend payments or stock redemptions or repurchases, or (4) for any transaction from which the director derived an improper personal benefit. In addition, our certificate of incorporation provides that if Delaware law is amended to authorize the further elimination or limitation of the liability of directors, then the liability of a director of our company will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our certificate of incorporation also provides that any repeal or modification of such article by our stockholders or amendment to Delaware law will not adversely affect any right or protection existing at the time of such repeal or modification with respect to any acts or omissions occurring before such repeal or modification of a director serving at the time of such repeal or modification.

In addition, as permitted by Delaware law, our amended and restated bylaws, or bylaws, provide that we will indemnify each of our directors and officers and, in the discretion of our board of directors, certain employees, to the fullest extent permitted by Delaware law as the same may be amended (except that in the case of amendment, only to the extent that the amendment permits us to provide broader indemnification rights than the Delaware General Corporation Law permitted us to provide prior to such the amendment) against any and all expenses, judgments, penalties, fines and amounts reasonably paid in settlement that are incurred by the director, officer or such employee or on the director's, officer's or employee's behalf in connection with any threatened, pending or completed proceeding or any claim, issue or matter therein, to which such person is or is threatened to be made a party because such person is or was serving as a director, officer or employee of our company, or at our request as a director, partner, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of our company and, with respect to any criminal proceeding, had no reasonable cause to believe their conduct was unlawful. Our bylaws also provide for the advancement of expenses to each of our directors and, in the discretion of the board of directors, to certain officers and employees. In addition, our bylaws provide that the right of each of our directors and officers to indemnification and advancement of expenses is a contract right and will not be exclusive of any other right now possessed or hereafter acquired under any statute, provision of the certificate of incorporation or bylaws, agreement, vote of stockholders or otherwise. Furthermore, our bylaws authorize us to provide insurance for our directors, officers and employees against any liability, whether or not we would have the power to indemnify such person against such liability under Delaware law or the provisions of our bylaws.

We have entered into indemnification agreements with each of our directors and our executive officers. These agreements provide that we will indemnify each of our directors and such officers to the fullest extent permitted by law and the certificate of incorporation and bylaws.

We also maintain a general liability insurance policy, which covers certain liabilities of directors and officers of our company arising out of claims based on acts or omissions in their capacities as directors or officers.

Certain of our non-employee directors may, through their relationships with their employers, be insured and/or indemnified against certain liabilities incurred in their capacity as members of our board of directors.

We believe that these provisions and agreements are necessary to attract and retain qualified persons as directors and executive officers. Insofar as indemnification for liabilities arising under the Securities Act of 1933, or the Securities Act, may be permitted to directors, officers or persons controlling our company, we understand that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

None of our executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee, or other committee serving an equivalent function, of any entity that has one or more executive officers who serve as members of our board of directors or our compensation committee. None of the members of our compensation committee is, or ever has been, an officer or employee of our company.

Blueprint Medicines Proxy Statement 2024 $\mid 58$

CEO Pay Ratio Disclosure

As required by Section 953(b) of the Dodd-Frank Act and Item 402(u) of Regulation S-K, or Item 402(u), we are providing the following information about the relationship of the total annual compensation of our employees and the total annual compensation of Kathryn Haviland, our chief executive officer. We also included our 401(k) plan employer contributions in 2023 for Ms. Haviland, and the grant date fair value of stock options, RSUs and PSUs awarded in 2023 to Ms. Haviland. The pay ratio included in this information is a reasonable estimate calculated in a manner consistent with Item 402(u). The pay ratio reported by other companies may not be comparable to the pay ratio reported below, as other companies have different employee populations and compensation practices and may use different methodologies, exclusions, estimates and assumptions in calculating their own pay ratios.

PAY RATIO DISCLOSURE

For 2023, our last completed fiscal year:

- the total annual compensation of our median employee was \$327,235, as determined in accordance with Item 402; and
- the total annual compensation of our chief executive officer was \$6,432,012, as determined in accordance with Item 402 and as described above

Based on this information, for 2023, the ratio of the total annual compensation of Ms. Haviland to the total annual compensation of our median employee was approximately 20 to 1.

METHODOLOGY

To identify the median employee, as well as to determine the total annual compensation of our median employee, we took the following steps:

- We determined that, as of December 31, 2023, our global employee population consisted of 652 full-time, part-time and temporary employees, excluding our chief executive officer.
- To identify the "median employee" from our employee population, for each employee we compared the total amount of salary paid as of December 31, 2023, the bonus earned for 2023 performance, employer contributions in 2023 under our 401(k) plan for our U.S. employees and employer contributions in 2023 under any defined contribution plan, if any, for our non-U.S. employees, and the grant date fair value of stock options, RSUs and PSUs awarded in 2023 as reflected in our human resources, payroll and equity award systems. In identifying the median employee, we included employees in non-U.S. countries. For our non-U.S. employees, amounts were converted to U.S. dollars using the foreign exchange rates for the period of January 1, 2023 through December 31, 2023. We did not make any cost-ofliving adjustments and did not annualize compensation.

Pay Versus Performance

The following table has been prepared in accordance with the SEC's pay versus performance disclosure rules, and reports the compensation of our Principal Executive Officer, or PEO, and the average compensation of the other named executive officers, or non-PEO NEOs, as reported in the Summary Compensation Table, or SCT, for fiscal years 2023, 2022, 2021 and 2020, as well as their "compensation actually paid," or CAP, which is calculated pursuant to the recently adopted SEC rules and certain performance measures required by such rules.

The table and related disclosure also provide information on the total stockholder return, or TSR, of the company as well as of the Nasdaq Biotechnology Index, an independently prepared index that includes companies in the biotechnology industry, or the TSR peer group, on a cumulative basis over fiscal years 2023, 2022, 2021 and 2020. In addition, the company's total revenue, which we consider our most important measure to link CAP to company performance in 2023, has been included in this table as our company selected measure and is shown for the same four fiscal years. As a general matter, our compensation committee does not use CAP as a basis for making compensation decisions, but rather uses a comprehensive pay-for-performance framework to ensure that pay and performance are aligned to our overall business objectives and to stockholder interests. For a more detailed discussion of our compensation committee's methodology and decisions regarding the compensation awarded to our executive officers for 2023 see - the "Compensation Discussion and Analysis" section above. Moreover, the compensation committee did not consider the disclosure below when determining compensation for any of the fiscal years represented.

LIST OF THE MOST IMPORTANT FINANCIAL MEASURES FOR 2023 COMPENSATION

In accordance with the pay versus performance rules, we list below the financial measures that we consider the most important when linking 2023 CAP to the company's performance:

Most Important Financial Measures

- Total Revenues (including Product, Collaboration and Other Revenues)
- Operating Expenses

The two financial measures listed above are the only two financial performance measures considered by the company when linking 2023 CAP to company performance. We chose total revenues as our company selected measure for the pay versus performance table below, as it is the aggregate of the product, collaboration and other revenues outlined above and is a key component for our annual executive bonus plan that results in annual cash incentive payments to our PEO and non-PEO NEOs.

The following table sets forth the compensation for our PEO and the average compensation for our non-PEO NEOs, both as reported in the SCT and with certain adjustments to reflect the CAP to such individuals, as defined under SEC rules, for 2023.

| | | | | | | | | | | Company |
|----------|---------------------|---------------------|---------------------|-------------|---------------------|---------------------|--------------|---------------------|---------------|---------------|
| | | | | | Average | Average | Value of Ini | tial Fixed \$100 | | Selected |
| | SCT Total | CAP | SCT Total | CAP | SCT Total | CAP | Investm | ent Based on: | | Measure: |
| | PEO | PEO | PEO | PEO | Non-PEO | Non-PEO | | Peer Group | Net income | Total |
| | Haviland | Haviland | Albers | Albers | NEOs | NEOs | TSR | TSR | (loss) | Revenues |
| Year (1) | (\$) ⁽²⁾ | (\$) ⁽³⁾ | (\$) ⁽²⁾ | (\$)(4) | (\$) ⁽²⁾ | (\$) ⁽⁵⁾ | (\$)(6) | (\$) ⁽⁷⁾ | (\$ millions) | (\$ millions) |
| 2023 | 6,432,012 | 17,443,365 | N/A | N/A | 2,525,661 | 6,756,954 | 115 | 115 | (507) | 249 |
| 2022 | 6,217,694 | 1,110,115 | 1,594,102 | (9,751,962) | 2,571,437 | (1,713,167) | 55 | 111 | (558) | 204 |
| 2021 | N/A | N/A | 9,713,304 | 7,061,616 | 3,747,755 | 3,452,235 | 134 | 125 | (644) | 180 |
| 2020 | N/A | N/A | 6,344,667 | 14,864,113 | 3,348,422 | 5,488,406 | 140 | 126 | 314 | 794 |

PEO and non-PEO NEOs for the applicable years were as follows:

- 2023: Kathryn Haviland, M.B.A, served as the company's PEO for the entirety of 2023. The company's non-PEO NEOs for 2023 were: Michael Landsittel, M.B.A, Fouad Namouni, MD., Christina Rossi, M.B.A, and Percy H. Carter, M.B.A, Ph.D.
- 2022: Jeffrey W. Albers, M.B.A, served as the company's PEO through April 3, 2022 when Kathryn Haviland became the Company's PEO. The company's non-PEO NEOs for 2022 were: Michael Landsittel, M.B.A, Fouad Namouni, MD., Christina Rossi, M.B.A, and Tracey L. McCain, Esq.

- 2021: Jeffrey W. Albers, M.B.A, served as the company's PEO for the entirety of 2021. The company's non-PEO NEOs for 2021 were: Michael Landsittel, M.B.A, Percy H. Carter, M.B.A, Ph.D., Fouad Namouni, MD., and Kathryn Haviland, M.B.A.
 2020: Jeffrey W. Albers, M.B.A, served as the company's PEO for the entirety of 2020. The company's non-PEO NEOs for 2020 were: Michael Landsittel, M.B.A, Fouad Namouni, MD., Tracey L. McCain, Esq., and Kathryn Haviland, M.B.A.
 Amounts reported in this column represent (i) the total compensation reported in the SCT for the applicable year in which the NEO served as PEO in the case of Jeffrey W. Albers and Kathryn Haviland and (ii) the average of the total compensation reported in the SCT for the applicable year for the company's named executive officers other than the individual serving as PEO for all or a portion of such years.
- Amounts reported in this column are based on total compensation reported for Kathryn Haviland in the SCT for 2023 and 2022 since her PEO tenure began on April 4, 2022, and are adjusted as shown in the table below to reflect the CAP. Ms. Haviland's annual equity awards granted on March 1, 2022 are included in the CAP as they were granted to her in connection with her transition to our PEO. In response to the SEC Staff's C&DIs dated September 27, 2023, we updated our calculation of expected life for 2023 valuations to be in compliance with the new guidance. There were no adjustments from dividends, pension plans or awards that failed to meet applicable vesting conditions.

| | Hav | Hanc | <u> </u> |
|---|------------------|------|-------------|
| | 2023 | | 2022 |
| SCT - Total Compensation | \$ 6,432,012 | \$ | 6,217,694 |
| | (4,916,892) | | (5,050,088) |
| + Fair Value at FY-End of Outstanding and Unvested Awards Granted in the FY | 11,269,918 | | 3,014,690 |
| + Fair Value of Awards Granted during the FY that Vested During the FY | 498,686 | | 447,695 |
| + Change in Fair Value of Outstanding and Unvested Awards Granted in Prior FYs | 3,896,364 | | (2,376,915) |
| + Change in Fair Value of Awards Granted in Prior FYs that Vested During the FY | 263,278 | | (1,142,960) |
| = Compensation Actually Paid (CAP) | \$ 17,443,365 | \$ | 1,110,115 |

Amounts reported in this column are based on total compensation reported for Jeffrey W. Albers, M.B.A, in the SCT for the indicated fiscal years and adjusted as Amounts reported in this column are based on total compensation reported for Jeffrey W. Albers, M.B.A, in the SCT for the indicated fiscal years and adjusted as shown in the table below to reflect the CAP. Year 2022 includes compensation and changes in fair value through April 3, 2022, Mr. Albers' last day as our PEO. There were no adjustments from dividends, pension plans or awards that failed to meet applicable vesting conditions. The amounts are inclusive of an increase of \$80,636 in fair value that resulted from the following two modifications to Mr. Albers' awards under FASB ASC Topic 718: (1) in January 2022, when the company announced the transition of Mr. Albers' role from chief executive officer to executive chairman, the company recorded an accounting modification of Mr. Albers' unvested non-qualified stock option and RSU awards due to continued vesting after significant reduction in Mr. Albers' responsibilities; (2) in December 2022, the company recorded a modification of Mr. Albers' non-qualified stock option and RSU awards when the company and Mr. Albers entered into an Amendment Agreement, pursuant to which the parties amended the terms of each of the outstanding non-qualified stock option and RSU awards granted to Mr. Albers on provide, among other things, that such non-qualified options and RSU awards will: (i) continue to vest for as long as Mr. Albers continues to provide services to the company as an employee, member of our board of directors or consultant and (ii) with respect to such non-qualified stock options, unless Mr. Albers is terminated for cause, be exercisable until twelve (12) months following the date Mr. Albers ceases to provide services to the company or the applicable expiration date (as defined in the respective agreements), if earlier.

| | | Albers | |
|---|-------------------|-----------------|------------------|
| | 2022 | 2021 | 2020 |
| SCT - Total Compensation | \$ 1,594,102 | \$ 9,713,304 | \$ 6,344,667 |
| H Grant Date Fair Value of Option Awards and Stock Awards Granted in FY | (946,892) | (8,330,904) | (5,146,092) |
| + Fair Value at FY-End of Outstanding and Unvested Awards Granted in the FY | 544,544 | 7,762,198 | 10,547,747 |
| + Fair Value of Awards Granted during the FY that Vested During the FY | 83,931 | 720,892 | 827,136 |
| + Change in Fair Value of Outstanding and Unvested Awards Granted in Prior FYs | (7,407,649) | (1,108,581) | 2,923,579 |
| + Change in Fair Value of Awards Granted in Prior FYs that Vested During the FY | (3,700,634) | (1,695,294) | (632,923) |
| + Change in Fair Value of Awards Modified during the FY | 80,636 | - | - |
| = Compensation Actually Paid (CAP) | \$ (9,751,962) | \$ 7,061,616 | \$ 14,864,113 |

Amounts reported in this column are based on the average total compensation reported for the company's non-PEO NEOs in the SCT for the indicated fiscal year and adjusted as shown in the table below to reflect the CAP. In response to the SEC Staff's C&DIs dated September 27, 2023, we updated our calculation of expected life for 2023 valuations to be in compliance with the new guidance. There were no adjustments from dividends, pension plans or awards that failed to meet applicable vesting conditions

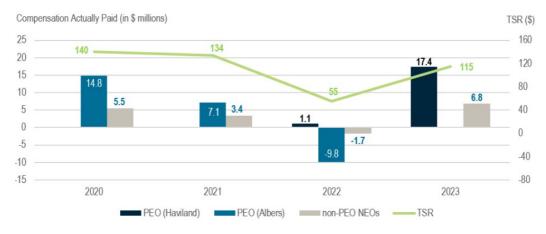
| | | Average of i | IOII-FEO NEOS | |
|---|--------------|----------------|---------------|--------------|
| | 2023 | 2022 | 2021 | 2020 |
| SCT - Total Compensation | \$ 2,525,661 | \$ 2,571,437 | \$ 3,747,755 | \$ 3,348,422 |
| □ Grant Date Fair Value of Option Awards and Stock Awards Granted in FY | (1,508,329) | (1,735,968) | (2,998,095) | (2,767,031) |
| + Fair Value at FY-End of Outstanding and Unvested Awards Granted in the FY | 3,383,091 | 1,036,305 | 3,051,119 | 4,356,342 |
| + Fair Value of Awards Granted during the FY that Vested During the FY | 171,419 | 153,884 | 176,550 | 188,381 |
| + Change in Fair Value of Outstanding and Unvested Awards Granted in Prior FYs | 1,971,041 | (2,575,263) | (295,932) | 494,425 |
| + Change in Fair Value of Awards Granted in Prior FYs that Vested During the FY | 214,071 | (1,163,562) | (229,162) | (132,133) |
| = Compensation Actually Paid (CAP) | \$ 6,756,954 | \$ (1,713,167) | \$ 3,452,235 | \$ 5,488,406 |

- Pursuant to rules of the SEC, the comparison of TSR assumes \$100 was invested in our common stock on December 31, 2019. Historic stock price performance is not necessarily indicative of future stock price performance.
- The TSR peer group consists of the Nasdaq Biotechnology Index

PAY VERSUS PERFORMANCE COMPARATIVE DISCLOSURE

The values calculated for CAP to our PEO and non-PEO NEOs show alignment between value being delivered through compensation and the financial performance measures included in the table above. The following illustrative charts reflect the relationships between PEO and average non-PEO NEO CAP compared to: (i) company TSR, (ii) net income, and (iii) total revenues. The final illustrative chart below reflects the relationship between the company's TSR and the TSR peer group.

PEO AND AVERAGE NON-PEO NEO COMPENSATION ACTUALLY PAID VS COMPANY TSR



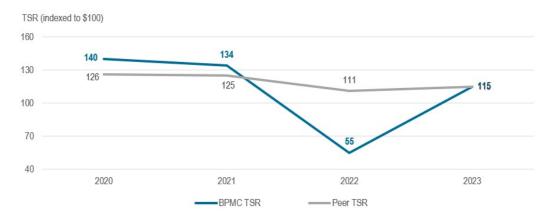
PEO AND AVERAGE NON-PEO NEO COMPENSATION ACTUALLY PAID VS NET INCOME



PEO AND AVERAGE NON-PEO NEO COMPENSATION ACTUALLY PAID VS TOTAL REVENUES



BLUEPRINT TSR VERSUS PEER GROUP TSR



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

The following table provides information about the securities authorized for issuance under our equity compensation plans as of December 31, 2023. As of December 31, 2023, we had three equity compensation plans: (i) our 2015 Plan, which replaced the company's 2011 Stock Option and Grant Plan, or the 2011 Plan, (ii) our 2015 ESPP, and (iii) our 2020 Plan. The 2011 Plan, 2015 Plan and the 2015 ESPP were approved by our stockholders.

EQUITY COMPENSATION PLAN INFORMATION

| Plan Category | Number of securities to be issued upon exercise of outstanding options, warrants and rights | Weighted average exercise price of outstanding options, warrants and rights ⁽¹⁾ | Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the first column) ⁽²⁾ |
|--|---|---|--|
| Equity compensation plans approved by security holders (3) | 7,888,195 (4) | | |
| Equity compensation plans not approved by security holders (6) | 929,775 | 75.91 | 1,376,416 |
| Total | 8,817,970 | \$ 66.48 | 9,873,809 |

- (1) The weighted average exercise price is calculated based solely on outstanding stock options.

- As of December 31, 2023, (i) 4,846,351 shares remained available for future issuance under our 2015 Plan, (ii) 3,651,042 shares remained available for future issuance under our 2020 Plan.
 Consists of the 2011 Plan (as replaced by the 2015 Plan), the 2015 Plan and the 2015 ESPP.
 Amount does not include any purchase rights accruing under the 2015 ESPP during the current purchase period, which commenced on December 1, 2023, because the purchase right (and therefore the number of shares to be purchased) will not be determined until the end of the purchase period on May 31, 2024. Subject to the number of shares remaining in the share reserve, the maximum number of shares purchase period, including the current purchase period, may not exceed 2,500 shares.
- Our 2015 Plan has an evergreen provision that allows for an annual increase in the number of shares available for issuance under the 2015 Plan to be added on the first day of each fiscal year in an amount equal to 4% of the number of shares of our common stock outstanding on the immediately preceding December 31 or such lesser amount determined by our board of directors or the compensation committee. Effective January 1, 2024, 2,445,889 additional shares were reserved for issuance under the 2015 Plan pursuant to this provision. Our 2015 ESPP has an evergreen provision that allows for an annual increase in the number of shares available for issuance under the 2015 ESPP to be added on the first day of each fiscal year in an amount equal to 1% of the total number of shares of our common stock outstanding on the immediately preceding December 31 or such lesser amount determined by our board of directors or the compensation committee. Effective January 1, 2024, 611,472 additional shares were reserved for issuance under the 2015 ESPP pursuant to this provision. The increases from January 1, 2024 have not been included in the 1440 and 1450 and been included in the table.
- Consists of the 2020 Plan. See Note 13 to the audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023 regarding the material terms of the 2020 Plan.



Our board of directors believes that stock-based incentive awards are a critical part of our talent strategy. Further, our equity program encourages and enables our executive officers and other employees, non-employee directors, and consultants of the company, to acquire a proprietary interest in the company, which helps encourage them to think and act like owners of the company. Our board of directors believes that providing such persons with a direct stake in the company assures a closer alignment of the interests of such individuals with those of the company and its stockholders, thereby inspiring their efforts on the company's behalf and strengthening their desire to remain with the company and contribute to our success.

On February 13, 2024, our board of directors adopted, subject to stockholder approval at the 2024 annual meeting of stockholders, the 2024 Plan. The 2024 Plan is designed to allow the company the flexibility to continue granting equity awards to our employees, including our newly hired and incumbent employees, executive officers, non-employee directors and consultants, at levels determined to be appropriate by our board of directors and/or the compensation committee. A copy of the 2024 Plan is attached as Annex A to this proxy statement and is incorporated herein by reference. If we receive stockholder approval for this proposal, the 2024 Plan will replace the 2015 Plan, which otherwise expires by its terms on April 6, 2025. Upon stockholder approval of the 2024 Plan, the 2015 Plan will be retired and no further awards may be granted under the 2015 Plan. The 2020 Plan will also be retired following our 2024 annual meeting of stockholders, provided that the 2024 Plan is approved.

We are asking you to approve the 2024 Plan, which will make 9,200,000 shares of our common stock available for the granting of awards under compensatory arrangements and incentives permitted by the 2024 Plan. If our stockholders do not approve the 2024 Plan, the company will lose its ability to grant equity as a compensation tool after April 6, 2025, except to the extent that shares are available for issuance pursuant to, and subject to the limitations of, our 2020 Plan.

KEY CONSIDERATIONS FOR APPROVAL OF THE 2024 PLAN

In designing the 2024 Plan, the company considered a variety of factors, including an appropriate request for a share pool reserve and several plan provisions in line with best practice. This was done to ensure the company has sufficient shares and flexibility to attract, reward and retain employees while balancing stockholder interests. Importantly, following the 2023 annual meeting of stockholders, we reached out to our top 30 stockholders representing approximately 86% of our outstanding shares in part to solicit general advice and feedback on the design of a future potential stock plan, and these stockholder insights have been incorporated into our 2024 Plan proposal.

Critical nature of equity compensation to company success. To continue to build on our company's success in serving patients around the world, we must recruit and retain highly-skilled talent and motivate high-performing individuals. Equity compensation is a key component of our compensation strategy and represents a significant element of the compensation granted to all employees. We believe it is necessary in helping to attract new talent based on the company's needs, further reinforces our pay for performance philosophy, and aligns the interests of all employees with those of our shareholders. Our ability to grant equity is arguably more important than ever given our competitive industry and geographic locations in which we

Appropriate share request pool and use of shares. We believe that the proposed 9,200,000 share reserve of the 2024 Plan is reasonable as we expect this share reserve to last approximately three years based on our current share price, recent burn rate history, and expected new-hire and annual grant practices. Stockholders will be asked to approve future increases in shares available for grant as, unlike our 2015 Plan, the 2024 Plan does not contain an automatic evergreen replenishment provision and is structured with a fixed share pool reserve.

Consolidated equity compensation plans. We are requesting that stockholders approve a new 2024 Plan that consolidates our existing equity compensation plans and governs the company's equity program going forward. As mentioned above, the 2015 Plan and the 2020 Plan, approved by our board of directors, will both be retired, provided the 2024 Plan is approved.

SUMMARY OF KEY FEATURES OF THE 2024 PLAN

The key features of the 2024 Plan are:

- Limited Incremental Dilution The maximum number of shares of common stock to be issued under the 2024 Plan is 9,200,000. This is comprised of approximately 5,300,000 shares currently available for grant under the 2015 Plan, 2,500,000 shares that would be replenished under the 2015 Plan as part of the evergreen feature in 2025, and 1,400,000 shares outstanding as of March 31, 2024 under the 2020 Plan currently in use for new hires in the United
- No Evergreen Feature It is important to note that the automatic evergreen replenishment provision is not included in the 2024 Plan:
- Director Compensation Limits The value of all awards awarded under the 2024 Plan and all other cash compensation paid by us to any non-employee director in any calendar year may not exceed \$750,000; provided, however, that such amount shall be \$1,000,000 for the calendar year in which the applicable non-employee director is initially elected or appointed to the board of directors;
- No Repricing Without Approval Stock options and stock appreciation rights will not be repriced in any manner without prior stockholder approval;
- Clawback Policy Awards to certain officers of the company may be subject to recoupment in the event we are required to prepare an accounting restatement;
- Variety of Equity Awards Available for Grant The award of stock options (both incentive and non-qualified options), stock appreciation rights, restricted stock, restricted stock units, unrestricted stock, performance-based restricted stock units, cash-based awards, and dividend equivalent rights is permitted to provide the company with needed flexibility;
- Recycling Feature Shares from the 2024 Plan and 2015 Plan that are forfeited, cancelled, held back upon exercise of a stock option or settlement of an award to cover the exercise price or tax withholding, reacquired by the company prior to vesting, or satisfied without the issuance of any stock or otherwise terminated (other than by exercise) will be added back to the reserved pool under the 2024 Plan. In the event the company repurchases shares of common stock on the open market, such shares will not be added to the reserved pool under the 2024 Plan;
- Dividends Subject to Vesting Any dividends and dividend equivalent rights payable with respect to any equity award are subject to the same vesting provisions as the underlying award;
- Double-Trigger Vesting Upon a Change-in-Control Upon a sale event of the company, outstanding awards are subject to "double-trigger" vesting according to the company's change-in-control plans. If, however, outstanding awards are not assumed, continued or substituted pursuant to the 2024 Plan, then awards with time-based conditions or restrictions will become fully vested (and if applicable, exercisable) and nonforfeitable upon the sale event and awards with performance-based conditions or restrictions will become fully vested and nonforfeitable upon the sale event, to the extent specified in the relevant award agreement;
- Administration by Independent Compensation Committee The 2024 Plan will be administered by the compensation committee, comprised entirely of independent directors, which is consistent with how the company has administered the 2015 Plan:
- Amendments To the extent required by the Nasdaq listing rules and other applicable laws, any material amendment to the 2024 Plan is subject to approval by our stockholders; and
- Term The term of the 2024 Plan will expire on June 12, 2034.

RATIONALE FOR APPROVING THE 2024 PLAN

Equity incentive awards are an important component of our executive and non-executive employees' compensation. The compensation committee and our board of directors believe that we must continue to offer a competitive equity compensation program in order to attract, retain and motivate the talented and qualified

employees necessary for our continued success as a company, which enables our ability to serve patients globally. Further, our compensation committee and board of directors believe that the 2024 Plan is critical to our ongoing effort to build stockholder value over the long-term. All employees are eligible to receive equity under the 2024 Plan, which helps encourage all employees to think and act like owners, thereby creating the ownership culture we believe is critical to our long-term success and stockholder value creation. The 2015 Plan will not be available after April 6, 2025. If the 2024 Plan is not approved by stockholders, our ability to attract, motivate and retain highly qualified talent would be materially curtailed. If our stockholders approve the 2024 Plan, we will be able to award grants from the 2024 Plan through June 12, 2034, subject to availability of shares

We manage our long-term stockholder dilution by limiting the number of equity incentive awards granted annually. The compensation committee monitors our annual burn rate, total dilution and equity expense in order to maximize stockholder value by granting only the number of equity incentive awards that it believes are necessary and appropriate to attract, reward and retain our employees. The compensation committee conducts extensive benchmarking in partnership with its outside, independent compensation consultant, Aon, in order to ensure our annual awards are aligned with market practices and our overall compensation philosophy.

Historical Burn Rate

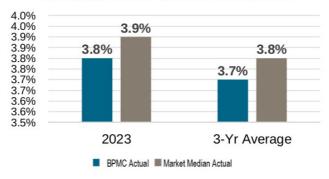
The following table sets forth information regarding historical awards granted for the fiscal years 2021 through 2023, including our grants to date in 2024 (which includes our annual as well as new hire grants), and the corresponding burn rate, which is defined as (i) the number of shares subject to equity-based awards granted in a fiscal year, divided by (ii) the weighted average number of shares of common stock outstanding for that year, for each of the last three fiscal years:

| Year | Stock Options | RSUs | PSUs | Total Equity Granted We | ighted Average Common Shares Outstan | ding Burn Rate |
|-----------------------------|---------------|-----------|--------|-------------------------|--------------------------------------|----------------|
| 2024 (as of March 31, 2024) | 968,539 | 911,766 | 90,000 | 1,970,305 | 61,580,461 | 3.22% |
| 2023 | 1,207,132 | 1,027,488 | 52,500 | 2,287,120 | 60,557,528 | 3.78% |
| 2022 | 1,192,170 | 956,717 | | 2,148,887 | 59,641,888 | 3.60% |
| 2021 | 1,125,514 | 999,504 | | 2,125,018 | 58,518,162 | 3.63% |
| 3-Year Average (2021-23) | | | | | | 3.67% |

We have thoughtfully managed our annual burn rate over the past three years, and plan to continue to do so in 2024 and beyond, helping to prolong our share pool reserve while being mindful of managing overall stockholder dilution.

Our judicious share usage during this period is further illustrated below, with the chart showing alignment to our 2023 peer group market median actual burn rate:

BURN RATE COMPARISON TO MARKET



While we have prudently managed our burn rate in line with competitive practices, we believe that our emphasis on stock options and our broad-based practice of granting equity to all employees has influenced our levels of dilution. We believe granting stock options is aligned with our pay for performance philosophy and further strengthens the ties between us and our stockholders, as further discussed herein. We believe that continuing to be inclusive in our equity granting practices provides unity of purpose for all our employees and ties our global "Blue Crew" together, helping us to achieve our business and strategic objectives in service of our patients.

The following table sets forth information regarding our outstanding equity compensation plans as of March 31, 2024. Other than as provided in the table below, there are no outstanding awards under our equity compensation plans as of March 31,

| Equity Metric | Number | Weighted Average Exercise Price | Weighted Average Remaining Term (in years) |
|---|--------------|------------------------------------|---|
| Total Stock Options Outstanding | 7,266,966 | 70.75 | 6.7 |
| Unvested Full Value Awards | 2,556,588(1) | - | - |
| Shares Available for Future Grant (2015 Plan) | 5,388,122 | _ | - |
| Shares Available for Future Grant (2020 Plan) | 1,372,658 | _ | _ |

⁽¹⁾ Amount includes unvested RSUs and unearned and unvested PSU awards.

Of the 7,266,966 options outstanding in the table above, approximately 3,900,000 are vested and in the money at \$90, the average stock price for March 2024. If those options were to be exercised, our overhang would decrease by approximately 6.3%. Additionally, approximately 750,000 vested options are underwater or out-of-the money at that same \$90 stock price, which is 1.2% of our total shares outstanding. If these vested options were exercised and our underwater options became inthe-money and were exercised, our overhang would decrease by almost 8%. As referred to herein, "overhang" is a measure of potential dilution partly due to stock options pending conversion into shares of common stock outstanding.

In summary, our compensation committee determined the requested size of the share reserve pool under the 2024 Plan after taking into consideration (i) the company's shares currently available for future grant, (ii) the projected new hire equity awards, annual equity awards, and other recognition awards to existing employees and (iii) an assessment of the magnitude of increase that our stockholders would likely find acceptable. Additionally, the compensation committee determined that this share request, and the resulting dilution, is in line with share requests from similarly situated biotechnology companies over the last two years and, therefore, believes the proposed reserve is reasonable and necessary for us to compete in a highly competitive market for talent. Further, the compensation committee believes that a request covering approximately three years allows the board of directors to better tie our long-term compensation strategy to our long-term growth strategy. Consequently, our board of directors believes that the requested share pool reserve under the 2024 Plan is reasonable and in line with our equity practice to date and, in addition, allows us to continue to provide broad-based incentives when hiring and retaining talent, so that we may continue to advance our business and strategic objectives for our company's long-term success.

SUMMARY OF THE 2024 PLAN

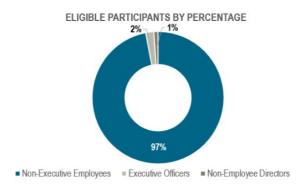
The following description of certain features of the 2024 Plan is intended to be a summary only. The summary is qualified in its entirety by the full text of the 2024 Plan, which is attached hereto as Annex A.

Administration. The 2024 Plan will be administered by the board of directors, the compensation committee of the board of directors or a similar committee performing the functions of the compensation committee, referred to herein as the administrator. The administrator of the 2024 Plan has full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, to make any combination of awards to participants, and to determine the specific terms and conditions of each award, subject to the provisions of the 2024 Plan. The administrator may delegate to a committee consisting of one or more officers of the company, including our chief executive officer, the authority to grant awards to employees who are not subject to the reporting and other provisions of Section 16 of the Exchange Act and are not members of the delegated committee, subject to certain limitations and guidelines.

Eligibility; 2024 Plan Limits. All employees (including executive officers), non-employee directors and consultants of the company and its affiliates are eligible to participate in the 2024 Plan, subject to the discretion of the

administrator. As of March 31, 2024, the chart and table below reflect the number of participants in the plan that would be eligible for equity awards under the 2024 Plan had it been effective on such date. Approximately 97% of eligible participants are non-executive employees, reflecting the inclusive nature and the importance of the equity program to help drive our ownership culture along with attracting, retaining and incentivizing our talented employees. There are certain limits on the number of awards that may be granted under the 2024 Plan. For example, no more than 9,200,000 shares of common stock may be granted in the form of incentive stock options.

Those 97% of eligible employees will also receive almost two-thirds of the awards typically granted annually under the 2015 Plan, based on historical granting practices, as summarized in the New Plan Benefits table below and illustrated in this pie chart, breaking down the number of shares granted by participant group in 2024:



Director Compensation Limit. The 2024 Plan provides that the value of all awards awarded under the 2024 Plan and all other cash compensation paid by the company to any non-employee director for service as a non-employee director in any calendar year shall not exceed \$750,000; provided, however, that such amount shall be \$1,000,000 for the calendar year in which the applicable non-employee director is initially elected or appointed to the Board.

Stock Options. The 2024 Plan permits the granting of (1) options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Code and (2) options that do not so qualify. Options granted under the 2024 Plan will be non-qualified options if they fail to qualify as incentive options or exceed the annual limit on incentive stock options. Incentive stock options may only be granted to employees of the company or any of its subsidiaries. Non-qualified options may be granted to any persons eligible to receive incentive options and to non-employee directors and consultants. The option exercise price of each option will be determined by the compensation committee. Except in the case of options (i) granted pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code, (ii) granted to individuals who are not subject to U.S. income tax on the date of grant or (iii) that are compliant with Section 409A of the Code, the exercise price of an option may not be less than 100% of the fair market value of the common stock on the date of grant. Fair market value for this purpose will be determined by reference to the last reported sale price of the shares of common stock on the Nasdaq Global Market (or such other market on which our common stock is then principally listed). The exercise price of an option may not be reduced after the date of the option grant without stockholder approval, other than to appropriately reflect changes in our capital structure.

The term of each option will be fixed by the compensation committee and may not exceed ten years from the date of grant. The administrator will determine at what time or times each option may be exercised. Options may be made exercisable in installments and the exercisability of options may be accelerated by the compensation committee. In general, unless otherwise permitted by the administrator, no option granted under the 2024 Plan is transferable by the optionee other than by will or by the laws of descent and distribution or pursuant to a domestic relations order, and options may be exercised during the optionee's lifetime only by the optionee, or by the optionee's legal representative or guardian in the case of the optionee's incapacity.

Upon exercise of options, the option exercise price must be paid in full either in cash, by certified or bank check or other instrument acceptable to the administrator or by delivery (or attestation to the ownership) of shares of common stock that are beneficially owned by the optionee and that are not subject to risk of forfeiture. Subject to applicable law, the exercise price may also be delivered to the company by a broker pursuant to irrevocable instructions to the broker from the optionee. In addition, non-qualified options may be exercised using a net

exercise feature that reduces the number of shares issued to the optionee by the number of shares with a fair market value equal to the exercise price.

To qualify as incentive options, options must meet additional federal tax requirements, including a \$100,000 limit on the value of shares subject to incentive options that first become exercisable by a participant in any one calendar year.

Stock Appreciation Rights. The administrator may award stock appreciation rights subject to such conditions and restrictions as the administrator may determine. Stock appreciation rights entitle the recipient to shares of common stock or cash equal to the value of the appreciation in the stock price over the exercise price. Except in the case of stock appreciation rights (i) granted pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code, (ii) granted to individuals who are not subject to U.S. income tax on the date of grant or (iii) that are compliant with Section 409A of the Code, the exercise price may not be less than the fair market value of the common stock on the date of grant. The term of a stock appreciation right may not exceed ten years.

Restricted Stock. The administrator may award shares of common stock to participants subject to such conditions and restrictions as the administrator may determine. These conditions and restrictions may include the achievement of certain performance goals and/or continued service with us or our affiliates through a specified restricted period. During the vesting period, restricted stock awards may be credited with dividends (but dividends payable with respect to restricted stock awards with vesting shall not be paid unless and until such vesting conditions are attained).

Restricted Stock Units. The administrator may award RSUs (including PSUs) to participants. RSUs are ultimately payable in the form of shares of common stock or cash subject to such conditions and restrictions as the administrator may determine. These conditions and restrictions may include continued service with the company or its affiliates through a specified vesting period, and/or the achievement of certain pre-established performance goals (with respect to PSUs). In the administrator's sole discretion, it may permit a participant to make an advance election to receive a portion of their future cash compensation otherwise due in the form of a RSU award, subject to the participant's compliance with the procedures established by the administrator and requirements of Section 409A of the Code.

Unrestricted Stock Awards. The administrator may also grant shares of common stock that are free from any restrictions under the 2024 Plan. Unrestricted stock may be granted to any participant in recognition of past services or other valid consideration and may be issued in lieu of cash compensation due to such participant.

Cash-Based Awards. The administrator may grant cash bonuses under the 2024 Plan to participants. The cash bonuses may be subject to the achievement of certain performance goals.

Dividend Equivalent Rights. The administrator may grant dividend equivalent rights to participants, which entitle the recipient to receive credits for dividends that would be paid if the recipient had held specified shares of common stock. Dividend equivalent rights granted as a component of another award (other than a stock option or stock appreciation right) may be paid only if the related award becomes vested. Dividend equivalent rights may be settled in cash, shares of common stock or a combination thereof, in a single installment or installments, as specified in the award.

Change of Control Provisions. In the event of a "sale event," as defined in the 2024 Plan, awards under the 2024 Plan may be assumed, continued or substituted. In the event that awards are not assumed, continued or substituted, the 2024 Plan and all outstanding awards thereunder will terminate. In such case of termination, except as otherwise provided in the applicable award agreement, upon the effective time of the sale event, all awards with time-based conditions or restrictions will become vested and nonforfeitable, and all awards with conditions and restrictions relating to the attainment of performance goals will be deemed vested and nonforfeitable in connection with a sale event, to the extent specified in the relevant award agreement. In addition, the company may make or provide for payment, in cash or in kind, to participants holding options and stock appreciation rights equal to the difference between the per share cash consideration and the exercise price of the options or stock appreciation rights (provided that, in the case of an option or stock appreciation right with an exercise price equal to or greater than the per share cash consideration, such option or stock appreciation right shall be cancelled for no consideration). The administrator shall also have the option to make or provide for a payment, in cash or in kind, to grantees holding other awards in an amount equal to the per share cash consideration multiplied by the number of vested shares under such awards.

Adjustments for Changes in Stock. The 2024 Plan requires the administrator to make appropriate and proportionate adjustments to the number or kind of shares of common stock that are subject to the 2024 Plan, to certain limits in the 2024 Plan, and to any outstanding awards to reflect stock dividends, stock splits, extraordinary cash dividends and similar events.

Tax Withholding. Participants in the 2024 Plan are responsible for the payment of any federal, state or local taxes that the company is required by law to withhold upon the exercise of options or stock appreciation rights or vesting of other awards. The administrator may require that tax withholding obligations be satisfied by withholding shares of common stock to be issued pursuant to exercise or vesting. The administrator may also require our tax withholding obligation to be satisfied, in whole or in part, by an arrangement whereby a certain number of shares issued pursuant to any award are immediately sold and proceeds from such sale are remitted to us in an amount that would satisfy the withholding amount due.

Amendments and Termination. Our board of directors may at any time amend or discontinue the 2024 Plan and the administrator may at any time amend or cancel any outstanding award for the purpose of satisfying changes in the law or for any other lawful purpose. However, no such action may adversely affect any rights under any outstanding award without the holder's consent. Without prior stockholder approval, in no event may the administrator exercise its discretion to reduce the exercise price of outstanding stock options or stock appreciation rights, effect repricing through cancellation and re-grants or cancellation of stock options or stock appreciation rights in exchange for cash or other awards or effect cash buyouts of underwater stock options or stock appreciation rights. To the extent required under the Nasdaq listing rules, any amendments that materially change the terms of the 2024 Plan will be subject to approval by our stockholders. Amendments shall also be subject to approval by our stockholders if and to the extent determined by the administrator to be required by the Code to preserve the qualified status of incentive options.

Clawback; Recovery of Compensation. Awards granted under the 2024 Plan are subject to forfeiture, termination and cancellation, and a participant will be obligated to return the value received to the company with respect to any such awards to the extent required by the terms of 2024 Plan, provided in an award agreement, pursuant to company policies relating to the recovery of erroneously-paid incentive compensation, including any clawback or recoupment policy adopted by the company, or as otherwise required by law or applicable stock exchange listing standards.

Effective Date of Plan. The 2024 Plan was approved by our board of directors on February 13, 2024. Awards of incentive options may be granted under the 2024 Plan until the tenth anniversary of February 13, 2024. No other awards may be granted under the 2024 Plan after the date that is ten years from the date of stockholder approval.

NEW PLAN BENEFITS

Because the grant of awards under the 2024 Plan is within the discretion of our board of directors and the administrator, the company cannot determine the dollar value or number of shares of common stock that will in the future be received by or allocated to any participant in the 2024 Plan. Accordingly, in lieu of providing information regarding benefits that will be received under the 2024 Plan, the following table provides information concerning the historical awards granted under the 2015 Plan by the following persons and groups during the fiscal year ended December 31, 2023: named executive officers combined as a group; all current executive officers combined as a group; all current executive officers combined as a group.

| Participant Group | Stock Options | Full Value Shares ⁽¹⁾ | Total Shares | Total as % of Total Shares |
|--|------------------|-------------------------------------|-----------------|-------------------------------|
| Named Executive Officers (NEOs) Combined | 190,000 | 131,900 | 321,900 | 14% |
| All Current Executive Officers Combined (excluding NEOs) | 128,350 | 77,075 | 205,425 | 9% |
| Non-Employee Directors Combined | 55,650 | 27,300 | 82,950 | 4% |
| All Current Employees (not also NEOs or Executive Officers | | | | |
| Combined) | 833,132 | 843,713 | 1,676,845 | 73% |
| Total Grants | 1,207,132 | 1.079.988 | 2,287,120 | |

(1) Full Value Shares include actual RSUs granted and PSUs granted at target.

TAX ASPECTS UNDER THE CODE

The following is a summary of the principal federal income tax consequences of certain transactions under the 2024 Plan. It does not describe all federal tax consequences under the 2024 Plan, nor does it describe state or local tax consequences.

Incentive Stock Options. No taxable income is generally realized by the optionee upon the grant or exercise of an incentive stock option. If shares of common stock issued to an optionee pursuant to the exercise of an incentive stock option are sold or transferred after two years from the date of grant and after one year from the date of exercise, then (i) upon sale of such shares, any amount realized in excess of the option exercise price (the amount paid for the shares) will be taxed to the optionee as a long-term capital gain, and any loss sustained will be a long-term capital loss, and (ii) the company will not be entitled to any deduction for federal income tax purposes. The exercise of an incentive stock option will give rise to an item of tax preference that may result in alternative minimum tax liability for the optionee.

If shares of common stock acquired upon the exercise of an incentive stock option are disposed of prior to the expiration of the two-year and one-year holding periods described above, or a disqualifying disposition, generally (i) the optionee will realize ordinary income in the year of disposition in an amount equal to the excess (if any) of the fair market value of the shares of common stock at exercise (or, if less, the amount realized on a sale of such shares of common stock) over the option exercise price thereof, and (ii) we will be entitled to deduct such amount. Special rules will apply where all or a portion of the exercise price of the incentive stock option is paid by tendering shares of common stock.

If an incentive stock option is exercised at a time when it no longer qualifies for the tax treatment described above, the stock option is treated as a non-qualified stock option. Generally, an incentive stock option will not be eligible for the tax treatment described above if it is exercised more than three months following termination of employment (or one year in the case of termination of employment by reason of disability). In the case of termination of employment by reason of death, the threemonth rule does not apply.

Non-Qualified Stock Options. No income is realized by the optionee at the time the non-qualified stock option is granted. Generally (i) at exercise, ordinary income is realized by the optionee in an amount equal to the difference between the option exercise price and the fair market value of the shares of common stock on the date of exercise, and we receive a tax deduction for the same amount, and (ii) at disposition, appreciation or depreciation after the date of exercise is treated as either shortterm or long-term capital gain or loss depending on how long the shares of common stock have been held. Special rules will apply where all or a portion of the exercise price of the non-qualified option is paid by tendering shares of common stock. Upon exercise, the optionee will also be subject to Social Security taxes on the excess of the fair market value over the exercise price of the stock option.

Stock Appreciation Rights. No income will be recognized by a recipient upon the grant of either tandem or freestanding stock appreciation rights. For the year in which the stock appreciation right is exercised, the recipient will generally be taxed at ordinary income rates on the amount equal to the cash received plus the fair market value of any unrestricted shares received on the exercise.

Restricted Stock Awards. The recipient of a restricted stock award will generally be taxed at ordinary income rates on the fair market value of the restricted shares (reduced by any amount paid by the recipient for such restricted shares) at such time as the shares are no longer subject to restrictions. However, a recipient may elect under Section 83(b) of the Code (the election must be filed with the IRS within 30 days of the grant date) to be taxed at ordinary income rates on the difference between: (i) the fair market value of such shares of the company's common stock on the grant date, and (ii) the purchase price, if any, of the shares. If a Section 83(b) election has not been made, dividends received with respect to restricted shares will generally be taxed as ordinary income to the recipient. If a Section 83(b) election has been made, dividends will be taxed at dividend rates.

Restricted Stock Units. The recipient of an RSU, or PSU, will generally be taxed at ordinary income rates on the fair market value of the shares of the company's common stock awarded on the transfer date. The capital gains/loss holding period for such shares will also commence on such date.

Unrestricted Stock Awards. The recipient of an unrestricted stock award will generally be taxed at ordinary income rates on the difference between: (i) the fair market value of the shares of the company's common stock on the grant date, and (ii) the purchase price, if any, of the shares.

Cash-Based Awards. The recipient will generally be taxed at ordinary income rates on the amount equal to the cash received.

Dividend Equivalent Rights. There are generally no Federal income tax consequences to the recipient or the company on the grant of a dividend equivalent right. When the dividend equivalent right is converted to cash and/or additional shares of common stock and distributed to the recipient of a dividend equivalent right, the cash or the fair market value of the shares of common stock will be taxable to the recipient as ordinary income and the company will be entitled to a corresponding deduction for tax purposes.

Parachute Payments. The vesting of any portion of an award that is accelerated due to the occurrence of a change in control (such as a sale event) may cause a portion of the payments with respect to such accelerated awards to be treated as "parachute payments" as defined in the Code. Any such parachute payments may be non-deductible to the company, in whole or in part, and may subject the recipient to a non-deductible 20% federal excise tax on all or a portion of such payment (in addition to other taxes ordinarily payable).

Limitation on Deductions. Under Section 162(m) of the Code, the Company's deduction for awards under the 2024 Plan may be limited to the extent that any "covered employee" (as defined in Section 162(m) of the Code) receives compensation in excess of \$1 million a year.

EQUITY COMPENSATION PLAN INFORMATION

The table below sets forth information regarding our equity compensation plans in effect as of December 31, 2023:

| Number of | Number of securities |
|---|---|
| securities to be | remaining available for |
| issued upon | future issuance under |
| exercise of Weight | hted average equity compensation |
| outstanding exerci | cise price of plans (excluding |
| options, warrants outstand | nding options, securities reflected in |
| Plan Category and rights warrants | ts and rights ⁽¹⁾ the first column) ⁽²⁾ |
| Equity compensation plans approved by security holders (3) 7,888,195 (4) \$ | 65.36 8,497,393 (5) |
| Equity compensation plans not approved by security holders ⁽⁶⁾ 929,775 | 75.91 1,376,416 |
| Total 8,817,970 \$ | 66.48 9,873,809 |

- (1) The weighted average exercise price is calculated based solely on outstanding stock options.
- (2) As of December 31, 2023, (i) 4,846,351 shares remained available for future issuance under our 2015 Plan, (ii) 3,651,042 shares remained available for future issuance under our 2020 Plan.
- (3) Consists of the 2015 Plan and the 2015 ESPP.
- Amount does not include any purchase rights accruing under the 2015 ESPP during the current purchase period, which commenced on December 1, 2023, because the purchase right (and therefore the number of shares to be purchased) will not be determined until the end of the purchase period on May 31, 2024. Subject to the number of shares remaining in the share reserve, the maximum number of shares purchasable by any participant in the 2015 ESPP on any one purchase date for any purchase period, including the current purchase period, may not exceed 2,500 shares.
- purchase period, including the current purchase period, may not exceed 2,500 shares.

 Our 2015 Plan has an evergreen provision that allows for an annual increase in the number of shares available for issuance under the 2015 Plan to be added on the first day of each fiscal year in an amount equal to 4% of the number of shares of our common stock outstanding on the immediately preceding December 31 or such lesser amount determined by our board of directors or the compensation committee. Effective January 1, 2024, 2,445,889 additional shares were reserved for issuance under the 2015 Plan pursuant to this provision. Our 2015 ESPP has an evergreen provision that allows for an annual increase in the number of shares available for issuance under the 2015 ESPP to be added on the first day of each fiscal year in an amount equal to 1% of the total number of shares of our common stock outstanding on the immediately preceding December 31 or such lesser amount determined by our board of directors or the compensation committee. Effective January 1, 2024, 611,472 additional shares were reserved for issuance under the 2015 ESPP pursuant to this provision. The increases from January 1, 2024 have not been included in the table.
- (6) Consists of the 2020 Plan.

VOTE REQUIRED AND RECOMMENDATION OF THE BOARD OF DIRECTORS

The approval of this proposal requires the affirmative vote of a majority of the votes cast on this proposal. Abstentions and broker non-votes will have no effect on the outcome of this proposal.



OUR BOARD OF DIRECTORS RECOMMENDS THAT STOCKHOLDERS VOTE "FOR" THE BLUEPRINT MEDICINES CORPORATION 2024 STOCK INCENTIVE PLAN.



Our audit committee has appointed the firm of Ernst & Young LLP, an independent registered public accounting firm, as independent auditors for the fiscal year ending December 31, 2024. Although stockholder approval of our audit committee's appointment of Ernst & Young LLP is not required by law, our board of directors believes that it is advisable to give stockholders an opportunity to ratify this appointment. If this proposal is not approved at the annual meeting, our audit committee will reconsider its appointment of Ernst & Young LLP.

Ernst & Young LLP has no direct or indirect material financial interest in our company or our subsidiaries. Representatives of Ernst & Young LLP are expected to be present at the annual meeting online and will have the opportunity to make a statement, if they desire to do so, and will be available to respond to appropriate questions from our stockholders.

AUDIT FEES AND SERVICES

Ernst & Young LLP was our independent registered public accounting firm for the years ended December 31, 2023 and December 31, 2022. The following table summarizes the fees of Ernst & Young LLP billed to us for each of the last two fiscal years. All such accountant services and fees were pre-approved by our audit committee in accordance with the "Pre-Approval Policies and Procedures" described below.

| | Year Ended | Decen | nber 31, |
|-------------------------|-----------------|-------|-----------|
| Fee Category | 2023 | | 2022 |
| Audit Fees (1) | \$ 1,526,710 | \$ | 1,708,106 |
| Audit-Related Fees (2) | _ | | |
| Tax Fees ⁽³⁾ | 278,551 | | 311,146 |
| All Other Fees (4) | _ | | |
| Total Fees | \$ 1,805,261 | \$ | 2,019,252 |

- (1) "Audit Fees" consist of fees for the audit of our annual financial statements, the review of the interim financial statements included in our quarterly reports on Form 10-Q and other professional services provided in connection with regulatory fillings or engagements.
- "Audit-Related Fees" consist of fees billed by Ernst & Young LLP for assurance and related services that are reasonably related to the performance of the audit or review of our consolidated financial statements. There were no such fees incurred in 2023 or 2022.
- "Tax Fees" consist of fees for professional services, including tax consulting and compliance performed by Ernst & Young LLP.
- "All Other Fees" consist of database subscription fees paid to Ernst & Young LLP. No such fees were incurred in 2023 or 2022.

PRE-APPROVAL POLICIES AND PROCEDURES

Our audit committee has adopted procedures requiring the pre-approval of all non-audit services performed by our independent registered public accounting firm in order to assure that these services do not impair the auditor's independence. These procedures generally approve the performance of specific services subject to a cost limit for all such services. This general approval is to be reviewed, and if necessary modified, at least annually. Management must obtain the specific prior approval of the audit committee for each engagement of the independent registered public accounting firm to perform other audit-related or other non-audit services. The audit committee does not delegate its responsibility to approve services performed by the independent registered public accounting firm to any member of management, and the audit committee has approved 100% of the services from Ernst & Young LLP.

The standard applied by the audit committee in determining whether to grant approval of any type of non-audit service, or of any specific engagement to perform a non-audit service, is whether the services to be performed, the compensation to be paid therefore and other related factors are consistent with the independent registered public accounting firm's independence under guidelines of the SEC and applicable professional standards. Relevant considerations include whether the work product is likely to be subject to, or implicated in, audit procedures during the audit of our financial statements, whether the independent registered public accounting firm would be functioning in the role of management or in an advocacy role, whether the independent registered public accounting firm's performance of the service would enhance our ability to manage or control risk or improve audit quality, whether such performance would increase efficiency because of the independent registered public accounting firm's familiarity with our business, personnel, culture, systems, risk profile and other factors, and whether the amount of fees involved, or the non-audit services portion of the total fees payable to the independent registered public accounting firm in the period would tend to reduce the independent registered public accounting firm's ability to exercise independent judgment in performing the audit.

VOTE REQUIRED AND RECOMMENDATION OF THE BOARD OF DIRECTORS

Ratification of the appointment of an independent registered public accounting firm requires the affirmative vote of a majority of the votes cast on this proposal. Abstentions and broker non-votes will have no effect on the outcome of this proposal.



OUR BOARD OF DIRECTORS RECOMMENDS THAT STOCKHOLDERS VOTE "FOR" THE RATIFICATION OF THE APPOINTMENT OF ERNST & YOUNG LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2024.

Report of the Audit Committee of the Board of **Directors**

Our audit committee has reviewed our audited consolidated financial statements for the fiscal year ended December 31, 2023 and discussed them with our management and our independent registered public accounting firm, Ernst & Young LLP.

Our audit committee has also received from, and discussed with, Ernst & Young LLP various communications that Ernst & Young LLP is required to provide to our audit committee, including the matters required to be discussed by the statement on Auditing Standards 1301, "Communication with Audit Committees," as adopted by the Public Company Accounting Oversight Board.

In addition, Ernst & Young LLP provided our audit committee with the written disclosures and the letter required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent registered public accounting firm's communications with the audit committee concerning independence and has discussed with the company's independent registered public accounting firm their independence.

Based on the review and discussions referred to above, our audit committee recommended to our board of directors that the audited consolidated financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2023.

This report of the audit committee is not "soliciting material," shall not be deemed "filed" with the SEC and shall not be incorporated by reference by any general statement incorporating by reference this proxy statement into any filing under the Securities Act or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing, except to the extent that we specifically incorporate this information by reference, and shall not otherwise be deemed filed under such acts.

By the audit committee of the board of directors of Blueprint Medicines Corporation.

Daniella Beckman, Chair

Lonnel Coats

Mark Goldberg, M.D.

Certain Relationships and Related Person **Transactions**

POLICIES AND PROCEDURES FOR RELATED PERSON TRANSACTIONS

Our board of directors has adopted a written related person transaction policy to set forth policies and procedures for the review and approval or ratification of related person transactions. This policy covers any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we were or are to be a participant and any director or executive officer, director nominee, holder of 5% or more of any class of our voting securities or any member of the immediate family of or entities affiliated with any of the foregoing had or will have a direct or indirect material interest, including, without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness and employment by us of a related person. Any such transaction must be presented to our audit committee for review, consideration and approval. In approving or rejecting any such proposal, our audit committee is to consider the relevant facts and circumstances available and deemed relevant to the audit committee, including, but not limited to, the extent of the related party's interest in the transaction, and whether the transaction is on terms no less favorable to us than terms we could have generally obtained from an unaffiliated third party under the same or similar circumstances.

On December 23, 2022, we entered into a consulting agreement effective January 1, 2023, with Jeffrey W. Albers under which Mr. Albers provided certain advisory services to us for up to 16 hours per month on average. The consulting services were in addition to the time and responsibilities reasonably expected of members of our board of directors and of the chairperson of our board of directors. For the consulting services, Mr. Albers received a fee of \$9,583.33 per month (\$115,000.00 on an annualized basis). The term of the consulting agreement ended on December 31, 2023 at the conclusion of its term. The consulting agreement was terminable by us or Mr. Albers upon not less than 90 days' prior written notice to the other party. Either party was able to terminate the consulting agreement immediately upon written notice to the other party in the event such other party has materially breached the consulting agreement. The agreement was reviewed and approved by the noninterested members of our board of directors (including the members of our audit committee).

Stock Ownership and Reporting

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Unless otherwise provided below, the following table sets forth information regarding beneficial ownership of our common stock as of March 31, 2024 by:

- each person, or group of affiliated persons, known to us to be the beneficial owner of 5% or more of the outstanding shares of our common stock;
- each named executive officer listed in the Summary Compensation table above; and
- all of our executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our common stock. Shares of our common stock subject to stock options that are currently exercisable or will become exercisable within 60 days after March 31, 2024 or RSUs vesting within 60 days after March 31, 2024 are considered outstanding and beneficially owned by the person holding the stock options for the purpose of calculating the percentage ownership of that person, but not for the purpose of calculating the percentage ownership of any other person. Except as otherwise noted, to our knowledge, the persons and entities in the table below have sole voting and investing power with respect to all of the shares of our common stock beneficially owned by them, subject to applicable community property laws. The inclusion herein of any shares as beneficially owned does not constitute an admission of beneficial ownership.

The column entitled "Percentage of Shares Beneficially Owned" is based on a total of shares of our common stock outstanding as of March 31, 2024. Except as otherwise set forth below, the address of the beneficial owner is c/o Blueprint Medicines Corporation, 45 Sidney Street, Cambridge, Massachusetts 02139. Beneficial ownership representing less than one percent of our outstanding common stock is denoted with an "*."

| | Number of shares beneficially | Percentage of shares beneficially | |
|---|-------------------------------------|---|---|
| Name and address of beneficial owner | owned | owned | |
| 5% stockholders | | | |
| Entities affiliated with BlackRock, Inc. (1) | 6,584,176 | 10.52 | % |
| Entities affiliated with the Vanguard Group (2) | 6,114,970 | 9.77 | % |
| Entities affiliated with T. Rowe Price Associates, Inc. (3) | 5,435,617 | 8.68 | % |
| Entities affiliated with Fidelity Management & Research (4) | 4,348,311 | 6.95 | % |
| Entities affiliated with Wellington Management Group LLP (5) | 4,276,333 | 6.83 | % |
| Named executive officers and directors | | | |
| Jeffrey W. Albers, M.B.A. ⁽⁶⁾ | 740,625 | | % |
| Daniella Beckman (7) | 15,805 | * | |
| Alexis Borisy (8) | 95,993 | * | |
| Percy H. Carter, M.B.A., Ph.D. (9) | 57,555 | * | |
| Lonnel Coats (10) | 68,723 | * | |
| Habib Dable, M.B.A. (11) | 6,379 | * | |
| Mark Goldberg, M.D. (12) | 50,996 | * | |
| Kathryn Haviland, M.B.A. (13) | 251,186 | * | |
| Michael Landsittel, M.B.A. (14) | 177,133 | * | |
| Nicholas Lydon, Ph.D. (15) | 90,768 | * | |
| Fouad Namouni, M.D. (16) | 132,725 | * | |
| Christina Rossi, M.B.A. (17) | 189,223 | * | _ |
| Lynn Seely, M.D. (18) | 78,723 | * | |
| John Tsai, M.D. (19) | 4,833 | * | _ |
| All executive officers and directors as a group (20 persons) (20) | 2,727,807 | 4.21 | % |

Based solely on a Schedule 13G/A filed with the SEC on January 23, 2024 by BlackRock Inc., or BlackRock. The address for BlackRock is 50 Hudson Yards, New York, NY 10001.

- (2) Based solely on a Schedule 13G/A filed with the SEC on January 10, 2024 by entities affiliated with the Vanguard Group, or Vanguard. The address for Vanguard is 100 Vanguard Blvd., Malvern, PA 19355.
- (3) Based solely on a Schedule 13G/A filed with the SEC on February 14, 2024 by T. Rowe Price Associates, Inc., or T Rowe Price. The address for T Rowe Price is 100 F. Pratt Street. Baltimore. MD 21202
- (4) Based solely on a Schedule 136/A filed with the SEC on February 8, 2024 by entities affiliated with FMR LLC aka Fidelity Management & Research LLC, or Fidelity. The address for Fidelity is 245 Summer Street, Boston, MA 02210.
- (5) Based solely on a Schedule 13G/A filed with the SEC on February 8, 2024 by Wellington Management Group LLP, Wellington. The address for Wellington is 280 Congress Street, Boston, MA 02210.
- (6) Consists of (i) 148,667 shares of common stock and (ii) 591,958 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (7) Consists of (i) 4,867 shares of common stock and (ii) 10,938 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (8) Consists of (i) 69,318 shares of common stock and (ii) 26,675 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (9) Consists of (i) 11,161 shares of common stock and (ii) 46,394 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (10) Consists of (i) 8,412 shares of common stock and (ii) 60,311 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (11) Consists of (i) 1,300 shares of common stock and (ii) 5,079 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (12) Consists of (i) 13,412 shares of common stock and (ii) 37,584 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (13) Consists of (i) 59,912 shares of common stock and (ii) 191,274 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (14) Consists of (i) 15,897 shares of common stock and (ii) 161,236 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (15) Consists of (i) 53,184 shares of common stock and (ii) 37,584 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (16) Consists of (i) 27,564 shares of common stock and (ii) 105,161 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (17) Consists of (i) 27,291 shares of common stock and (ii) 161,932 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (18) Consists of (i) 8,412 shares of common stock and (ii) 70,311 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.
- (19) Consists of (i) 1,300 shares of common stock and (ii) 3,533 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of
- (20) Consists of (i) 542,972 shares of common stock and (ii) 2,184,835 shares of common stock underlying options exercisable and restricted stock units vesting within 60 days of March 31, 2024.

DELINQUENT SECTION 16(A) REPORTS

Section 16(a) of the Exchange Act requires our directors and officers and holders of more than 10% of our common stock to file with the SEC initial reports of ownership of our common stock and other equity securities on a Form 3 and reports of changes in such ownership on a Form 4 or Form 5. Directors and officers and holders of 10% of our common stock are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file. To our knowledge, based solely on a review of our records and representations made by our directors and officers regarding their filing obligations, all Section 16(a) filing requirements were satisfied with respect to 2023 except that Philina Lee had one late Form 4 transaction due to an administrative oversight.

STOCKHOLDER PROPOSALS

STOCKHOLDER PROPOSALS INCLUDED IN PROXY STATEMENT

In order to be considered for inclusion in our proxy statement and proxy card relating to our annual meeting of stockholders to be held in 2025, stockholder proposals must be received by us no later than December 30, 2024, which is 120 days prior to the first anniversary of the mailing date of this proxy, unless the date of the 2025 annual meeting of stockholders is changed by more than 30 days from the anniversary of our 2024 annual meeting, in which case, the deadline for such proposals will be a reasonable time before we begin to print and send our proxy materials. Upon receipt of any such proposal, we will determine whether or not to include such proposal in the proxy statement and proxy card in accordance with regulations governing the solicitation of proxies.

In addition, to comply with the universal proxy rules, stockholders who intend to solicit proxies in support of director nominees other than the Company's nominees must provide notice that sets forth the information required by Rule 14a-19 under the Securities Exchange Act of 1934 no later than April 22, 2024.

STOCKHOLDER PROPOSALS NOT INCLUDED IN PROXY STATEMENT

In addition, our amended and restated bylaws, or bylaws, establish an advance notice procedure for nominations for election to our board of directors and other matters that stockholders wish to present for action at an annual meeting other than those to be included in our proxy statement. In general, we must receive other proposals of stockholders (including director nominations) intended to be presented at the 2025 annual meeting of stockholders but not included in the proxy statement by March 23, 2025, but not before February 22, 2025, which is not less than 90 days nor more than 120 days prior to the anniversary date of the immediately preceding annual meeting. However, if the date of the annual meeting is more than 30 days before or more than 60 days after such anniversary date, notice must be received no earlier than the close of business 120 days prior to such annual meeting and no later than the close of business on the later of 90 days prior to such annual meeting and 10 days following the day on which notice of the date of such annual meeting was mailed or public announcement of the date of such annual meeting was first made. If the stockholder fails to give notice by these dates, then the persons named as proxies in the proxies solicited by the board of directors for the 2025 annual meeting of stockholders may exercise discretionary voting power regarding any such proposal. Stockholders are advised to review our bylaws which also specify requirements as to the form and content of a stockholder's notice.

Any proposals, notices or information about proposed director candidates should be sent to Blueprint Medicines Corporation, Attention: Nominating and Corporate Governance Committee c/o Chief Legal Officer and Secretary, 45 Sidney Street, Cambridge, Massachusetts 02139.

STOCKHOLDERS SHARING THE SAME **ADDRESS**

Some banks, brokerage firms and other nominee record holders may be "householding" our proxy materials. This means a single notice and, if applicable, the proxy materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received. We will promptly deliver a separate copy of the notice and, if applicable, the proxy materials and our 2023 annual report to stockholders, which consists of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, to you if you contact us at Blueprint Medicines Corporation, 45 Sidney Street, Cambridge, Massachusetts 02139, Attn: Investor Relations, telephone: (617) 374-7580, e-mail: ir@blueprintmedicines.com. If you would like to receive separate copies of our proxy materials and annual reports in the future, or if you are receiving multiple copies and would like to receive only one copy for your household, you should contact your bank, broker, or other nominee record holder, or you may contact us at the above address, telephone number or e-mail.

OTHER MATTERS

As of the date of this proxy statement, we know of no matter not specifically referred to above as to which any action is expected to be taken at the annual meeting. The persons named as proxies will vote the proxies, insofar as they are not otherwise instructed, regarding such other matters and the transaction of such other business as may be properly brought before the meeting, as seems to them to be in the best interest of our company and our stockholders.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This proxy statement contains forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, statements regarding our medicines, statements with respect to plans, strategies, timelines and expectations for our operations, including for our current or future approved drugs and drug candidates, AYVAKIT's potential as a greater than \$2 billion product, plans to advance our portfolio by targeting additional allergicinflammatory diseases driven by mast cells, BLU-808's potential to address the medical needs of large patient populations and the development of our CDK franchise anchored by the CDK2 inhibitor BLU-222; expectations related to the markets for our current or future approved drugs and drug candidates; the potential benefits of any of our current or future approved drugs or drug candidates in treating patients; and our financial performance, strategy, goals and anticipated milestones, business plans and focus, including expectations regarding our revenue ramp, operating expenses and potential profitability. While we believe the forward-looking statements contained in this proxy statement are accurate, these forward-looking statements represent our beliefs only as of the date of this proxy statement and there are a number of risks and uncertainties that could cause actual events or results to differ materially from those indicated by such forward-looking statements. Any forward-looking statements in this proxy statement are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this proxy statement, including, without limitation, risks and uncertainties related to our ability and plans in continuing to expand a commercial infrastructure, and successfully launching, marketing and selling current or future approved products; our ability to obtain marketing approval for AYVAKIT/AYVAKYT in additional geographies in the future; the rate and degree of market acceptance of AYVAKIT/AYVAKYT and any future drug candidates for which we receive marketing approval; the delay of any current or planned clinical trials or the development of our current or future drug candidates; our advancement of multiple early-stage efforts; our ability to successfully demonstrate the safety and efficacy of our drug candidates and gain approval of our drug candidates on a timely basis, if at all, the preclinical and clinical results for our drug candidates, which may not support further development of such drug candidates either as monotherapies or in combination with other agents or may impact the anticipated timing of data or regulatory submissions; actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials; our ability to obtain, maintain and enforce patent and other intellectual property protection for its products or any drug candidates we are developing; our ability to successfully expand our research platform and the costs thereof; the success of our current and future collaborations, partnerships or licensing arrangements; and the accuracy of our estimates of revenues, expenses and capital requirements. These and other risks and uncertainties are described in greater detail in the section entitled "Risk Factors" in our filings with the SEC, including our Annual Report on Form 10-K for the year ended December 31, 2023, as filed with the SEC on February 15, 2024, and any other filings that we have made or may make with the SEC in the future. Any forward-looking statements contained in this proxy statement represent our views only as of April 25, 2024 and should not be relied upon as representing its views as of any subsequent date. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

TRADEMARKS

Blueprint Medicines, AYVAKIT, AYVAKYT and associated logos are trademarks of Blueprint Medicines Corporation.

© Blueprint Medicines Corporation April 25, 2024

Frequently Asked Questions Regarding the Annual Meeting & Voting

Q. Why did I receive these proxy materials?

We have made these materials available to you on the Internet in connection with the solicitation of proxies for use at our 2023 annual meeting of stockholders to be held online on Wednesday, June 12, 2024 at 3:00 p.m., Eastern Daylight Time, at http://www.virtualshareholdermeeting.com/BPMC2024. As a holder of common stock, you are invited to attend the annual meeting online and are requested to vote on the items of business described in this proxy statement. This proxy statement includes information that we are required to provide to you under SEC rules and that is designed to assist you in voting your shares

Q. Why did I receive a notice in the mail regarding the Internet availability of proxy materials instead of a full set of proxy materials?

In accordance with the SEC rules, we may furnish proxy materials, including this proxy statement and our annual report, to our stockholders by providing access to such documents on the Internet instead of mailing printed copies. If you would like to receive a paper copy of our proxy materials, you should follow the instructions for requesting such materials in the Notice.

Q. What is the purpose of the annual meeting?

At the annual meeting, stockholders will consider and vote on the following matters:

- Proposal 1: The election of three Class III directors nominated by our board of directors, each to serve for a threeyear term expiring at the 2027 annual meeting of stockholders or until their successor has been duly elected and qualified;
- Proposal 2: A non-binding advisory vote on the frequency of future executive compensation votes;
- Proposal 3: A non-binding advisory vote on the compensation paid to our named executive officers;
- Proposal 4: The approval of the 2024 Stock Incentive Plan; and
- **Proposal 5:** The ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2024.

The transaction of any other business that may properly come before the annual meeting or any adjournment or postponement thereof.

Q. Who can vote at the annual meeting?

To be entitled to vote, you must have been a stockholder of record at the close of business on April 12, 2024, the record date for our annual meeting. As of the record date, there were 62,814,862 shares of our common stock outstanding and entitled to vote at the annual meeting.

Q. How many votes do I have?

Each share of our common stock that you own as of the record date will entitle you to one vote on each matter considered at the annual meeting.

Q. How do I vote?

If you are the "record holder" of your shares, meaning that your shares are registered in your name in the records of our transfer agent, Computershare Trust Company, N.A., and not in the name of a bank, brokerage firm or other nominee, you may vote your shares as follows:

Over the Internet: To vote over the Internet, please go to the following website: www.proxyvote.com, and follow the instructions on that website for submitting your proxy electronically. If you vote over the Internet, you do not need to complete and mail your proxy card or vote your proxy by telephone. You must specify how you want your shares voted, or your Internet vote cannot be completed, and you will receive an error message. You must submit your Internet proxy before 11:59 p.m., Eastern Daylight Time, on June 11, 2024, the day before the annual meeting, for your proxy to be valid and your vote to count.

By Telephone: To vote by telephone, please call 1-800-6903, and follow the instructions provided on the proxy card. If you vote by telephone, you do not need to complete and mail your proxy card or vote your proxy over the Internet. You must specify how you want your shares voted and confirm your vote at the end of the call, or your telephone vote cannot be completed. You must submit your telephonic proxy before 11:59 p.m., Eastern Daylight Time, on June 11, 2024, the day before the annual meeting, for your proxy to be valid and your vote to count.

By Mail: To vote by mail, you must mark, sign and date the proxy card and then mail the proxy card in accordance with the instructions on the proxy card. If you vote by mail, you do not need to vote over the Internet or by telephone. Broadridge Financial Solutions, Inc. must receive the proxy card not later than June 11, 2024, the day before the annual meeting, for your proxy to be valid and your vote to count. If you return your proxy card but do not specify how you want your shares voted on any particular matter, they will be voted in accordance with the recommendations of our board of directors.

During the Annual Meeting: You may vote during the annual meeting by going to http://www.virtualshareholdermeeting.com/BPMC2024 and following the instructions on that website for submitting your vote. You will need the 16-digit control number included on your Notice. If you previously voted via the Internet (or by telephone or mail), you will not limit your right to vote online at the annual meeting.

If your shares are held in "street name," meaning they are held for your account by an intermediary, such as a bank, brokerage firm or other nominee, then you are deemed to be the beneficial owner of your shares, and the bank, brokerage firm or other nominee that actually holds the shares for you is the record holder and is required to vote the shares it holds on your behalf according to your instructions. The proxy materials, as well as voting and revocation instructions, should have been forwarded to you by the bank, brokerage firm or other nominee that holds your shares. In order to vote your shares, you will need to follow the instructions that your bank, brokerage firm or other nominee provides you. Many banks, brokerage firms or other nominees solicit voting instructions over the Internet or by telephone.

If you do not give instructions to your bank, brokerage firm or other nominee, they will still be able to vote your shares with respect to certain "discretionary" items. The ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm (Proposal 5) is considered a discretionary item. Accordingly, your bank, brokerage firm or other nominee may vote your shares in its discretion with respect to that matter even if you do not give voting instructions on Proposal 5.

However, under applicable stock exchange rules that regulate voting by registered banks, brokerage firms or other nominees, the election of our nominees to serve as Class III directors (Proposal 1), a non-binding advisory vote on the frequency of future executive compensation votes (Proposal 2), a non-binding advisory vote on the compensation paid to our named executive officers (Proposal 3), and the approval of the 2024 Stock Incentive Plan (Proposal 4) are not considered to be discretionary items. Accordingly, if you do not give your bank, brokerage firm or other nominee voting instructions on Proposals 1 or 3 they may not vote your shares with respect to those matters and your shares will be counted as "broker non-votes" with respect to each such proposal. A "broker non-vote" occurs when shares held by a bank, brokerage firm or other nominee are not voted with respect to a particular proposal because the bank, brokerage firm or other nominee does not have or did not exercise discretionary authority to vote on the matter and has not received voting instructions from its clients.

Regardless of whether your shares are held in street name, you are welcome to attend the annual meeting online. You may not vote shares held in street name at the annual meeting, however, unless you obtain a legal proxy, executed in your favor, from the holder of record (i.e., your bank, brokerage firm or other nominee). A legal proxy is not the form of proxy included with this proxy statement. You will not be able to vote shares you hold in street name at the annual meeting unless you have a legal proxy from your bank, brokerage firm or other nominee issued in your name giving you the right to vote your shares.

Q. How do I attend the annual meeting online?

Our 2024 annual meeting will be held entirely online because it allows stockholders to attend the meeting from anywhere while providing stockholders the same rights and opportunities as an in-person meeting and it enables us to continue to provide additional flexibility for our partners, employees, and stockholders. There will not be a physical location for in-person stockholder attendance at the meeting. Stockholders of record as of April 12, 2024 will be able to attend and participate in the annual meeting by accessing http://www.virtualshareholdermeeting.com/BPMC2024. To join the annual meeting, you will need to have your 16 - digit control number, which is included on your Notice and your proxy card.

Even if you plan to attend the annual meeting online, we recommend that you also vote by proxy as described herein so that your vote will be counted if you decide not to attend the annual meeting.

Log in Instructions. To attend the online annual meeting, log in at http://www.virtualshareholdermeeting.com/BPMC2024. Stockholders will need their unique 16-digit control number, which appears on the Notice and the instructions that accompanied the proxy materials. In the event that you do not have a control number, please contact your broker, bank, or other nominee as soon as possible and no later than June 11, 2024, so that you can be provided with a control number and gain access to the meeting.

Q. How do I ask questions at the annual meeting?

If you have logged into the annual meeting using your 16-digit control number and wish to ask a question during the meeting, you may do so on the virtual meeting website by typing your question into the "Ask a Question" field, and clicking "Submit." Those without a control number will not have the option to ask questions during the meeting.

If questions submitted are repetitive as to a particular topic, the chairperson of the meeting may limit discussion on such topic. During the formal portion of the meeting, all questions presented should relate directly to the proposal under discussion. We will also hold a question and answer period at the end of the meeting, as time permits, during which time we welcome questions not relating to specific proposals.

For further details, please review the annual meeting's Rules of Conduct, which will be posted on http://www.virtualshareholdermeeting.com/BPMC2024 during the annual meeting.

Following the annual meeting, an archived replay of the audio webcast will be available on the Investor Relations section of our website for approximately 30 days thereafter.

Q: How do I access technical support at the annual meeting?

Beginning 15 minutes prior to the start of and during the virtual annual meeting, we will have a support team ready to assist stockholders with any technical difficulties they may have accessing or hearing the virtual meeting. If you encounter any difficulties accessing the virtual meeting during the check-in or meeting time, please call the technical support number that will be posted on the virtual stockholder meeting log-in page.

Q. Can I change my vote?

If your shares are registered directly in your name, you may revoke your proxy and change your vote at any time before the vote is taken at the annual meeting. To do so, you must do one of the following:

Vote over the Internet or by telephone as instructed above. Only your latest Internet or telephone vote is counted.

Sign and return a new proxy card. Only your latest dated and timely received proxy card will be counted.

Attend the annual meeting online and vote as instructed above. Attending the annual meeting will not alone revoke your Internet vote, telephone vote or proxy card submitted by mail, as the case may be.

Give our corporate secretary written notice before or at the meeting that you want to revoke your proxy.

If your shares are held in street name, you may submit new voting instructions by contacting your bank, brokerage firm or other nominee. You may also vote at the annual meeting online if you obtain a legal proxy as described in the answer above.

Q. How many shares must be represented to have a quorum and hold the annual meeting?

A majority of our shares of common stock outstanding at the record date must be present or represented by proxy to hold the annual meeting. This is called a quorum. For purposes of determining whether a quorum exists, we count as present any shares that are voted over the Internet, by telephone, by completing and submitting a proxy by mail or that are represented at the meeting. Further, for purposes of establishing a quorum, we will count as present shares that a stockholder holds even if the stockholder votes to abstain or only votes on one of the proposals. In addition, we will count as present shares held in street name by banks, brokerage firms or other nominees who indicate on their proxies that they do not have authority to vote those shares. If a quorum is not present, we expect to adjourn the annual meeting until we obtain a quorum.

The presence at the annual meeting, online or by proxy, of holders representing a majority of our outstanding common stock as of the record date, April 12, 2024, or approximately 31,407,432 shares, constitutes a quorum at the meeting and permits us to conduct the business of the meeting.

Q. What vote is required to approve each matter and how are votes counted?

Proposal 1—Election of Class II Directors

The three nominees receiving the highest number of affirmative votes of the shares present in person or represented by proxy at the 2024 annual meeting of stockholders and entitled to vote on the election of directors will be elected to the board of directors. This is called a plurality. If a nominee receives a greater number of votes "withheld" than votes "for" such election, the nominee is required to promptly tender their resignation to the board of directors in accordance with our director resignation policy, as described in our corporate governance guidelines. Proposal 1 is a non-discretionary matter. Therefore, if your shares are held by your brokerage firm in street name and you do not timely provide voting instructions with respect to your shares, your brokerage firm cannot vote your shares on Proposal 1. As a result, broker non-votes will have no effect on the voting on Proposal 1. You may:

vote FOR all nominees;

vote FOR one or more nominees and WITHHOLD your vote from the other nominee(s); or

WITHHOLD your vote from all nominees.

Votes that are withheld will not be included in the vote tally for the election of directors and will not affect the results of the vote.

Proposal 2— Non-binding Advisory Vote on the Frequency of Future Advisory Votes on Named Executive Officer Compensation

For Proposal 2, the frequency receiving the majority of the votes cast for the proposal on the item will be considered the frequency preferred by the stockholders. Proposal 2 is a non-discretionary matter. Therefore, if your shares are held by your brokerage firm in street name and you do not timely provide voting instructions with respect to your shares, your brokerage firm cannot vote your shares on Proposal 2. If you ABSTAIN from voting on Proposal 2, your shares will not be voted FOR or AGAINST the proposal and will also not be counted as votes cast or shares voting on the proposal. As a result, broker nonvotes and abstentions will have no effect on the voting on Proposal 2. Proposal 2 is non-binding. Because this vote is advisory and not binding on us or our board in any way, our board may decide that it is in our and our stockholders' best interests to have a different frequency of advisory vote on executive officer compensation than the frequency preferred by our stockholders.

Proposal 3—Non-binding Advisory Vote on the Compensation Paid to Named Executive Officers

To approve Proposal 3, holders of a majority of the votes cast on the matter must vote FOR the proposal, **Proposal 3 is a non**discretionary matter. Therefore, if your shares are held by your brokerage firm in street name and you do not timely provide voting instructions with respect to your shares, your brokerage firm cannot vote your shares on Proposal 3. If you ABSTAIN from voting on Proposal 3, your shares will not be voted FOR or AGAINST the proposal and will also not be counted as votes cast or shares voting on the proposal. As a result, broker non-votes and abstentions will have no effect on the voting on Proposal 3. Proposal 3 is non-binding. Because this vote is advisory and not binding on us or our board in any way, our board may decide that it is in our and our stockholders' best interests to compensate our named executive officers in an amount or manner that differs from that which is approved by our stockholders.

Proposal 4—Approval of the 2024 Stock Plan

To approve Proposal 4, holders of a majority of the votes cast on the matter must vote FOR the proposal. Proposal 4 is a nondiscretionary matter. Therefore, if your shares are held by your brokerage firm in street name and you do not timely provide voting instructions with respect to your shares, your brokerage firm cannot vote your shares on Proposal 4. If you ABSTAIN from voting on Proposal 4, your shares will not be voted FOR or AGAINST the proposal and will also not be counted as votes cast or shares voting on the proposal. As a result, broker non-votes will have no effect on the voting on Proposal 4.

Proposal 5—Ratification of the Appointment of Independent Registered Public Accounting Firm

To approve Proposal 5, holders of a majority of the votes cast on the matter must vote FOR the proposal. Proposal 5 is considered a discretionary matter. If your shares are held by your brokerage firm in street name and you do not provide voting instructions with respect to your shares, your brokerage firm may vote your unvoted shares on Proposal 5. If you ABSTAIN from voting on Proposal 5, your shares will not be voted FOR or AGAINST the proposal and will also not be counted as votes cast or shares voting on the proposal. As a result, broker non-votes and abstentions will have no effect on the outcome of Proposal 5.

Although stockholder approval of our audit committee's appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2024 is not required, we believe that it is advisable to give stockholders an opportunity to ratify this appointment. If this proposal is not approved at the annual meeting, our audit committee will reconsider its appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2024.

Q. Who will count the vote?

The votes will be counted, tabulated and certified by Broadridge Financial Solutions, Inc.

Q. How does the board of directors recommend that I vote on the proposals?

Our board of directors recommends that you vote:

FOR the election of all of the nominees to serve as Class III directors, each for a three-year term;

FOR ONE YEAR as the frequency of future advisory votes on named executive officer compensation;

FOR the approval, on an advisory basis, of the compensation of our named executive officers;

FOR the approval of the 2024 Stock Incentive Plan; and

FOR the ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2024.

Q. Are there other matters to be voted on at the annual meeting?

We do not know of any matters that may come before the annual meeting other than the election of our Class III directors, the advisory vote on frequency of future advisory votes on named executive officer compensation, the non-binding, approval of the compensation of our named executive officers, the approval of the 2024 Stock Incentive Plan and the ratification of the appointment of our independent registered public accounting firm. If any other matters are properly presented at the annual meeting, the persons named in the accompanying proxy intend to vote, or otherwise act, in accordance with their judgment on the matter.

Q. Where can I find the voting results?

We plan to announce preliminary voting results at the annual meeting and will report final voting results in a Current Report on Form 8-K filed with the SEC within four business days following the end of our annual meeting.

Q. What are the costs of soliciting these proxies?

We will bear the cost of soliciting proxies. In addition to solicitation by mail, our directors, officers and employees may solicit proxies by telephone, e-mail, facsimile and in person without additional compensation. We may reimburse banks or brokerage firms or persons holding stock in their names, or in the names of their nominees, for their expenses in sending proxies and proxy material to beneficial owners.

We have engaged Innisfree M&A Incorporated, or Innisfree, to solicit proxies from stockholders in connection with the annual meeting. We will pay Innisfree a fee of approximately \$25,000, plus reasonable out-of-pocket fees and expenses for soliciting proxies. In addition, Innisfree and certain related persons will be indemnified against certain liabilities arising out of or in connection with the engagement.

Q. Whom should I contact if I have any additional questions?

If you hold your shares directly, please contact us at Blueprint Medicines Corporation, 45 Sidney Street, Cambridge, Massachusetts 02139, Attn: Investor Relations, telephone: (617) 374-7580, e-mail: ir@blueprintmedicines.com.

If your shares are held in street name, please call the telephone number provided on your voting instruction form or contact your bank, brokerage firm or other nominee directly.

Appendix A

BLUEPRINT MEDICINES CORPORATION 2024 STOCK INCENTIVE PLAN

SECTION 1. GENERAL PURPOSE OF THE PLAN; DEFINITIONS

The name of the plan is the Blueprint Medicines Corporation 2024 Stock Incentive Plan (the "Plan"). The purpose of the Plan is to encourage and enable the employees, Non-Employee Directors and Consultants of Blueprint Medicines Corporation (the "Company") and its Affiliates upon whose judgment, initiative and efforts the Company largely depends for the successful conduct of its business to acquire a proprietary interest in the Company. It is anticipated that providing such persons with a direct stake in the Company's welfare will assure a closer identification of their interests with those of the Company and its stockholders, thereby stimulating their efforts on the Company's behalf and strengthening their desire to remain with the Company.

The following terms shall be defined as set forth below:

"Act" means the Securities Act of 1933, as amended, and the rules and regulations thereunder.

"Administrator" means either the Board or the compensation committee of the Board or a similar committee performing the functions of the compensation committee and which is comprised of not less than two Non Employee Directors who are independent.

"Affiliate" means, at the time of determination, any "parent" or "subsidiary" of the Company as such terms are defined in Rule 405 of the Act. The Board will have the authority to determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

"Award" or "Awards," except where referring to a particular category of grant under the Plan, shall include Incentive Stock Options, Non-Qualified Stock Options, Stock Appreciation Rights, Restricted Stock Units, Restricted Stock Awards, Unrestricted Stock Awards, Cash-Based Awards and Dividend Equivalent Rights.

"Award Agreement" means a written or electronic document setting forth the terms and provisions applicable to an Award granted under the Plan. Each Award Agreement is subject to the terms and conditions of the Plan.

"Board" means the Board of Directors of the Company.

"Cash-Based Award" means an Award entitling the recipient to receive a cash-denominated payment.

"Code" means the Internal Revenue Code of 1986, as amended, and any successor Code, and related rules, regulations and interpretations.

"Consultant" means a consultant or adviser who provides bona fide services to the Company or an Affiliate as an independent contractor and who qualifies as a consultant or advisor under Instruction A.1.(a)(1) of Form S-8 under the Act.

"Dividend Equivalent Right" means an Award entitling the grantee to receive credits based on cash dividends that would have been paid on the shares of Stock specified in the Dividend Equivalent Right (or other award to which it relates) if such shares had been issued to and held by the grantee.

"Effective Date" means the date on which the Plan becomes effective as set forth in Section 19.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder.

"Fair Market Value" of the Stock on any given date means the fair market value of the Stock determined in good faith by the Administrator; provided, however, that if the Stock is listed on the National Association of Securities Dealers Automated Quotation System ("Nasdaq"), Nasdaq Global Market, The New York Stock Exchange or another national securities exchange or traded on any established market, the determination shall be made by reference to market quotations. If there are no market quotations for such date, the determination shall be made by reference to the last date preceding such date for which there are market quotations.

- "Incentive Stock Option" means any Stock Option designated and qualified as an "incentive stock option" as defined in Section 422 of the Code.
 - "Non-Employee Director" means a member of the Board who is not also an employee of the Company or any Affiliate.
 - "Non-Qualified Stock Option" means any Stock Option that is not an Incentive Stock Option.
 - "Option" or "Stock Option" means any option to purchase shares of Stock granted pursuant to Section 5.
- "Restricted Shares" means the shares of Stock underlying a Restricted Stock Award that remain subject to a risk of forfeiture or the Company's right of repurchase.
- "Restricted Stock Award" means an Award of Restricted Shares subject to such restrictions and conditions as the Administrator may determine at the time of grant.
- "Restricted Stock Units" means an Award of Stock units subject to such restrictions and conditions as the Administrator may determine at the time of grant.
- "Sale Event" shall mean (i) the sale of all or substantially all of the assets of the Company on a consolidated basis to an unrelated person or entity, (ii) a merger, reorganization or consolidation pursuant to which the holders of the Company's outstanding voting power and outstanding Stock immediately prior to such transaction do not own a majority of the outstanding voting power and outstanding stock or other equity interests of the resulting or successor entity (or its ultimate parent, if applicable) immediately upon completion of such transaction, (iii) the sale of all of the Stock of the Company to an unrelated person, entity or group thereof acting in concert or (iv) any other transaction in which the owners of the Company's outstanding voting power immediately prior to such transaction do not own at least a majority of the outstanding voting power of the Company or any successor entity immediately upon completion of the transaction other than as a result of the acquisition of securities directly from the Company.
- "Sale Price" means the value as determined by the Administrator of the consideration payable, or otherwise to be received by stockholders, per share of Stock pursuant to a Sale Event.
 - "Section 409A" means Section 409A of the Code and the regulations and other guidance promulgated thereunder.
- "Service Relationship" means any continuous relationship with the Company or any Affiliate as an employee, Non-Employee Director or Consultant.
- "Stock" means the Common Stock, par value \$0.001 per share, of the Company, subject to adjustments pursuant to Section 3.
- "Stock Appreciation Right" means an Award entitling the recipient to receive shares of Stock (or cash, subject to the Administrator's discretion, to the extent explicitly provided for in the applicable Award Agreement) having a value equal to the excess of the Fair Market Value of the Stock on the date of exercise over the exercise price of the Stock Appreciation Right multiplied by the number of shares of Stock with respect to which the Stock Appreciation Right shall have been exercised.
- "Subsidiary" means any corporation or other entity (other than the Company) in which the Company has at least a 50 percent interest, either directly or indirectly.
- "Substitute Awards" means Awards issued under the Plan in substitution for one or more equity awards of an acquired company that are converted, replaced or adjusted in connection with the acquisition.
- "Ten Percent Owner" means an employee who owns or is deemed to own (by reason of the attribution rules of Section 424(d) of the Code) more than 10 percent of the combined voting power of all classes of stock of the Company or any Affiliate.
 - "Unrestricted Stock Award" means an Award of shares of Stock free of any restrictions.

SECTION 2. <u>ADMINISTRATION OF PLAN; ADMINISTRATOR AUTHORITY TO SELECT GRANTEES AND DETERMINE AWARDS</u>

- (a) Administration of Plan. The Plan shall be administered by the Administrator.
- (b) <u>Powers of Administrator</u>. The Administrator shall have the power and authority to administer the Plan and grant Awards consistent with the terms of the Plan, including the power and authority:
 - (i) to select the individuals to whom Awards may from time to time be granted;
- (ii) to determine the time or times of grant, and the extent, if any, of Incentive Stock Options, Non-Qualified Stock Options, Stock Appreciation Rights, Restricted Stock Awards, Restricted Stock Units, Unrestricted Stock Awards, Cash-Based Awards and Dividend Equivalent Rights, or any combination of the foregoing, granted to any one or more grantees;
 - (iii) to determine the number of shares of Stock to be covered by any Award;
- (iv) to determine and modify from time to time the terms and conditions, including restrictions, not inconsistent with the terms of the Plan, of any Award, which terms and conditions may differ among individual Awards and grantees, and to approve the forms of Award Agreement;
 - (v) to accelerate at any time the exercisability or vesting of all or any portion of any Award;
- (vi) subject to the provisions of Section 5(c) and 6(d), to extend at any time the period in which Stock Options or Stock Appreciation Rights, as applicable, may be exercised; and
- (vii) at any time to adopt, alter and repeal such rules, guidelines and practices for administration of the Plan and for its own acts and proceedings as it shall deem advisable; to interpret the terms and provisions of the Plan and any Award (including the Award Agreements and any related written instruments); to make all determinations it deems advisable for the administration of the Plan; to decide all disputes arising in connection with the Plan; and to otherwise supervise the administration of the Plan.

All decisions and interpretations of the Administrator shall be binding on all persons, including the Company and Plan grantees.

- (c) <u>Delegation of Authority to Grant Awards</u>. Subject to applicable law, the Administrator, in its discretion, may delegate to an officer of the Company or a committee consisting of one or more officers of the Company (including the Chief Executive Officer of the Company) all or part of the Administrator's authority and duties with respect to the granting of Awards to individuals who are (i) not subject to the reporting and other provisions of Section 16 of the Exchange Act and (ii) not members of the delegated committee. Any such delegation by the Administrator shall include a limitation as to the amount of Stock underlying Awards that may be granted during the period of the delegation and shall contain guidelines as to the determination of the exercise price and the vesting criteria. The Administrator may revoke or amend the terms of a delegation at any time, but such action shall not invalidate any prior actions of the Administrator's delegate or delegates that were consistent with the terms of the Plan.
- (d) <u>Award Agreement</u>. Awards under the Plan shall be evidenced by Award Agreements that set forth the terms, conditions and limitations for each Award which may include, without limitation, the term of an Award and the provisions applicable in the event the Service Relationship terminates.
- (e) <u>Indemnification</u>. Neither the Board nor the Administrator, nor any member of either or any delegate thereof, shall be liable for any act, omission, interpretation, construction or determination made in good faith in connection with the Plan, and the members of the Board and the Administrator (and any delegate thereof) shall be entitled in all cases to indemnification and reimbursement by the Company in respect of any claim, loss, damage or expense (including, without limitation, reasonable attorneys' fees) arising or resulting therefrom to the fullest extent permitted by law and/or under the Company's articles or bylaws, any directors' and officers' liability insurance coverage which may be in effect from time to time and/or any indemnification agreement between such individual and the Company.
- (f) <u>Foreign Award Recipients</u>. Notwithstanding any provision of the Plan to the contrary, in order to comply with the laws in other countries in which the Company and its Affiliates operate or have employees or other

individuals eligible for Awards, the Administrator, in its sole discretion, shall have the power and authority to: (i) determine which Affiliates shall be covered by the Plan; (ii) determine which individuals outside the United States are eligible to participate in the Plan; (iii) modify the terms and conditions of any Award granted to individuals outside the United States to comply with applicable foreign laws; (iv) establish subplans and modify exercise procedures and other terms and procedures, to the extent the Administrator determines such actions to be necessary or advisable (and such subplans and/or modifications shall be attached to this Plan as appendices); provided, however, that no such subplans and/or modifications shall increase the share limitations contained in Section 3(a) hereof; and (v) take any action, before or after an Award is made, that the Administrator determines to be necessary or advisable to obtain approval or comply with any local governmental regulatory exemptions or approvals. Notwithstanding the foregoing, the Administrator may not take any actions hereunder, and no Awards shall be granted, that would violate the Exchange Act or any other applicable United States securities law, the Code, or any other applicable United States governing statute or law.

SECTION 3. STOCK ISSUABLE UNDER THE PLAN; MERGERS; SUBSTITUTION

- (a) Stock Issuable. The maximum number of shares of Stock reserved and available for issuance under the Plan shall be 9,200,000 shares, subject to adjustment as provided in this Section 3. For purposes of this limitation, the shares of Stock underlying any awards under the Plan and under the Company's 2015 Stock Option and Incentive Plan, as amended from time to time, that are forfeited, canceled, held back upon exercise of an Option or settlement of an Award to cover the exercise price or tax withholding, reacquired by the Company prior to vesting, satisfied without the issuance of Stock or otherwise terminated (other than by exercise) shall be added back to the shares of Stock available for issuance under the Plan and, to the extent permitted under Section 422 of the Code and the regulations promulgated thereunder, the shares of Stock that may be issued as Incentive Stock Options. In the event the Company repurchases shares of Stock on the open market, such shares shall not be added to the shares of Stock available for issuance under the Plan. Subject to such overall limitations, shares of Stock may be issued up to such maximum number pursuant to any type or types of Award; provided, however, that no more than 9,200,000 shares of the Stock may be issued in the form of Incentive Stock Options. The shares available for issuance under the Plan may be authorized but unissued shares of Stock or shares of Stock reacquired by the Company.
- Changes in Stock. Subject to Section 3(c) hereof, if, as a result of any reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in the Company's capital stock, the outstanding shares of Stock are increased or decreased or are exchanged for a different number or kind of shares or other securities of the Company, or additional shares or new or different shares or other securities of the Company or other non-cash assets are distributed with respect to such shares of Stock or other securities, or, if, as a result of any merger or consolidation, or sale of all or substantially all of the assets of the Company, the outstanding shares of Stock are converted into or exchanged for securities of the Company or any successor entity (or a parent or subsidiary thereof), the Administrator shall make an appropriate or proportionate adjustment in (i) the maximum number of shares reserved for issuance under the Plan, including the maximum number of shares that may be issued in the form of Incentive Stock Options, (ii) the number and kind of shares or other securities subject to any then outstanding Awards under the Plan, (iii) the repurchase price, if any, per share subject to each outstanding Restricted Stock Award and (iv) the exercise price for each share subject to any then outstanding Stock Options and Stock Appreciation Rights under the Plan, without changing the aggregate exercise price (i.e., the exercise price multiplied by the number of shares subject to Stock Options and Stock Appreciation Rights) as to which such Stock Options and Stock Appreciation Rights remain exercisable. The Administrator shall also make equitable or proportionate adjustments in the number of shares subject to outstanding Awards and the exercise price and the terms of outstanding Awards to take into consideration cash dividends paid other than in the ordinary course or any other extraordinary corporate event. The adjustment by the Administrator shall be final, binding and conclusive. No fractional shares of Stock shall be issued under the Plan resulting from any such adjustment, but the Administrator in its discretion, may make a cash payment in lieu of fractional shares
- (c) Mergers and Other Transactions. In the case of and subject to the consummation of a Sale Event, the parties thereto may cause the assumption or continuation of Awards theretofore granted by the successor entity, or the substitution of such Awards with new Awards of the successor entity or parent thereof, with appropriate adjustment as to the number and kind of shares and, if appropriate, the per share exercise prices, as such parties shall agree. To the extent the parties to such Sale Event do not provide for the assumption, continuation or substitution of Awards, upon the effective time of the Sale Event, the Plan and all outstanding Awards granted hereunder shall terminate. In such case, except as may be otherwise explicitly provided in the relevant Award Agreement, all Options and Stock Appreciation Rights with time-based vesting conditions or restrictions that are not vested and/or exercisable immediately prior to the effective time of the Sale Event shall become fully vested and nonforfeitable as of the effective time of the Sale Event, and all Awards

with conditions and restrictions relating to the attainment of performance goals may become vested and nonforfeitable in connection with a Sale Event to the extent specified in the relevant Award Agreement. In the event of any such termination of the Plan and outstanding Awards, (i) the Company shall have the option (in its sole discretion) to make or provide for a payment, in cash or in kind, to the grantees holding Options and Stock Appreciation Rights, in exchange for the cancellation thereof, in an amount equal to the difference between (A) the Sale Price multiplied by the number of shares of Stock subject to outstanding Options and Stock Appreciation Rights (to the extent then exercisable at prices not in excess of the Sale Price) and (B) the aggregate exercise price of all such outstanding Options and Stock Appreciation Rights (provided that, in the case of an Option or Stock Appreciation Right with an exercise price equal to or greater than the Sale Price, such Option or Stock Appreciation Right shall be cancelled for no consideration); or (ii) each grantee shall be permitted, within a specified period of time prior to the consummation of the Sale Event as determined by the Administrator, to exercise all outstanding Options and Stock Appreciation Rights (to the extent then exercisable) held by such grantee, including those that will become exercisable upon the consummation of the Sale Event (provided that such exercise shall be subject to the consummation of the Sale Event). The Company shall also have the option (in its sole discretion) to make or provide for a payment, in cash or in kind, to the grantees holding other Awards in an amount equal to the Sale Price multiplied by the number of vested shares of Stock under such Awards.

- (d) Maximum Awards to Non-Employee Directors. Notwithstanding anything to the contrary in this Plan, the value of all Awards awarded under this Plan and all other cash compensation paid by the Company to any Non-Employee Director for service as a Non-Employee Director in any calendar year shall not exceed: (i) \$1,000,000 in the first calendar year an individual becomes a Non-Employee Director and (ii) \$750,000 in any other calendar year. For the purpose of this limitation, the value of any Award shall be its grant date fair value, as determined in accordance with ASC Topic 718 or successor provision but excluding the impact of estimated forfeitures related to service-based vesting provisions.
- (e) <u>Substitute Awards</u>. The Administrator may grant Substitute Awards under the Plan. To the extent consistent with the requirements of Section 422 and the regulations thereunder and other applicable legal requirements (including applicable stock exchange requirements), Stock issued under Substitute Awards will be in addition to and will not reduce the Stock reserved under the Plan, but, notwithstanding anything in Section 3(a) to the contrary, if any Substitute Award is settled in cash or expires, becomes unexercisable, terminates or is forfeited to or repurchased by the Company without the issuance of Stock, the shares of Stock previously subject to such Award will not increase the Stock reserved or be available for future issuance under the Plan. The Administrator will determine the extent to which the terms and conditions of the Plan apply to Substitute Awards, if at all.

SECTION 4. ELIGIBILITY

Grantees under the Plan will be such employees, Non-Employee Directors or Consultants of the Company and its Affiliates as are selected from time to time by the Administrator in its sole discretion; provided that Awards may not be granted to employees, Non-Employee Directors or Consultants who are providing services only to any "parent" of the Company, as such term is defined in Rule 405 of the Act, unless (i) the stock underlying the Awards is treated as "service recipient stock" under Section 409A or (ii) the Company has determined that such Awards are exempt from or otherwise comply with Section 409A.

SECTION 5. STOCK OPTIONS

(a) <u>Award of Stock Options</u>. The Administrator may grant Stock Options under the Plan. Any Stock Option granted under the Plan shall be in such form as the Administrator may from time to time approve.

Stock Options granted under the Plan may be either Incentive Stock Options or Non-Qualified Stock Options. Incentive Stock Options may be granted only to employees of the Company or any Subsidiary that is a "subsidiary corporation" within the meaning of Section 424(f) of the Code. To the extent that any Option does not qualify as an Incentive Stock Option, it shall be deemed a Non-Qualified Stock Option.

Stock Options granted pursuant to this Section 5 shall be subject to the following terms and conditions and shall contain such additional terms and conditions, not inconsistent with the terms of the Plan, as the Administrator shall deem desirable. If the Administrator so determines, Stock Options may be granted in lieu of cash compensation at the optionee's election, subject to such terms and conditions as the Administrator may establish.

(b) <u>Exercise Price</u>. The exercise price per share for the Stock covered by a Stock Option granted pursuant to this Section 5 shall be determined by the Administrator at the time of grant but shall not be less than 100 percent of the Fair Market Value on the date of grant. In the case of an Incentive Stock Option that is granted to a

Ten Percent Owner, the exercise price of such Incentive Stock Option shall be not less than 110 percent of the Fair Market Value on the grant date. Notwithstanding the foregoing, Stock Options may be granted with an exercise price per share that is less than 100 percent of the Fair Market Value on the date of grant (i) pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code, (ii) to individuals who are not subject to U.S. income tax on the date of grant or (iii) if the Stock Option is otherwise compliant with Section 409A.

- (c) <u>Option Term</u>. The term of each Stock Option shall be fixed by the Administrator, but no Stock Option shall be exercisable more than ten years after the date the Stock Option is granted. In the case of an Incentive Stock Option that is granted to a Ten Percent Owner, the term of such Stock Option shall be no more than five years from the date of grant.
- (d) <u>Exercisability; Rights of a Stockholder</u>. Stock Options shall become exercisable at such time or times, whether or not in installments, as shall be determined by the Administrator at or after the grant date. The Administrator may at any time accelerate the exercisability of all or any portion of any Stock Option. An optionee shall have the rights of a stockholder only as to shares acquired upon the exercise of a Stock Option and not as to unexercised Stock Options.
- (e) <u>Method of Exercise</u>. Stock Options may be exercised in whole or in part, by giving written or electronic notice of exercise to the Company, specifying the number of shares to be purchased. Payment of the purchase price may be made by one or more of the following methods except to the extent otherwise provided in the Award Agreement:
 - (i) In cash, by certified or bank check or other instrument acceptable to the Administrator;
- (ii) Through the delivery (or attestation to the ownership following such procedures as the Company may prescribe) of shares of Stock that are not then subject to restrictions under any Company plan. Such surrendered shares shall be valued at Fair Market Value on the exercise date;
- (iii) By the optionee delivering to the Company a properly executed exercise notice together with irrevocable instructions to a broker to promptly deliver to the Company cash or a check payable and acceptable to the Company for the purchase price; provided that in the event the optionee chooses to pay the purchase price as so provided, the optionee and the broker shall comply with such procedures and enter into such agreements of indemnity and other agreements as the Company shall prescribe as a condition of such payment procedure; or
- (iv) With respect to Stock Options that are not Incentive Stock Options, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price.

Payment instruments will be received subject to collection. The transfer to the optionee on the records of the Company or of the transfer agent of the shares of Stock to be purchased pursuant to the exercise of a Stock Option will be contingent upon receipt from the optionee (or a purchaser acting in his stead in accordance with the provisions of the Stock Option) by the Company of the full purchase price for such shares and the fulfillment of any other requirements contained in the Award Agreement or applicable provisions of laws (including the satisfaction of any withholding taxes that the Company is obligated to withhold with respect to the optionee). In the event an optionee chooses to pay the purchase price by previously-owned shares of Stock through the attestation method, the number of shares of Stock transferred to the optionee upon the exercise of the Stock Option shall be net of the number of attested shares. In the event that the Company establishes, for itself or using the services of a third party, an automated system for the exercise of Stock Options, such as a system using an internet website or interactive voice response, then the paperless exercise of Stock Options may be permitted through the use of such an automated system.

- (f) Annual Limit on Incentive Stock Options. To the extent required for "incentive stock option" treatment under Section 422 of the Code, the aggregate Fair Market Value (determined as of the time of grant) of the shares of Stock with respect to which Incentive Stock Options granted under this Plan and any other plan of the Company or its Affiliates become exercisable for the first time by an optionee during any calendar year shall not exceed \$100,000. To the extent that any Stock Option exceeds this limit, it shall constitute a Non-Qualified Stock Option.
- (g) <u>Termination</u>. Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 16 below, in writing after the Award is issued, any portion of a Stock Option that is not vested and exercisable on the date of termination of an optionee's Service Relationship shall immediately expire

and be null and void. Once any portion of the Stock Option becomes vested and exercisable, the optionee's right to exercise such portion of the Stock Option (or the optionee's representatives and legatees as applicable) in the event of a termination of the optionee's Service Relationship shall continue until during the period as set forth in the applicable Award Agreement.

SECTION 6. STOCK APPRECIATION RIGHTS

- (a) <u>Award of Stock Appreciation Rights</u>. The Administrator may grant Stock Appreciation Rights under the Plan. A Stock Appreciation Right is an Award entitling the recipient to receive shares of Stock (or cash, subject to the Administrator's discretion, to the extent explicitly provided for in the applicable Award Agreement) having a value equal to the excess of the Fair Market Value of a share of Stock on the date of exercise over the exercise price of the Stock Appreciation Right multiplied by the number of shares of Stock with respect to which the Stock Appreciation Right shall have been exercised.
- (b) Exercise Price of Stock Appreciation Rights. The exercise price of a Stock Appreciation Right shall not be less than 100 percent of the Fair Market Value of the Stock on the date of grant. Notwithstanding the foregoing, Stock Appreciation Rights may be granted with an exercise price per share that is less than 100 percent of the Fair Market Value on the date of grant (i) pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code, (ii) to individuals who are not subject to U.S. income tax on the date of grant or (iii) the Stock Appreciation Right is otherwise compliant with Section 409A.
- (c) <u>Grant and Exercise of Stock Appreciation Rights</u>. Stock Appreciation Rights may be granted by the Administrator independently of any Stock Option granted pursuant to Section 5 of the Plan.
- (d) <u>Terms and Conditions of Stock Appreciation Rights</u>. Stock Appreciation Rights shall be subject to such terms and conditions not inconsistent with the terms of the Plan as shall be determined on the date of grant by the Administrator. The term of a Stock Appreciation Right may not exceed ten years. The terms and conditions of each such Award shall be determined by the Administrator, and such terms and conditions may differ among individual Awards and grantees.
- (e) <u>Termination</u>. Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 16 below, in writing after the Award is issued, any Stock Appreciation Rights that are not vested and exercisable on the date of termination of a recipient's Service Relationship shall immediately expire and be null and void. Once any Stock Appreciation Rights become vested and exercisable, the recipient's right to exercise such Stock Appreciation Rights (or the recipient's representatives and legatees as applicable) in the event of a termination of the recipient's Service Relationship shall continue until during the period as set forth in the applicable Award Agreement.

SECTION 7. RESTRICTED STOCK AWARDS

- (a) <u>Nature of Restricted Stock Awards.</u> The Administrator may grant Restricted Stock Awards under the Plan. A Restricted Stock Award is any Award of Restricted Shares subject to such restrictions and conditions as the Administrator may determine at the time of grant. Conditions may be based on a continuing Service Relationship and/or achievement of preestablished performance goals and objectives.
- (b) Rights as a Stockholder. Upon the grant of the Restricted Stock Award and payment by the grantee of any applicable purchase price, the grantee shall have the rights of a stockholder with respect to the voting of the Restricted Shares and receipt of dividends; provided that if the lapse of restrictions with respect to the Restricted Stock Award is tied to the attainment of vesting conditions, any dividends paid by the Company during the vesting period shall accrue and shall not be paid to the grantee until and to the extent the vesting conditions are met with respect to the Restricted Stock Award. Unless the Administrator shall otherwise determine, (i) uncertificated Restricted Shares shall be accompanied by a notation on the records of the Company or the transfer agent to the effect that they are subject to forfeiture until such Restricted Shares are vested as provided in Section 7(d) below, and (ii) certificated Restricted Shares shall remain in the possession of the Company until such Restricted Shares are vested as provided in Section 7(d) below, and the grantee shall be required, as a condition of the grant, to deliver to the Company such instruments of transfer as the Administrator may prescribe.
- (c) Restrictions. Restricted Shares may not be sold, assigned, transferred, pledged or otherwise encumbered or disposed of except as specifically provided herein or in the Award Agreement. Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 16 below, in writing after the Award is issued, if a grantee's Service Relationship terminates for any reason, any Restricted Shares that

have not vested at the time of termination shall automatically and without any requirement of notice to such grantee from or other action by or on behalf of, the Company be deemed to have been reacquired by the Company at its original purchase price (if any) from such grantee or such grantee's legal representative simultaneously with such termination of the Service Relationship), and thereafter shall cease to represent any ownership of the Company by the grantee or rights of the grantee as a stockholder. Following such deemed reacquisition of Restricted Shares that are represented by physical certificates, a grantee shall surrender such certificates to the Company upon request without consideration.

- (d) <u>Vesting of Restricted Shares</u>. The Administrator at the time of grant shall specify the date or dates and/or the attainment of pre-established performance goals, objectives and other conditions on which the non-transferability of the Restricted Shares and the Company's right of repurchase or forfeiture shall lapse. Subsequent to such date or dates and/or the attainment of such pre-established performance goals, objectives and other conditions, the shares on which all restrictions have lapsed shall no longer be Restricted Shares and shall be deemed "vested."
- (e) <u>Termination</u>. Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 16 below, in writing after the Award is issued, a grantee's right in all Restricted Shares that have not vested shall automatically terminate upon termination of the grantee's Service Relationship for any reason.

SECTION 8. RESTRICTED STOCK UNITS

- (a) Nature of Restricted Stock Units. The Administrator may grant Restricted Stock Units under the Plan. A Restricted Stock Unit is an Award of stock units that may be settled in shares of Stock (or cash, subject to the Administrator's discretion, to the extent explicitly provided for in the Award Agreement) upon the satisfaction of such restrictions and conditions at the time of grant. Conditions may be based on a continuing Service Relationship and/or achievement of pre-established performance goals and objectives. The terms and conditions of each such Award shall be determined by the Administrator, provided that they are not inconsistent with the terms of the Plan, and such terms and conditions may differ among individual Awards and grantees. Except in the case of Restricted Stock Units with a deferred settlement date that complies with Section 409A, at the end of the vesting period, the Restricted Stock Units, to the extent vested, shall promptly be settled in the form of shares of Stock. Restricted Stock Units with deferred settlement dates are subject to Section 409A and shall contain such additional terms and conditions as the Administrator shall determine in its sole discretion in order to comply with the requirements of Section 409A.
- (b) <u>Election to Receive Restricted Stock Units in Lieu of Compensation</u>. The Administrator may, in its sole discretion, permit a grantee to elect to receive a portion of future cash compensation otherwise due to such grantee in the form of an award of Restricted Stock Units. Any such election shall be made in writing and shall be delivered to the Company no later than the date specified by the Administrator and in accordance with Section 409A and such other rules and procedures established by the Administrator. Any such future cash compensation that the grantee elects to defer shall be converted to a fixed number of Restricted Stock Units based on the Fair Market Value of Stock on the date the compensation would otherwise have been paid to the grantee if such payment had not been deferred as provided herein. The Administrator shall have the sole right to determine whether and under what circumstances to permit such elections and to impose such limitations and other terms and conditions thereon as the Administrator deems appropriate. Any Restricted Stock Units that are elected to be received in lieu of cash compensation shall be fully vested, unless otherwise provided in the Award Agreement.
- (c) <u>Rights as a Stockholder</u>. A grantee shall have the rights as a stockholder only as to shares of Stock acquired by the grantee upon settlement of Restricted Stock Units; provided, however, that the grantee may be credited with Dividend Equivalent Rights with respect to the stock units underlying his Restricted Stock Units, subject to the provisions of Section 11 and such terms and conditions as the Administrator may determine.
- (d) <u>Termination</u>. Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 16 below, in writing after the Award is issued, a grantee's right in all Restricted Stock Units that have not vested shall automatically terminate upon termination of the grantee's Service Relationship for any reason.

SECTION 9. UNRESTRICTED STOCK AWARDS

<u>Grant or Sale of Unrestricted Stock</u>. The Administrator may grant (or sell at par value or such higher purchase price determined by the Administrator) an Unrestricted Stock Award under the Plan. An Unrestricted Stock

Award is an Award pursuant to which the grantee may receive shares of Stock free of any restrictions under the Plan. Unrestricted Stock Awards may be granted in respect of past services or other valid consideration, or in lieu of cash compensation due to such grantee.

SECTION 10. CASH-BASED AWARDS

Grant of Cash-Based Awards. The Administrator may grant Cash-Based Awards under the Plan. A Cash-Based Award is an Award that entitles the grantee to a payment in cash upon the attainment of specified performance goals. The Administrator shall determine the maximum duration of the Cash-Based Award, the amount of cash to which the Cash-Based Award pertains, the conditions upon which the Cash-Based Award shall become vested or payable, and such other provisions as the Administrator shall determine. Each Cash-Based Award shall specify a cash-denominated payment amount, formula or payment ranges as determined by the Administrator. Payment, if any, with respect to a Cash-Based Award shall be made in accordance with the terms of the Award and may be made in cash.

SECTION 11. DIVIDEND EQUIVALENT RIGHTS

- (a) <u>Dividend Equivalent Rights</u>. The Administrator may grant Dividend Equivalent Rights under the Plan. A Dividend Equivalent Right is an Award entitling the grantee to receive credits based on cash dividends that would have been paid on the shares of Stock specified in the Dividend Equivalent Right (or other Award to which it relates) if such shares had been issued to the grantee. A Dividend Equivalent Right may be granted hereunder to any grantee as a component of an Award of Restricted Stock Units or as a freestanding Award. The terms and conditions of Dividend Equivalent Rights shall be specified in the Award Agreement. Dividend equivalents credited to the holder of a Dividend Equivalent Right may be paid currently or may be deemed to be reinvested in additional shares of Stock, which may thereafter accrue additional equivalents. Any such reinvestment shall be at Fair Market Value on the date of reinvestment or such other price as may then apply under a dividend reinvestment plan sponsored by the Company, if any. Dividend Equivalent Rights may be settled in cash or shares of Stock or a combination thereof, in a single installment or installments. A Dividend Equivalent Right granted as a component of another Award shall provide that such Dividend Equivalent Right shall expire or be forfeited or annulled under the same conditions as such other Award, and that such Dividend Equivalent Right shall expire or be forfeited or annulled under the same conditions as such other Award.
- (b) <u>Termination</u>. Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 16 below, in writing after the Award is issued, a grantee's rights in all Dividend Equivalent Rights shall automatically terminate upon termination of the grantee's Service Relationship for any reason.

SECTION 12. TRANSFERABILITY OF AWARDS

- (a) <u>Transferability</u>. Except as provided in Section 12(b) below, a grantee's Awards shall only be exercisable by the grantee during such grantee's lifetime, or by the grantee's legal representative or guardian in the event of the grantee's incapacity. No Awards shall be sold, assigned, transferred or otherwise encumbered or disposed of by a grantee other than by will or by the laws of descent and distribution or pursuant to a domestic relations order. No Awards shall be subject, in whole or in part, to attachment, execution, or levy of any kind, and any purported transfer in violation hereof shall be null and void.
- (b) <u>Administrator Action.</u> Notwithstanding Section 12(a), the Administrator, in its discretion, may provide either in the Award Agreement regarding a given Award or by subsequent written approval that the grantee (who is an employee or Non-Employee Director) may transfer their Non-Qualified Stock Options to their immediate family members, to trusts for the benefit of such family members, or to partnerships in which such family members are the only partners, provided that the transferee agrees in writing with the Company to be bound by all of the terms and conditions of this Plan and the applicable Award. In no event may an Award be transferred by a grantee for value.
- (c) <u>Family Member</u>. For purposes of Section 12(b), "immediate family member" shall mean a grantee's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive relationships, any person sharing the grantee's household (other than a tenant of the grantee), a trust in which these persons (or the grantee) have more than 50 percent of the beneficial interest, a foundation in which these persons (or the grantee) control the management of assets, and any other entity in which these persons (or the grantee) own more than 50 percent of the voting interests.

(d) <u>Designation of Beneficiary</u>. To the extent permitted by the Company, each grantee to whom an Award has been made under the Plan may designate a beneficiary or beneficiaries to exercise any Award or receive any payment under any Award payable on or after the grantee's death. Any such designation shall be on a form provided for that purpose by the Administrator and shall not be effective until received by the Administrator. If no beneficiary has been designated by a deceased grantee, or if the designated beneficiaries have predeceased the grantee, the beneficiary shall be the grantee's estate

SECTION 13. TAX WITHHOLDING

- (a) <u>Payment by Grantee</u>. Each grantee shall, no later than the date as of which the value of an Award or of any Stock or other amounts received thereunder first becomes includable in the gross income of the grantee for Federal income tax purposes, pay to the Company, or make arrangements satisfactory to the Administrator regarding payment of, any Federal, state, or local taxes of any kind required by law to be withheld by the Company with respect to such income. The Company and its Affiliates shall, to the extent permitted by law, have the right to deduct any such taxes from any payment of any kind otherwise due to the grantee. The Company's obligation to deliver evidence of book entry (or stock certificates) to any grantee is subject to and conditioned on tax withholding obligations being satisfied by the grantee.
- (b) Payment in Stock. The Administrator may require the Company's tax withholding obligation to be satisfied, in whole or in part, by the Company withholding from shares of Stock to be issued pursuant to any Award a number of shares with an aggregate Fair Market Value (as of the date the withholding is effected) that would satisfy the withholding amount due; provided, however, that the amount withheld does not exceed the maximum statutory tax rate or such lesser amount as is necessary, on a jurisdiction-by-jurisdiction basis, to avoid liability accounting treatment. For purposes of share withholding, the Fair Market Value of withheld shares shall be determined in the same manner as the value of Stock includible in income of the grantees. The Administrator may also require the Company's tax withholding obligation to be satisfied, in whole or in part, by an arrangement whereby a certain number of shares of Stock issued pursuant to any Award are immediately sold and proceeds from such sale are remitted to the Company in an amount that would satisfy the withholding amount due.

SECTION 14. SECTION 409A AWARDS

Awards are intended to be exempt from Section 409A to the greatest extent possible and to otherwise comply with Section 409A. The Plan and all Awards shall be interpreted in accordance with such intent. To the extent that any Award is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A (a "409A Award"), the Award shall be subject to such additional rules and requirements as specified by the Administrator from time to time in order to comply with Section 409A. In this regard, if any amount under a 409A Award is payable upon a "separation from service" (within the meaning of Section 409A) to a grantee who is then considered a "specified employee" (within the meaning of Section 409A), then no such payment shall be made prior to the date that is the earlier of (i) six months and one day after the grantee's separation from service, or (ii) the grantee's death, but only to the extent such delay is necessary to prevent such payment from being subject to interest, penalties and/or additional tax imposed pursuant to Section 409A. Further, the settlement of any 409A Award may not be accelerated except to the extent permitted by Section 409A.

SECTION 15. TERMINATION OF SERVICE RELATIONSHIP, TRANSFER, LEAVE OF ABSENCE, ETC.

- (a) <u>Termination of Service Relationship</u>. If the grantee's Service Relationship is with an Affiliate and such Affiliate ceases to be an Affiliate, the grantee shall be deemed to have terminated their Service Relationship for purposes of the Plan.
 - (b) For purposes of the Plan, the following events shall not be deemed a termination of a Service Relationship:
- (i) a change in the type of Service Relationship (e.g., a change to or from full- or part-time employee, Non-Employee Director or Consultant) provided that the Service Relationship, regardless of type, continues without interruption including a transfer as described below in Section 15(b)(ii);
- (ii) a transfer of any Service Relationship between the Company and an Affiliate or from one Affiliate to another, provided that the transfer occurs on the date immediately following the date upon which the Service Relationship with the previous entity (the Company or Affiliate, as applicable) ends; or

(iii) an approved leave of absence for military service or sickness, or for any other purpose approved by the Company, if the employee's right to return to active employment or to re-employment is guaranteed either by a statute, law or by contract or under the policy pursuant to which the leave of absence was granted or if the Administrator otherwise so provides in writing.

SECTION 16. AMENDMENTS AND TERMINATION

The Board may, at any time, amend or discontinue the Plan and the Administrator may, at any time, amend or cancel any outstanding Award for the purpose of satisfying changes in law or for any other lawful purpose, but no such action shall materially and adversely affect rights under any outstanding Award without the holder's consent. Except as provided in Section 3(b), 3(c) or 3(e), without prior stockholder approval, in no event may the Administrator exercise its discretion to reduce the exercise price of outstanding Stock Options or Stock Appreciation Rights, effect repricing through cancellation and re-grants or cancellation of Stock Options or Stock Appreciation Rights in exchange for cash or other Awards or effect cash buyouts of underwater Stock Options or Stock Appreciation Rights. To the extent required under the rules of any securities exchange or market system on which the Stock is listed or to the extent determined by the Administrator to be required by the Code to ensure that Incentive Stock Options granted under the Plan are qualified under Section 422 of the Code, Plan amendments shall be subject to approval by Company stockholders. Nothing in this Section 16 shall limit the Administrator's authority to take any action permitted pursuant to Section 3(b), 3(c) or 3(e).

SECTION 17. STATUS OF PLAN

With respect to the portion of any Award that has not been exercised and any payments in cash, Stock or other consideration not received by a grantee, a grantee shall have no rights greater than those of a general creditor of the Company unless the Administrator shall otherwise expressly determine in connection with any Award or Awards. In its sole discretion, the Administrator may authorize the creation of trusts or other arrangements to meet the Company's obligations to deliver Stock or make payments with respect to Awards hereunder, provided that the existence of such trusts or other arrangements is consistent with the foregoing sentence.

SECTION 18. GENERAL PROVISIONS

- (a) <u>No Distribution</u>. The Administrator may require each person acquiring Stock pursuant to an Award to represent to and agree with the Company in writing that such person is acquiring the shares without a view to distribution thereof.
- Issuance of Stock. To the extent certificated, stock certificates to grantees under this Plan shall be deemed delivered for all purposes when the Company or a stock transfer agent of the Company shall have mailed such certificates in the United States mail, addressed to the grantee, at the grantee's last known address on file with the Company. Uncertificated Stock shall be deemed delivered for all purposes when the Company or a Stock transfer agent of the Company shall have given to the grantee by electronic mail (with proof of receipt) or by United States mail, addressed to the grantee, at the grantee's last known address on file with the Company, notice of issuance and recorded the issuance in its records (which may include electronic "book entry" records). Notwithstanding anything herein to the contrary, the Company shall not be required to issue or deliver any evidence of book entry or certificates evidencing shares of Stock pursuant to the exercise or settlement of any Award, unless and until the Administrator has determined, with advice of counsel (to the extent the Administrator deems such advice necessary or advisable), that the issuance and delivery is in compliance with all applicable laws, regulations of governmental authorities and, if applicable, the requirements of any exchange on which the shares of Stock are listed, quoted or traded. Any Stock issued pursuant to the Plan shall be subject to any stop-transfer orders and other restrictions as the Administrator deems necessary or advisable to comply with federal, state or foreign jurisdiction, securities or other laws, rules and quotation system on which the Stock is listed, quoted or traded. The Administrator may place legends on any Stock certificate or notations on any book entry to reference restrictions applicable to the Stock. In addition to the terms and conditions provided herein, the Administrator may require that an individual make such reasonable covenants, agreements, and representations as the Administrator, in its discretion, deems necessary or advisable in order to comply with any such laws, regulations, or requirements. The Administrator shall have the right to require any individual to comply with any timing or other restrictions with respect to the settlement or exercise of any Award, including a window-period limitation, as may be imposed in the discretion of the Administrator.
- (c) <u>Stockholder Rights.</u> Until Stock is deemed delivered in accordance with Section 18(b), no right to vote or receive dividends or any other rights of a stockholder will exist with respect to shares of Stock to be issued in connection with an Award, notwithstanding the exercise of a Stock Option or any other action by the grantee with respect to an Award.

- (d) <u>Other Compensation Arrangements; No Employment Rights</u>. Nothing contained in this Plan shall prevent the Board from adopting other or additional compensation arrangements, including trusts, and such arrangements may be either generally applicable or applicable only in specific cases. The adoption of this Plan and the grant of Awards do not confer upon any employee any right to continued employment with the Company or any Affiliate.
- (e) <u>Trading Policy Restrictions</u>. Option exercises and other Awards under the Plan shall be subject to the Company's insider trading policies and procedures, as in effect from time to time.
- (f) <u>Clawback Policy</u>. Awards under the Plan shall be subject to any and all clawback and recoupment policies of the Company, as may be in effect from time to time.

SECTION 19. EFFECTIVE DATE OF PLAN

This Plan shall become effective upon stockholder approval in accordance with applicable state law, the Company's bylaws and articles of incorporation, and applicable stock exchange rules. No grants of Stock Options and other Awards may be made hereunder after the tenth anniversary of the Effective Date and no grants of Incentive Stock Options may be made hereunder after the tenth anniversary of the date the Plan is approved by the Board.

SECTION 20. GOVERNING LAW

This Plan and all Awards and actions taken thereunder shall be governed by, and construed in accordance with, the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the State of Delaware, applied without regard to conflict of law principles.

DATE APPROVED BY BOARD OF DIRECTORS: March 6, 2024

DATE APPROVED BY STOCKHOLDERS:



BLUEPRINT MEDICINES CORPORATION ATTN: TRACEY L. MCCAIN 45 SIDNEY STREET CAMBRIDGE, MA 02139

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:



VOTE BY INTERNET - www.proxyvote.com or scan the QR Barcode above
Use the Internet to transmit your voting instructions and for electronic delivery of
information up until 11:59 P.M. Eastern Daylight Time on June 11, 2024, the day before
the Annual Meeting. Have your proxy card in hand when you access the web site and
follow the instructions to obtain your records and to create an electronic voting instruction

Torm. During The Meeting - Go to www.virtualshareholdermeeting.com/BPMC2024
You may attend the meeting via the Internet and vote during the meeting. Have the information that is printed in the box marked by the arrow available and follow the lengthuisting.

instructions.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 P.M.
Eastern Daylight Time on June 11, 2024, the day before the Annual Meeting. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

| | THIS PROXY | CARD | IS | VALID | ONLY | WHEN | SIGNED | AND | DATED. | DETA | CH AND F | RETURN T | HIS POR | TION ON |
|---|--------------------------|------------|--------|-----------|-------------------|---------------------|-------------------------|-------------------|---|----------|----------|----------|---------|---------|
| The Board of Directors recommends you the three Class III director nominees Proposal 1. | | For All | Withh | | pt in Ex no | dividua cept" ar | nominee | the num | vote for ark "For ber(s) of low. | A11 | | | | ٦ |
| 1. Election of Directors | | | | | | | | | | | | | | • |
| Nominees | | | | | | | | | | | | | | |
| 01) Daniella Beckman 02) Hab | bib Dable | | 03) | Lynn Se | ely | | | | | | | | | |
| The Board of Directors recommends you | vote 1 YEAR on | the fol | lowing | propos | al: | | | | | | 1 year | 2 years | 3 years | Abstai |
| Approval of a non-binding advisory our named executive officers. | vote on the f | requency | of fu | iture ad | visory w | otes on 1 | the compen | sation | paid to | | 0 | 0 | 0 | 0 |
| The Board of Directors recommends you | vote FOR propo | sals 3, | 4 and | 5. | | | | | | | | For | Against | Abstai |
| Approval of a non-binding advisory | vote on the c | ompensat | ion pa | aid to o | ur named | executiv | ve officer | s. | | | | 0 | 0 | 0 |
| 4. Approval of the Blueprint Medicine | s Corporation : | 2024 Sto | ck Inc | entive | Plan. | | | | | | | 0 | 0 | 0 |
| Ratification of the appointment of the fiscal year ending December 31 | Ernst & Young , 2024. | LLP as | our in | ndepender | nt regis | tered put | olic accou | nting f | irm for | | | 0 | 0 | 0 |
| NOTE: The proxies are authorized to vo before the meeting or any adjournment | | | | on such (| other bu | siness as | may prop | erly co | me | | | | | |
| | | | | | | | | | | | | | | |
| Please sign exactly as your name(s) ap please give full title as such. Joint partnership, please sign in full corpo | owners should | each sig | n pers | onally. | All hold | ders must | administr t sign. If | ator, o a corp | r other fi oration or | duciary, | | | | |
| | | | 100 | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

0000644137 2 R1 0.0.6

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:

The Notice and Proxy Statement and Form 10-K are available at www.proxyvote.com

BLUEPRINT MEDICINES CORPORATION
Annual Meeting of Stockholders
June 12, 2024 3:00 PM
This proxy is solicited by the Board of Directors

The stockholder(s) hereby appoint(s) Kathryn Haviland, Tracey L. McCain and Michael Landsittel, or any of them, as proxies, each with the power to appoint his or her substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of common stock of BLUEPRINT MEDICINES CORPORATION that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 3:00 PM, Eastern Daylight Time, on June 12, 2024, via a live webcast at www.virtualshareholdermeeting.com/BPMC2024, and any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

Continued and to be signed on reverse side