

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 (Amendment No. )

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under §240.14a-12

**IDERA PHARMACEUTICALS, INC.**

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(Name of Registrant as Specified In Its Charter)

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(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required
- Fee paid previously with preliminary materials
- Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11

**IDERA PHARMACEUTICALS, INC.**

**505 Eagleview Blvd., Suite 212**

**Exton, PA 19341**

**NOTICE OF 2022 ANNUAL MEETING OF STOCKHOLDERS**

**Thursday, June 23, 2022**

- Date and Time:** Thursday, June 23, 2022 at 8:00 a.m., Eastern Time
- Format:** Idera Pharmaceuticals, Inc.'s ("Idera," "our," "we," "us," or the "Company") 2022 annual meeting of stockholders (the "Annual Meeting") will be an in-person meeting held at the Company's headquarters located at:
- 505 Eagleview Boulevard, Suite 212 Exton,  
Pennsylvania 19341
- Items of Business:**
- Elect two Class III directors to our board of directors for terms to expire at the 2025 annual meeting of stockholders;
  - Approve, by non-binding vote, the compensation of the Company's named executive officers for 2021;
  - Ratify the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2022;
  - Approve the amendment to the 2013 Stock Incentive Plan to increase the number of authorized shares;
  - Approve the amendment to the 2017 Employee Stock Purchase Plan to increase the number of authorized shares; and
  - Transact any other business as may properly come before the Annual Meeting or any postponement, continuation or adjournment of the Annual Meeting.
- The board of directors has no knowledge of any other business to be transacted at the Annual Meeting.
- Record Date:** You may vote on the matters to be presented at the Annual Meeting if you were a stockholder of record as of the close of business on April 25, 2022 (the "Record Date").
- Proxy Voting:** It is important that your shares be represented and voted at the Annual Meeting. Whether or not you plan attend the Annual Meeting, we urge you to vote as promptly as possible by telephone or Internet or by signing, dating, and returning a printed proxy card or voting instruction form, as applicable. If you attend the Annual Meeting, you may vote your shares at the Annual Meeting even if you previously voted by proxy and may revoke your proxy at any time before its exercise at the Annual Meeting. Please vote as soon as possible to ensure that your shares will be represented and counted at the Annual Meeting.

By order of the board of directors,

/s/ BRYANT D. LIM

Bryant D. Lim  
*Senior Vice President, General Counsel*  
*and Corporate Secretary*  
Exton, Pennsylvania  
April 29, 2022

**IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE ANNUAL MEETING OF STOCKHOLDERS TO BE HELD ON JUNE 23, 2022**

**Idera's Proxy Statement for the Annual Meeting of Stockholders and 2021 Annual Report to Stockholders for the fiscal year ended December 31, 2021 are available at:**  
**<https://ir.iderapharma.com/shareholder-services/annual-meeting>**

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**IDERA PHARMACEUTICALS, INC.****505 Eagleview Blvd., Suite 212  
Exton, PA 19341****PROXY STATEMENT  
FOR THE 2022 ANNUAL MEETING OF STOCKHOLDERS  
TO BE HELD ON THURSDAY, JUNE 23, 2022  
AT 8:00 A.M. EASTERN TIME**

Idera Pharmaceuticals, Inc., a Delaware corporation, which is referred to as “we,” “us,” the “Company,” or “Idera” in this proxy statement, has made these proxy materials available to you on the Internet, or upon your request, has delivered a printed or email copy of the proxy materials to you, because our board of directors (our “board” or the “board”) is soliciting your proxy to vote at our Annual Meeting of stockholders, or the Annual Meeting. The Annual Meeting will be held on Thursday, June 23, 2022, at 8:00 a.m., Eastern Time, the Company’s headquarters located at 505 Eagleview Boulevard, Suite 212, Exton, Pennsylvania 19341, or at such other time and place to which the meeting may be adjourned, continued, or postponed. If the Annual Meeting is adjourned for any reason, then proxies submitted may be used at any adjournment of the Annual Meeting.

**INFORMATION ABOUT THE ANNUAL MEETING****When are this proxy statement and the accompanying materials scheduled to be sent to stockholders?**

We have elected to provide access to our proxy materials for the Annual Meeting to our stockholders via the Internet. Accordingly, on or about May 2, 2022, we will begin mailing a Notice of Internet Availability of Proxy Materials, or Notice of Internet Availability, and all other proxy materials, including the Notice of Annual Meeting of Stockholders, this proxy statement, and accompanying proxy card. For shares held in street name (held for your account by a broker or other nominee), a voting instruction form and the Annual Report on Form 10-K for the fiscal year ended December 31, 2021, or the 2021 Annual Report, will be made available to stockholders on the Internet on the same date.

**Why did I receive a Notice of Internet Availability instead of a full set of proxy materials?**

Pursuant to rules adopted by the U.S. Securities and Exchange Commission, or SEC, we are providing access to our proxy materials over the Internet rather than printing and mailing the proxy materials. We believe electronic delivery will expedite the receipt of materials and will help lower our costs and reduce the environmental impact of our Annual Meeting materials. Therefore, a Notice of Internet Availability will be mailed to holders of record and beneficial owners of our common stock starting on or around May 2, 2022. The Notice of Internet Availability will provide instructions as to how stockholders may access and review the proxy materials, including the Notice of Annual Meeting, proxy statement, proxy card, and 2021 Annual Report, on the website referred to in the Notice of Internet Availability or, alternatively, how to request that a copy of the proxy materials, including a proxy card, be sent to them by mail. The Notice of Internet Availability also will provide voting instructions. In addition, stockholders of record may request to receive the proxy materials in printed form by mail or electronically by email on an ongoing basis for future stockholder meetings. Please note that while our proxy materials are available at the website referenced in the Notice of Internet Availability, and our Notice of Annual Meeting, proxy statement, and 2021 Annual Report are available on our website, no other information contained on either website is incorporated by reference in, or considered to be a part of, this document.

**Who may vote?**

Holders of record of our common stock as of the close of business on the Record Date of April 25, 2022 are entitled to vote on each matter properly brought before the Annual Meeting. Holders of our common stock will be entitled to one vote for each share of common stock held as of the record date. As of the close of business on the Record Date, we had 52,966,025 shares of common stock outstanding.

**How do I vote my shares if I am a stockholder of record?**

If you are a stockholder of record (meaning that you hold shares in your name in the records of our transfer agent, Computershare Trust Company, N.A., and that your shares are not held in “street name” by a bank or brokerage firm), you may vote your shares in any one of the following ways:

- *By internet.* To vote over the internet through services provided by Computershare Trust Company, N.A., please go to the following website: <http://www.investorvote.com/IDRA> and follow the instructions at that site for submitting your proxy. If you vote over the internet, you do not need to complete and mail your proxy card.
- *By telephone.* To vote by telephone through services provided by Computershare Trust Company, N.A., call 1-800-652-VOTE (8683), and follow the instructions provided on the proxy card that accompanies this proxy statement. If you vote by telephone, you do not need to complete and mail your proxy card.
- *By mail.* If you requested printed proxy materials, you need to complete, date and sign the proxy card that accompanies this proxy statement and promptly mail it in the enclosed postage-prepaid envelope. You do not need to put a stamp on the enclosed envelope if you mail it from within the United States. If you are mailed or otherwise receive or obtain a proxy card, and you choose to vote by telephone or by Internet, you do not have to return your proxy card.
- *At the Annual Meeting.* If you attend the Annual Meeting, you may vote at the Annual Meeting.

Your proxy will only be valid if you complete and return the proxy card, vote by telephone, vote over the internet before the Annual Meeting or vote at the Annual Meeting. The persons named in the proxy card will vote the shares you own in accordance with your instructions on your proxy card, in your vote by telephone, or in your vote over the internet. If you return the proxy card, vote by telephone, or vote over the internet, but do not give any instructions on a particular matter described in this proxy statement, the persons named in the proxy card will vote the shares you own in accordance with the recommendations of our board.

**How do I vote my shares if I hold them in “street name”?**

If the shares you own are held in “street name” by a bank or brokerage firm, your bank or brokerage firm, as the record holder of your shares, is required to vote your shares according to your instructions. In order to vote your shares, you will need to follow the directions that your bank or brokerage firm provides to you. Many banks and brokerage firms solicit voting instructions over the internet or by telephone. Even if your shares are held in street name, you are welcome to attend the Annual Meeting. If your shares are held in street name, you may not vote your shares at the Annual Meeting unless you obtain a “legal proxy,” executed in your favor, from the holder of record (i.e., your bank or brokerage firm). If you hold your shares in street name and wish to vote at the Annual Meeting, please contact your bank or brokerage firm before the Annual Meeting to obtain the necessary proxy from the holder of record. You must then submit the legal proxy to the Company by 5:00 p.m., Eastern Time, on June 22, 2022. Legal proxies may be submitted: by mail to Corporate Secretary, Idera Pharmaceuticals, Inc., 505 Eagleview Boulevard, Suite 212, Exton, Pennsylvania 19341; or by email to [legal@iderapharma.com](mailto:legal@iderapharma.com).

If the beneficial owner does not provide voting instructions, banks and brokerage firms cannot vote the shares with respect to “non-routine” matters, but can vote the shares with respect to “routine” matters. “Broker non-votes” occur when a beneficial owner of shares held in street name fails to provide instructions to the bank or brokerage firm holding the shares as to how to vote on matters deemed “non-routine.” We believe Proposal Three (the ratification of the selection of our independent registered public accounting firm) is a “routine” matter and, as a result, we do not expect there to be any broker non-votes. Proposal One (the election of directors), Proposal Two (the approval of, by non-binding vote, the compensation of the Company’s named executive officers for 2021) Proposal Four (the approval of an amendment to our 2013 Stock Incentive Plan) and Proposal Five (approval of an amendment to our 2017 Employee Stock Purchase Plan) are “non-routine” matters, and banks and brokerage firms cannot vote your shares on such proposals if you have not given voting instructions.

As long as one of the matters is deemed to be a “routine” matter, proxies reflecting broker non-votes (if any) will be counted towards the quorum requirement.

#### How may I change or revoke my vote?

If you are a stockholder of record, even if you complete and return a proxy card or vote by telephone or over the internet, you may change or revoke your vote at any time before your proxy is exercised by taking one of the following actions:

- send written notice to our Secretary, Bryant Lim, at our address above, stating that you wish to revoke your vote;
- deliver to us another signed proxy card with a later date or vote by telephone or over the internet at a later date; or
- attending the Annual Meeting and voting at the Annual Meeting.

If you own shares in street name, your bank or brokerage firm should provide you with instructions for changing or revoking your vote.

#### What constitutes a quorum?

In order for business to be conducted at the Annual Meeting, a quorum must be present. A quorum consists of the holders of a majority of the shares of our common stock issued, outstanding and entitled to vote at the Annual Meeting.

Shares of common stock present or represented by proxy (including broker non-votes and shares that are abstained or withheld or with respect to which no voting instructions are provided for one or more of the matters to be voted upon) will be counted for the purpose of determining whether a quorum exists.

If a quorum is not present, the Annual Meeting will be adjourned until a quorum is obtained.

#### What vote is required to approve each matter and how will votes be counted?

The table below sets forth the vote required for each matter being submitted to our stockholders at the Annual Meeting to be approved and the effect that abstentions, withheld votes, and broker non-votes:

Proposal	Affirmative Vote Required	Abstentions/ Withholds	Broker Non-Votes
Election of Directors <i>(Proposal One)</i>	Plurality of votes cast by holders of common stock entitled to vote	No effect(1)	No effect
Advisory Vote on Named Executive Officer 2021 Compensation <i>(Proposal Two)</i>	Majority of common stock present or represented and voting on the matter	No effect	Not applicable
Ratification of Selection of Ernst & Young LLP <i>(Proposal Three)</i>	Majority of common stock present or represented and voting on the matter	No effect	No effect
Approval of Amendment to 2013 Stock Incentive Plan <i>(Proposal Four)</i>	Majority of common stock present or represented and voting on the matter	No effect	No effect
Approval of Amendment to 2017 Employee Stock Purchase Plan <i>(Proposal Five)</i>	Majority of common stock present or represented and voting on the matter	No effect	No effect

- (1) You may vote FOR all of the director nominees, WITHHOLD your vote from all of the director nominees or WITHHOLD your vote from any of the director nominees.

Each share of common stock will be counted as one vote.

**How does the board recommend that I vote?**

Our board recommends that you vote as follows:

- FOR each of the Class III director nominees (Proposal One); and
- FOR Proposal Two, Proposal Three, Proposal Four and Proposal Five.

Under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and related SEC regulations, the vote on executive compensation, as described in greater detail in Proposal Two, set forth elsewhere in this proxy statement, is an advisory vote, meaning it is non-binding. The vote on the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm, as described in greater detail in Proposal Three, is also an advisory vote. Our board will carefully consider the outcome of each of these votes, but will not be obligated to take any action as a result of such outcomes.

**Will any other business be conducted at the Annual Meeting?**

Our board does not know of any other business to be conducted or matters to be voted upon at the Annual Meeting. If any other matter properly comes before the Annual Meeting, the persons named in the proxy card that accompanies this proxy statement will exercise their judgment in deciding how to vote or otherwise act with respect to that matter at the Annual Meeting.

**Who is making and paying for the solicitation of proxies and how is it made?**

We are making the solicitation and will bear the costs of soliciting proxies. In addition to solicitations by mail, our directors, officers, and employees, without additional remuneration, may solicit proxies by telephone, text message, facsimile, email, personal interviews, and other means. We have engaged MacKenzie Partners, Inc. to serve as our proxy solicitor to distribute our proxy materials and solicit proxies, and the estimated fee for these services is \$12,500 plus reimbursement for reasonable disbursements. We have requested that brokerage houses, custodians, nominees, and fiduciaries forward copies of the proxy materials to the persons for whom they hold shares and request instructions for voting the proxies. We will reimburse the brokerage houses and other persons for their reasonable out-of-pocket expenses in connection with this distribution.

**How and when may I submit a proposal for the 2023 annual meeting of stockholders?**

If you are interested in submitting a proposal for inclusion in the proxy statement and proxy card for our 2023 annual meeting of stockholders, or the 2023 annual meeting, you need to follow the procedures outlined in Rule 14a-8 of the Exchange Act. We must receive your proposal intended for inclusion in the proxy statement at our principal executive offices, 505 Eagleview Blvd., Suite 212, Exton, Pennsylvania 19341, Attention: Secretary, no later than January 2, 2022. SEC rules set standards for the types of stockholder proposals and the information that must be provided by the stockholder making the request.

If you wish to present a proposal at the 2023 annual meeting, but do not wish to have the proposal considered for inclusion in the proxy statement and proxy card or have not complied with the requirements for inclusion of such proposal in our proxy statement under SEC rules, you must also give written notice to us at the address noted above. Our bylaws specify the information that must be included in any such notice, including a brief description of the business to be brought before the annual meeting, the name of the stockholder proposing such business, and stock ownership information for such stockholder. In accordance with our bylaws, we must receive this notice (or the stockholder director nomination, see "Stockholder Nominees") at least 60 days, but not more than 90 days, prior to the date of the 2023 annual meeting and the notice must include specified information regarding the proposal and the stockholder making the proposal.

Notwithstanding the foregoing, if we provide less than 70 days' notice or prior public disclosure of the date of the annual meeting to the stockholders, notice by the stockholders must be received by our Secretary no later than the close of business on the tenth day following the date on which the notice of the annual meeting was mailed or such public disclosure was made, whichever occurs first. If a stockholder who wished to present a proposal fails to notify us by this date, the proxies that management solicits for that meeting will have discretionary authority to vote on the stockholder's proposal if it is otherwise properly brought



before that meeting. If a stockholder makes timely notification, the proxies may still exercise discretionary authority to vote on stockholder proposals under circumstances consistent with the SEC's rules.

**Are annual meeting materials househanded?**

Some banks and brokerage firms may be participating in the practice of "householding" proxy statements and annual reports. This means that the banks and brokerage firms send only one copy of this proxy statement and the accompanying 2021 Annual Report to multiple stockholders in the same household. Upon request, we will promptly deliver separate copies of this proxy statement and our annual report to stockholders. To make such a request, please call Investor Relations at (877) 888-6550, write to Investor Relations, 505 Eagleview Blvd., Suite 212, Exton, Pennsylvania 19341 or email Investor Relations at [ir@iderapharma.com](mailto:ir@iderapharma.com). To receive separate copies of our annual report to stockholders and proxy statement in the future, or to receive only one copy for the household in the future, please contact us or your bank or brokerage firm.

**PROPOSAL ONE**  
**ELECTION OF DIRECTORS**

**General Information**

Our board is divided into three classes and currently consists of three Class I directors: Vincent J. Milano, Cristina Csimma, PharmD, MHP, and Michael R. Dougherty; two Class II directors: James A. Geraghty and Maxine Gowen, Ph.D.; and two Class III directors: Mark Goldberg, M.D. and Carol A. Schafer. Each member of a class is elected for a three-year term, with the terms staggered so that approximately one-third of our directors stand for election at each annual meeting of stockholders. The Class I, Class II, and Class III directors were elected to serve until the annual meeting of stockholders to be held in 2023, 2024 and 2022, respectively, and until their respective successors are elected and qualified.

Our board, on the recommendation of the members of our nominating and corporate governance committee, has nominated Dr. Goldberg and Ms. Schafer for election as Class III directors at the Annual Meeting. At the Annual Meeting, stockholders will be asked to consider the election of Dr. Goldberg and Ms. Schafer.

The persons named in the enclosed proxy card will vote to elect Dr. Goldberg and Ms. Schafer to our board unless you indicate that you withhold authority to vote for the election of one or all director nominees. You may not vote for more than two director nominees. Each Class III director will be elected to hold office until our 2025 annual meeting of stockholders and until his or her successor is elected and qualified or until his or her earlier resignation, death, or removal. Each of the director nominees is presently a director and each has indicated a willingness to serve as a director, if elected. If a director nominee becomes unable or unwilling to serve, however, the persons acting under the proxy may vote for substitute director nominees selected by the board.

**Information about our Directors**

Set forth below is information about each member of our board, including (a) the year in which each director first joined the board, (b) their age as of the Annual Meeting, (c) their positions and offices with our Company (if any), (d) their principal occupations and business experience during at least the past five years, and (e) the names of other public companies for which they currently serve, or have served within the past five years, as a director. We have also included information about each director's specific experience, qualifications, attributes, or skills that led our board to conclude that such individual is qualified to serve as a director on our board. We also believe that all of our directors have a reputation for integrity, honesty, and adherence to high ethical standards. They each have demonstrated business acumen and an ability to exercise sound judgment, as well as a commitment of service to our Company and our board.

**Recommendation of the Board of Directors**

**Our board unanimously recommends that the stockholders vote FOR the election of  
Dr. Goldberg and Ms. Schafer as Class III directors.**

**Class I Directors—Terms to Expire in 2023****Cristina Csimma, PharmD, MHP***Director since 2019*

Dr. Csimma, age 63, is a biopharmaceutical leader and strategic advisor with decades of experience in biotechnology, large pharma and venture capital. Dr. Csimma currently serves on the board of directors of Syncona Partners, LLP (LON:SYNC), having been elected to its board of directors in 2022. She also serves as a board director and a member of the compensation committee of Palisade Bio, Inc. (Nasdaq: PALI), having been elected to its board of directors in 2021. She also serves as the chair of the board of directors of Caraway Therapeutics, Inc. since 2019 (executive chair in 2019). Dr. Csimma also serves on advisory boards, including the Muscular Dystrophy Association Venture Philanthropy Scientific Advisory Committee since 2006; the Harvard and Brigham and Women's Hospital MRCT Center External Advisory Board since 2015; the TREAT-NMD Advisory Committee for Therapeutics (TACT) since 2009; and the Executive Oversight Board to the National Institutes of Health (NIH) NeuroNext Network since 2013.

Dr. Csimma previously served as chair of the board of directors of Forendo Pharma between May 2020 and December 2021 (executive chair in 2021) when it was acquired by Organon & Co. Dr. Csimma also previously served as a director on the boards of Seneca Biopharma, Inc. (Nasdaq: SNCA; formerly Neuralstem Inc., from 2017 until 2021 when it merged with Leading BioSciences Inc. to form Palisade Bio.), Juniper Pharmaceuticals, Inc. (from 2010 until its acquisition by Catalent, Inc. in 2018), Vtesse Inc. (from 2014 until its acquisition by Sucampo Pharmaceuticals, Inc. in 2017). Dr. Csimma was the executive chair and a senior advisor of Exonics Therapeutics, Inc. (from 2016 to 2017), and was President, founding CEO, and board director of Cydan Inc. from 2012 to 2014. She also served on the board of directors of T1D Exchange (non-profit Type 1 Diabetes) from 2018 to 2020 and the NIH Blueprint Neurotherapeutics Network External Oversight Committee from 2014 to 2018, was Vice President of Drug Development at Virdante Pharmaceuticals Inc. from 2009 to 2011, Principal at Clarus Ventures LLC (now Blackstone Life Science), and held roles of increasing responsibility in Clinical Development and Translational Research at Wyeth (now Pfizer Inc.), Genetics Institute, and Dana Farber Cancer Institute. Dr. Csimma holds both a Doctor of Pharmacy and a Bachelor of Science in Pharmacy from the Massachusetts College of Pharmacy and Allied Health Sciences, as well as a Master of Health Professions from Northeastern University.

We believe that Dr. Csimma's qualifications to sit on our board include her significant public company management and board experience and knowledge of our industry.

**Michael R. Dougherty***Director since 2019*

Mr. Dougherty, age 64, currently serves as chair of our board of directors. Mr. Dougherty currently serves on the board of directors of Trevena, Inc. (Nasdaq: TRVN) and Marinus Pharmaceuticals, Inc. (Nasdaq: MRNS). Mr. Dougherty was executive chairman of Celator Pharmaceuticals, Inc., or Celator, from 2015 until its acquisition by Jazz Pharmaceuticals plc in 2016; he also served as a director of Celator from 2013 to 2016. Mr. Dougherty previously served in a variety of senior positions in the biopharmaceutical industry, including as CEO, President, Chief Operating Officer, and Chief Financial Officer. He also previously served as a member of the board of directors of Foundation Medicine, Inc., Adolor Corporation, Genaera Corporation, Aviragen Therapeutics, Inc., Cempra, Inc., and ViroPharma Incorporated. Mr. Dougherty received a Bachelor of Science in Accounting from Villanova University.

We believe that Mr. Dougherty's qualifications to sit on our board include his significant public company management and board experience and knowledge of our industry.

**Vincent J. Milano***Director since 2014*

Vincent Milano, age 58, has been our President and CEO, and a member of our board of directors, since 2014. Prior to joining us, Mr. Milano served as Chairman, President, and CEO of ViroPharma Incorporated, or ViroPharma, a pharmaceutical company that was acquired by Shire plc in 2014, from 2008 to 2014, as its Vice President, Chief Financial Officer, and Chief Operating Officer from 2006 to 2008, and

as its Vice President, Chief Financial Officer, and Treasurer from 1996 to 2005. Mr. Milano also served on the board of directors of ViroPharma from 2008 to 2014. Prior to joining ViroPharma, Mr. Milano served in increasingly senior roles, most recently senior manager, at KPMG LLP, an independent registered public accounting firm, from 1985 to 1996.

Mr. Milano currently serves on the board of directors of Aclaris Therapeutics, Inc. (Nasdaq: ACRS) and BioCryst Pharmaceuticals, Inc. (Nasdaq: BCRX), each a publicly traded company, since 2020 and 2021, respectively, and privately held VenatoRx Pharmaceuticals, Inc., since 2013. Mr. Milano previously served as a director of Spark Therapeutics, Inc. and Vanda Pharmaceuticals Inc. from 2014 to 2019 and 2010 to 2019, respectively. Mr. Milano holds a Bachelor of Science degree in Accounting from Rider College.

We believe Mr. Milano's qualifications to sit on our board include his knowledge of our Company as our President and CEO, knowledge of our industry, including over 20 years of experience serving in a variety of roles of increasing responsibility in the finance department, corporate administration, and operations of a multinational biopharmaceutical company, and understanding of pharmaceutical research and development, sales and marketing, strategy, and operations in both the United States and overseas. He also has corporate governance experience through service on other public company boards.

#### **Class II Directors—Terms to Expire in 2024**

##### **James A. Geraghty**

*Director since 2013*

Mr. Geraghty, age 67, has served on our board since 2013 and as chair of our board from that time until April 2021. Mr. Geraghty is an industry leader with over 35 years of strategic and leadership experience, including more than 25 years as a senior member of executive teams at biotechnology companies developing and commercializing innovative therapies. From 2013 to 2016, Mr. Geraghty was an Entrepreneur in Residence at Third Rock Ventures, a leading biotech venture fund. From 2011 to 2012, he served as a Senior Vice President of Sanofi S.A., a global healthcare company. Prior to that, he served in various senior management roles at Genzyme Corporation, or Genzyme, a biotechnology company, from 1992 to 2011, including as Senior Vice President, International Development and President of Genzyme Europe. Mr. Geraghty currently serves as chairman of the board of Orchard Therapeutics plc and Pieris Pharmaceuticals, Inc. and as a member of the board of Voyager Therapeutics, Inc., and Fulcrum Therapeutics, Inc. He also previously served as a director of bluebird bio, Inc. and GTC Biotherapeutics, Inc.

We believe that Mr. Geraghty's qualifications to sit on our board include his public company board and management experience and his broad and deep knowledge of our industry.

##### **Maxine Gowen, Ph.D.**

*Director since 2016*

Dr. Gowen, age 63, served as the CEO and a board director of TamuroBio Inc., a privately held drug development company, from 2019 to 2021, and she remains on the board of directors. She was the founding President and CEO of Trevena, Inc., or Trevena, (Nasdaq: TRVN), a publicly traded biopharmaceutical company, from 2007 until her retirement in 2018; she remained a member of its board of directors until 2021. Prior to joining Trevena, Dr. Gowen was Senior Vice President for the Center of Excellence for External Drug Discovery at GlaxoSmithKline plc, or GSK, where she held a variety of leadership positions during her tenure of 15 years. Before GSK, Dr. Gowen was Senior Lecturer and Head, Bone Cell Biology Group, Department of Bone and Joint Medicine, of the University of Bath, U.K. Dr. Gowen has served as a director of Aclaris Therapeutics, Inc. (Nasdaq: ACRS) since 2019, Passage Bio, Inc. (Nasdaq: PASG), and as its Chairwoman, since 2021, and Merus NV (Nasdaq: MRUS) since 2021, each a publicly traded company. She previously held a board seat in the state biotechnology industry association, Life Sciences of Pennsylvania from 2015 until 2021 and in the national biotechnology industry association, BIO, from 2008 until 2018. Dr. Gowen previously served as a director of Human Genome Sciences, Inc., from 2008 until 2012, and Akebia Therapeutics, Inc. (Nasdaq: AKBA) from 2014 until 2021, both publicly traded companies, as well as Panorama Medicine, from 2020 until 2021 a privately held biotechnology company. She received her Ph.D.

from the University of Sheffield, U.K., a M.B.A. with academic honors from The Wharton School of the University of Pennsylvania, and a B.Sc. with Honors in Biochemistry from the University of Bristol, U.K.

We believe that Dr. Gowen's qualifications to sit on our board include her significant public company management and board experience and knowledge of our industry.

### **Class III Directors—Terms to Expire in 2022**

#### **Mark Goldberg, M.D.**

*Director since 2014*

Dr. Goldberg, age 67, has served as a member of the board of directors of ImmunoGen, Inc. (Nasdaq: IMGN) since 2011, a member of the board of directors of GlycoMimetics, Inc. (Nasdaq: GLYC) since 2014, a member of the board of directors of Blueprint Medicines Corporation (Nasdaq: BPMC) since 2015, and a member of the board of directors of Avacta Group plc (LON: AVCT) since 2021. In addition, he is a member of the board of directors of the American Cancer Society, a non-profit organization. Dr. Goldberg previously served on the board of directors of Audentes Therapeutics, Inc. from 2017 until 2020 and aTyr Pharma Inc. from 2015 until 2017.

Dr. Goldberg served as advisor and medical and regulatory strategist for Synageva BioPharma Corp., a biopharmaceutical company, from 2014 until 2015. Prior to that, he served as the Executive Vice President for Medical and Regulatory Strategy from January 2014 to October 2014 and as the Senior Vice President of Medical and Regulatory Affairs from 2011 to 2014. Dr. Goldberg served in a variety of senior management positions at Genzyme Corporation from 1996 to July 2011, including most recently as Senior Vice President for Clinical Development and Therapeutic Group Head for Oncology and Personalized Genetic Health from 2009 to 2011. Prior to working at Genzyme Corporation, he was a full-time staff physician at Brigham and Women's Hospital and Dana Farber Cancer Institute. He was an Associate Professor of Medicine at Harvard Medical School from 1996 until 2021 and is currently a Lecturer and part-time faculty at Harvard Medical School. Dr. Goldberg is a board certified medical oncologist and hematologist and has more than 50 published papers.

Dr. Goldberg holds an A.B. from Harvard College and an M.D. from Harvard Medical School. We believe that Dr. Goldberg's qualifications to sit on our board include his extensive scientific and medical background, public company board experience, and extensive experience in the management and operations of pharmaceutical companies.

#### **Carol A. Schafer**

*Director since December 2018*

Ms. Schafer, age 57, has served on the board of directors of Repare Therapeutics, Inc., or Repare, (Nasdaq: RPTX) since 2019, Insmid Incorporated, or Insmid, (Nasdaq: INSM) since 2020 and Kura Oncology Inc., or Kura, (Nasdaq: KURA) since 2021, each a publicly traded company. Ms. Schafer serves on the audit committee and nominating and corporate governance committee at Insmid. Ms. Schafer serves on the audit committee and is the chair of the nominating and corporate governance committee at Repare. Ms. Schafer is the chair of the audit committee at Kura. Additionally, Ms. Schafer has served as a non-fiduciary board member of OneGoal NY, a non-profit entity, since 2019.

Ms. Schafer previously served on the board, as a member of the compensation committee and nominating and corporate governance committee, of Five Prime Therapeutics, Inc., or Five Prime, (Nasdaq: FPRX) from 2019 until 2021 when it was acquired by Amgen Inc.

Ms. Schafer has more than 25 years of experience in investment banking and equity capital markets, as well as in corporate finance and business development in the biopharmaceutical sector, with substantial experience financing and facilitating investor access for public and private healthcare companies. Ms. Schafer most recently served as Vice Chair, Equity Capital Markets at Wells Fargo Securities LLC. Prior to Wells Fargo, Ms. Schafer served as Vice President of Finance and Business Development at Lexicon Pharmaceuticals, Inc. Earlier in her career, Ms. Schafer served as an Equity Capital Markets Sector Head in

her role as Managing Director at J.P. Morgan Chase & Co. Ms. Schafer received a B.A. from Boston College and an M.B.A. from New York University.

We believe that Ms. Schafer's qualifications to sit on our board include her extensive financial background and her many years of experience providing investment banking, equity capital markets, and strategic support to companies within the healthcare sector.

## DIRECTOR COMPENSATION

We use a combination of cash and equity-based compensation to attract and retain candidates to serve on our board. We do not compensate directors who are also our employees of the Company for their service on our board. As a result, Mr. Milano does not receive any compensation for his service as a director.

We generally review our director compensation program every two years with the advice of an independent compensation consultant. As a result of the review of the director compensation program, in June 2021, we approved increasing the annual equity grant to 26,000 options. With the exception of the foregoing equity compensation increase, no other changes were made to our director compensation program.

Under our director compensation program, we pay our non-employee directors retainers in cash. Each director receives a cash retainer for service on the board and for service on each committee on which the director is a member. The chairperson of each committee receives higher retainers for such service. These fees are paid quarterly in arrears. The fees paid to non-employee directors for service on the board and for service on each committee of the board on which the director was a member during 2021 were as follows:

	Member Annual Fee	Chairperson Annual Fee
Board of Directors	\$40,000	\$70,000
Audit Committee	\$ 7,500	\$15,000
Compensation Committee	\$ 6,250	\$12,500
Nominating and Corporate Governance Committee	\$ 4,000	\$ 8,000
Scientific Advisory Committee	\$ 4,000	\$ 8,000

Our director compensation program includes a stock-for-fees policy, under which directors have the right to elect to receive common stock in lieu of cash fees. These shares of common stock are issued under our 2013 Stock Incentive Plan. The number of shares issued to participating directors is determined on a quarterly basis by dividing the cash fees to be paid through the issuance of common stock by the fair market value of our common stock, which is the closing price of our common stock, on the first business day of the quarter following the quarter in which the fees are earned. In 2021, several of our directors elected to receive shares of our common stock in lieu of cash fees as set forth in the footnotes to the Director Compensation table below.

Under our director compensation program, we also reimburse our directors for reasonable travel and other related expenses for attendance at meetings. Additionally, upon their initial election to the board, new non-employee directors receive an initial option grant to purchase 23,000 shares of our common stock, and all non-employee directors receive an annual option grant to purchase 26,000 shares of our common stock. The annual grants are made on the date of our annual meeting of stockholders and fully vest one year from that date of grant. The initial options granted to our non-employee directors vest with respect to one-third of the underlying shares on the first anniversary of the date of grant and the balance of the underlying shares vest in eight equal quarterly installments following the first anniversary of the date of grant, subject to continued service as a director, and are granted under our 2013 Stock Incentive Plan. These options are granted with exercise prices equal to the fair market value of our common stock, which is the closing price of our common stock, on the date of grant and will become immediately exercisable in full if there is a change in control of our Company.

Under our retirement policy for non-employee members of the board, if a non-employee director is deemed to retire, then:

- all outstanding options held by such director will automatically accelerate and vest in full; and
- the period during which such director may exercise the options will be extended to the expiration of the option under the plan.

Under the policy, a non-employee director will be deemed to have retired if:

- the director resigns from the board or determines not to stand for re-election or is not nominated for re-election at a meeting of our stockholders and has served as a director for more than 10 years; or
- the director does not stand for re-election or is not nominated for re-election due to the fact that he or she is or will be older than 75 at the end of such director's term.

The following table sets forth a summary of the compensation we paid to our non-employee directors who served on our board in 2021.



## DIRECTOR COMPENSATION FOR 2021

	Fees Earned or Paid in Cash (\$)	Option Awards \$(1)	Total (\$)
Cristina Csimma	50,250	24,658	74,908
Michael Dougherty	78,027(2)	24,658	102,685
James A. Geraghty	57,726(3)	24,658	82,384
Mark Goldberg	55,500(4)	24,658	80,158
Maxine Gowen	56,500	24,658	81,158
Carol A. Schafer	59,004(5)	24,658	83,662

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- (1) These amounts represent the aggregate grant date fair value of option awards made to each listed director in 2021 as computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, "Stock Compensation," or ASC 718. These amounts do not represent the actual amounts paid to or realized by the directors during 2021. See Note 11 to the financial statements included in our annual report on Form 10-K for the year ended December 31, 2021 regarding assumptions we made in determining the fair value of option awards. As of December 31, 2021, our non-employee directors held options to purchase shares of our common stock as follows: Dr. Csimma: 72,000; Mr. Dougherty: 72,000; Mr. Geraghty: 151,686; Dr. Goldberg: 83,375; Dr. Gowen: 74,625; and Ms. Schafer: 72,000.
- (2) Consists of cash meeting fees of \$58,314 in lieu of which Mr. Dougherty elected to receive 69,230 shares of our common stock.
- (3) Consists of cash meeting fees of \$19,500 in lieu of which Mr. Geraghty elected to receive 14,773 shares of our common stock.
- (4) Consists of cash meeting fees of \$13,875 in lieu of which Mr. Goldberg elected to receive 10,511 shares of our common stock.
- (5) Includes cash meeting fees of \$14,754 in lieu of which Ms. Schafer elected to receive 11,177 shares of our common stock.

## CORPORATE GOVERNANCE INFORMATION

### Board of Directors

Our board is responsible for establishing our broad corporate policies and overseeing the management of our Company. Our chief executive officer and our other executive officers are responsible for our day-to-day operations. Our board evaluates our corporate performance and approves, among other things, our corporate strategies and objectives, operating plans, major commitments of corporate resources and significant policies. Our board also evaluates and appoints our executive officers.

Our board met eight times during 2021. Each director attended at least 75% of the total number of board meetings and committee meetings for the committees on which he or she served during 2021.

While we do not have a formal policy regarding director attendance, we strongly encourage and expect our directors to attend our annual meetings of stockholders. All of our directors virtually attended the 2021 annual meeting of stockholders.

### Board Leadership Structure

Our board does not have a policy on whether the offices of chairperson of the board and chief executive officer should be separate and, if they are to be separate, whether the chairperson should be selected from among the independent directors or should be an employee of our Company. Our board believes that it should have the flexibility to make these determinations at any given point in time in the way that it believes best to provide appropriate leadership for our Company. Currently, Mr. Milano serves as our chief executive officer. Mr. Geraghty, an independent director, served as chair of our board from 2013 until April 28, 2021, at which time Mr. Dougherty, also an independent director, succeeded him as chair. Our board believes that this separation allows our chief executive officer to focus on our day-to-day business, while allowing the chairperson to lead the board in its fundamental role of providing advice to and independent oversight of management.

Our board recognizes that no single leadership model is right for all companies and at all times and that depending on the circumstances, other leadership models, such as a combined chairperson and chief executive officer, might be appropriate. Accordingly, the board periodically reviews its leadership structure. Pursuant to our corporate governance guidelines, if the chairperson is not an independent director, the board may elect a lead director from its independent directors. In such case, the chairperson and chief executive officer would consult periodically with the lead director on board matters and on issues facing our Company. In addition, the lead director would serve as the principal liaison between the chairperson of the board and the independent directors and would preside at any executive session of independent directors.

### Board of Directors' Role in Risk Oversight

Our board, as a whole, has responsibility for risk oversight, with reviews of certain areas being conducted by relevant committees that report directly to the board. The oversight responsibility of the board and its committees is enabled by management reporting processes that are designed to provide visibility to the board about the identification, assessment, and management of critical risks and management's risk mitigation strategies. These areas of focus include competitive, economic, operational, financial (accounting, credit, liquidity, and tax), legal, regulatory, compliance, health, safety, environmental, political, and reputational risks. Our board regularly reviews information regarding our strategy, operations, credit, and liquidity, as well as the risks associated with each. Our compensation committee is responsible for overseeing risks relating to our executive compensation plans and arrangements. Our audit committee is responsible for overseeing financial risks and risks associated with related party transactions. Our nominating and corporate governance committee is responsible for overseeing risks associated with governance and the independence of the board. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, our entire board is regularly informed through committee reports about such risks.

### Board Committees

Our board has established three formal standing committees: audit, compensation, and nominating and corporate governance. Each of our audit, compensation, and nominating and corporate governance

committees operates under a charter that has been approved by our board. Our board has also adopted corporate governance guidelines to assist our board in the exercise of its duties and responsibilities. Current copies of the charters for the audit, compensation, and nominating and corporate governance committees and the corporate governance guidelines are posted on our website, [ir.iderapharma.com/corporate-governance/highlights](http://ir.iderapharma.com/corporate-governance/highlights).

#### *Audit Committee*

Our audit committee's purpose is to assist the board's oversight of our accounting and financial reporting processes and the audits of our financial statements. Our audit committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
- overseeing the work of our independent registered public accounting firm, including through the receipt and consideration of certain reports from such accounting firm;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures;
- monitoring our internal control over financial reporting, disclosure controls and procedures, and code of business conduct and ethics;
- discussing with management and our independent auditor about significant risks or exposures;
- establishing procedures for the receipt and retention of accounting related complaints and concerns;
- reviewing and approving related party transactions;
- meeting independently with our independent registered public accounting firm and management; and
- preparing the audit committee report required by SEC rules.

The current members of our audit committee are Ms. Schafer (Chair), Mr. Dougherty, and Dr. Goldberg. Our board has determined that Ms. Schafer is an "audit committee financial expert" within the meaning of SEC rules and regulations. Each member of the audit committee is independent as defined under applicable rules of the Nasdaq, including the independence requirements contemplated by Rule 10A-3 under the Exchange Act. During 2021, our audit committee held four meetings.

#### Audit Committee Commitments

Our board pays careful attention to the committee commitments of our directors. We understand that proxy advisory firms set guidelines as to the number of public company audit committees on which a director should simultaneously serve. However, we also recognize the importance of evaluating a director's audit committee commitments on an individual, case-by-case basis to ensure (1) that such director has sufficient time to meaningfully serve on our audit committee and (2) that our audit committee is composed of independent, qualified directors with the requisite financial acumen.

Currently, our director Carol Schafer sits on four public company audit committees (including our audit committee). The board believes that Ms. Schafer's experience, expertise, independence, and institutional knowledge, especially with respect to the Company's auditing processes and its financial history, planning, and strategy, make her a valuable member of our audit committee. Furthermore, the board believes that Ms. Schafer has demonstrated her commitment and dedication to serving on our audit committee, as she has proven to be a highly-engaged committee chair, attending 100% of all audit committee meetings in 2021, and 100% of all audit committee meetings since being appointed to the committee in 2018. Accordingly, the board believes that Ms. Schafer's service on three other public companies' audit committee does not, and will not, negatively impact her service on our audit committee.

*Compensation Committee*

Our compensation committee’s purpose is to oversee the discharge of the responsibilities of the board relating to compensation of the Company’s executive officers, employees, and board members. Our compensation committee’s responsibilities include:

- approving the Company’s long-term strategy of compensation, including the consideration of base compensation, short-term incentive, and long-term incentive targets,
- reviewing and approving the compensation of the Company’s chief executive officer and the other executive officers;
- overseeing and administering our cash and equity incentive plans;
- reviewing and making recommendations to the board with respect to director compensation;
- overseeing the evaluation of the Company’s senior executives;
- reviewing and discussing annually with management the compensation discussion and analysis required by the SEC rules and included in this proxy statement; and
- preparing the compensation committee report required by SEC rules.

The current members of our compensation committee are Dr. Gowen (Chair), Dr. Csimma, and Mr. Dougherty. During 2021, the compensation committee held five meetings. The compensation committee may delegate to one or more executive officers of the Company the power to grant operations or stock awards to employees of the Company or its subsidiaries who are not directors or executive officers of the Company. The compensation committee may also form and delegate authority to one or more subcommittees as it deems appropriate.

The processes and procedures followed by our compensation committee in considering and determining executive compensation are described below under the heading “Executive Compensation.”

*Nominating and Corporate Governance Committee*

Our nominating and corporate governance committee’s purpose is to identify and recommend to the board persons to be nominated for election as directors, develop and recommend corporate governance principals, and oversee the evaluation of the board. Our nominating and corporate governance committee’s responsibilities include:

- reviewing with the board the requisite skills and criteria for new board members, as well as the composition of the board as a whole;
- adopting and periodically reviewing procedures regarding director candidates proposed by stockholders;
- recommending to the board to be appointed to each committee of the board;
- reviewing and assessing the adequacy of the corporate governance guidelines;
- determining the nature of the self-evaluation of the board, supervising the conduct of the evaluation, and preparing the assessment of the board’s performance; and
- overseeing the Company’s succession planning, which includes transitional leadership in the event of an unplanned vacancy.

The current members of our nominating and corporate governance committee are Messrs. Geraghty (Chair) and Dougherty, and Ms. Schafer. During 2021, the nominating and corporate governance committee held three meetings.

The processes and procedures followed by our nominating and corporate governance committee in identifying and evaluating director candidates are described below under the heading “Director Nomination Process.”

### Director Independence

Our securities are listed on the Nasdaq Capital Market and we use the standards of “independence” prescribed by rules set forth by Nasdaq. Under Nasdaq rules, a majority of a listed company’s board of directors must be comprised of independent directors. In addition, Nasdaq rules require that, subject to specified exceptions, each member of a listed company’s audit committee and compensation committee be independent and satisfy additional independence criteria set forth in Rules 10A-3 and 10C-1, respectively, under the Exchange Act. Under the applicable Nasdaq rules, a director will only qualify as an “independent director” if, in the opinion of our board, that person does not have a relationship which would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Our board determined in early 2021 that each of Dr. Csimma, Mr. Dougherty, Mr. Geraghty, Dr. Goldberg, Dr. Gowen, and Ms. Schafer and all of the members of each of the audit, compensation and nominating and corporate governance committees are independent as defined under applicable rules of the Nasdaq, and, in the case of all members of the audit and compensation committees, the independence requirements contemplated by Rule 10A-3 and Rule 10C-1 under the Exchange Act. As Mr. Milano is our President and Chief Executive Officer, he is not independent.

### Director Nomination Process

The process followed by our nominating and corporate governance committee to identify and evaluate director candidates includes requesting recommendations from members of our board and others, meeting to evaluate biographical information and background material relating to potential candidates and interviewing selected candidates by members of our nominating and corporate governance committee and our board. The nominating and corporate governance committee has from time to time used a third-party recruiting firm to identify and interview potential candidates.

In considering whether to recommend any particular candidate for inclusion in the board’s slate of recommended director nominees, the nominating and corporate governance committee will apply the criteria set forth in our corporate governance guidelines. All candidates, regardless of the source of the candidate’s recommendation, are evaluated using the same criteria. These criteria include assessing the candidate’s:

- business acumen;
- knowledge of our business and industry;
- age;
- experience;
- diligence;
- conflicts of interest;
- ability to act in the interests of all stockholders; and
- in the case of the renomination of existing directors, performance on our board and on any committee of which the director was a member.

Our corporate governance guidelines also provide that candidates should not be discriminated against on the basis of race, religion, national origin, sex, sexual orientation, disability, or any other basis proscribed by law and that our nominating and corporate governance committee should consider the value of diversity of the board when evaluating particular candidates. The nominating and corporate governance committee has not adopted any formal or informal diversity policy and treats diversity as one of the criteria to be considered by the committee. The nominating and corporate governance committee does not assign specific weights to particular criteria that the nominating and corporate governance committee reviews and no particular criterion is a prerequisite for the consideration of any prospective director nominee. We believe that the backgrounds and qualifications of our directors, considered as a group, should provide a composite and diverse mix of experience, knowledge, and abilities that will allow the board to fulfill its responsibilities.

### Stockholder Nominees

Stockholders may recommend individuals to the nominating and corporate governance committee for consideration as potential director candidates by submitting the individuals' name, together with appropriate biographical information and background materials and a statement as to whether the stockholder or group of stockholders making the recommendation has beneficially owned more than 5% of our common stock for at least one year as of the date such recommendation is made, to the Nominating and Corporate Governance Committee, c/o Secretary, Idera Pharmaceuticals, Inc., 505 Eagleview Blvd., Suite 212, Exton, PA 19341. 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 provided by other sources. If the board determines to nominate a stockholder-recommended candidate and recommends his or her election, then his or her name will be included in our proxy card for the next annual meeting.

Stockholders also have the right under our bylaws to nominate director candidates directly, without any action or recommendation on the part of the nominating and corporate governance committee or the board, by following the procedures set forth in our bylaws, including advance notice requirements. Candidates nominated by stockholders in accordance with the procedures set forth in our bylaws will not be included in our proxy card for the next annual meeting. See "Information about the Annual Meeting—How and when may I submit a proposal for the 2023 annual meeting of stockholders?" for more information about these procedures and the deadline for submitting director nominations.

### Board Diversity

As shown in the table below, three of our seven directors self-identify as diverse.

Total number of Directors	7			Did not Disclose Gender
	Female	Male	Non-Binary	
<b>Part I: Gender Identity</b>				
Directors	3	4	0	0
<b>Part II: Demographic Background</b>				
African American or Blank	0	0	0	0
Alaskan Native or Native American	0	0	0	0
Asian	0	0	0	0
Hispanic or Latinx	0	0	0	0
Native Hawaiian or Pacific Islander	0	0	0	0
White	3	4	0	0
Two or More Races or Ethnicities	0	0	0	0
LGBTQ+		0		
Did Not Disclose Demographic Background		0		

### Communicating with our Board of Directors

Stockholders and other interested parties may communicate directly with the board (and with independent directors, individually or as a group). Our board will give appropriate attention to written communications that are submitted by stockholders and other interested parties and will respond if and as appropriate. The chairperson of the board (if an independent director) or the lead independent director, if any, is primarily responsible for monitoring communications from stockholders and for providing copies or summaries to the other directors, as he or she deems appropriate.

Communications are forwarded to all directors if they relate to important substantive matters and include suggestions or comments that the chairperson of the board or lead independent director, as the case may be, considers to be important for the directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters that involve repetitive or duplicative communications.

Stockholders and other interested parties who wish to send communications on any topic to the board should address such communications to Board of Directors, c/o Secretary, Idera Pharmaceuticals, Inc., 505 Eagleview Blvd., Suite 212, Exton, PA 19341.

Each communication from a stakeholder should include the following information, to the extent applicable, and to provide an address to forward a response if deemed appropriate:

- the name, mailing address, and telephone number of the stakeholder sending the communication;
- the number of shares, if any, held by the stakeholder; and
- if the stakeholder is not a record owner of our securities, the name of the record owner of our securities beneficially owned by the stakeholder, if applicable.

#### **Code of Business Conduct and Ethics**

We have adopted a written code of business conduct and ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. We have posted a current copy of the Code of Business Conduct and Ethics in the “Investors—Corporate Governance” section of our website, which is located at [ir.iderapharma.com/corporate-governance/highlights](http://ir.iderapharma.com/corporate-governance/highlights). We intend to satisfy the disclosure requirements under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of our code of business conduct and ethics by posting such information on our website at [www.iderapharma.com](http://www.iderapharma.com).

#### **Hedging Policy**

Our insider trading policy prohibits our directors and employees (including our executive officers) from hedging or entering into other similar arrangements with respect to the Company’s securities, including, without limitation, short sales of Company securities, including short sales “against the box,” or purchases or sales of puts or calls or other derivative securities based on the Company’s securities.

## EXECUTIVE OFFICERS

## Information about our Executive Officers

Our currently-serving executive officers and their respective ages and positions are described below. Our executive officers serve until they resign or the board terminates their position.

Name	Age	Position
Vincent J. Milano*	58	President and Chief Executive Officer
Daniel B. Soland	64	Senior Vice President, Chief Operating Officer
John J. Kirby	50	Senior Vice President, Chief Financial Officer
Bryant D. Lim	51	Senior Vice President, General Counsel and Corporate Secretary

\* Mr. Milano is a member of our board. See “Information about our Directors” above for more information about Mr. Milano.

**Daniel B. Soland** joined the Company in January 2021 as our Senior Vice President, Chief Operating Officer. Prior to joining us, Mr. Soland most recently served as the Chief Executive Officer of uniQure N.V. from 2015 through 2016 and as the Senior Vice President and Chief Operating Officer of ViroPharma Inc. from 2006 through 2014. Mr. Soland previously served as President of Chiron Corporation, or Chiron, from 2005 through 2006, and helped engineer a turnaround that contributed to the acquisition of Chiron by Novartis International AG. Prior to then, he served as President and Chief Executive Officer of Epigenesis Pharmaceuticals Inc. and as Vice President and Director, Worldwide Marketing Operations at GlaxoSmithKline Biologicals. Earlier in his career, he held positions of increasing responsibility in sales and product management at Pasteur-Merieux’s Connaught Laboratories. Mr. Soland currently serves on the board of directors of KalVista Pharmaceuticals, Inc. (Nasdaq: KALV), Acadia Pharmaceuticals Inc. (Nasdaq: ACAD), and DBV Pharmaceuticals S.A. (Nasdaq: DBVT), each a publicly traded company. Mr. Soland holds a B.S. in Pharmacy from the University of Iowa.

**John J. Kirby** joined the Company in 2015 as our Vice President of Corporate Accounting. He served as Vice President of Finance from 2018 to 2019 and has served as Senior Vice President and Chief Financial Officer since 2019 (principal financial officer and principal accounting officer since 2018). Prior to joining us, Mr. Kirby served as Assistant Controller at Endo Pharmaceuticals, Inc. from 2014 to 2015. From 2012 to 2014, Mr. Kirby served as Vice President, Chief Accounting Officer and Corporate Controller at ViroPharma Incorporated, which was acquired by Shire Plc in 2014. Mr. Kirby began his career at KPMG, LLP in their Healthcare and Life Science Practice and served as a Regional Audit Director at AstraZeneca Pharmaceuticals L.P. prior to joining ViroPharma Incorporated. Mr. Kirby received his B.S. in Accountancy from Villanova University and is a licensed certified public accountant in the Commonwealth of Pennsylvania. Mr. Kirby also serves on the board of trustees of the Delaware Museum of Nature & Science (formerly the Delaware Museum of Natural History) since 2018.

**Bryant D. Lim** has been our Senior Vice President, General Counsel and Secretary since 2018. Prior to joining us, Mr. Lim served as Vice President, Assistant General Counsel and, prior to that, Global Chief Compliance Officer at Incyte Corporation from 2014 to 2018. Prior to Incyte Corporation, Mr. Lim held roles of increasing responsibility at ViroPharma Incorporated from 2009 until its acquisition by Shire Plc in 2014. Mr. Lim served as Assistant Counsel at Merck & Co., Inc. and also was associated with Morgan, Lewis & Bockius, LLP. Mr. Lim began his legal career as a law clerk for a federal judge. Mr. Lim received his J.D. from Villanova University School of Law, where he serves on its adjunct faculty teaching about the Law of Drugs and Biologics. Mr. Lim received his B.A. from the University of Rochester. Mr. Lim also serves on the board of directors of the state biotechnology industry association, Life Sciences of Pennsylvania since 2019.



## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth, as of April 1, 2022 (except as otherwise indicated below), information we know about the beneficial ownership of our common stock by:

- each person or entity, including any “group” as that term is used in Section 13(d)(3) of the Exchange Act, who is known by us to own beneficially more than 5% of the issued and outstanding shares of our common stock;
- each of our current directors and director nominees;
- each of our named executive officers, as set forth in the Summary Compensation Table set forth in this proxy; and
- all of our current directors and executive officers as a group.

We have determined beneficial ownership in accordance with the rules of the SEC, and the information in the table below is not necessarily indicative of beneficial ownership for any other purpose. The SEC has defined “beneficial” ownership of a security to mean the possession, directly or indirectly, of voting power and/or investment power. In computing the percentage ownership of each person, shares of common stock subject to options, warrants, or rights held by that person that are currently exercisable, or exercisable within 60 days of April 15, 2022, are deemed to be outstanding and beneficially owned by that person. These shares, however, are not deemed outstanding for the purpose of computing the percentage ownership of any other person.

To our knowledge and except as indicated in the notes to this table and pursuant to applicable community property laws, each stockholder named in the table has sole voting and investment power with respect to the shares set forth opposite such stockholder’s name. The percentage of ownership is based on 52,924,870 shares of our common stock issued and outstanding on April 1, 2022. All fractional common share amounts have been rounded to the nearest whole number. To our knowledge, except as noted below, no person or entity is the beneficial owner of more than 5% of the voting power of the Company’s stock.

Name and Address of Beneficial Owner(1)	Number of Shares Beneficially Owned	Percentage of Outstanding Shares
<b>5% Stockholders</b>		
Pillar Investment Entities c/o Stuarts Corporate Services Ltd. Kensington House, 69 Dr. Roy’s Drive Georgetown, Grand Cayman KY1-1104 Cayman Islands	11,111,671(2)	19.99
<b>Named Executive Officers and Directors</b>		
Vincent J. Milano	891,044(3)	1.68
John J. Kirby	328,479(4)	*
Bryant D. Lim	386,184(5)	*
Daniel Soland	278,843(6)	*
Elizabeth Tarka	13,237(7)	*
Cristina Csimma	46,000(8)	*
Michael R. Dougherty	237,875(9)	*
James A. Geraghty	245,229(10)	*
Mark Goldberg	105,985(11)	*
Maxine Gowen	49,500(12)	*
Carol A. Schafer	105,665(13)	*
All current directors and executive officers as a group (10 individuals)	2,674,804(14)	5.05

\* Denotes less than 1% beneficial owner.

- (1) Except as otherwise noted, the address for each person listed above is c/o Idera Pharmaceuticals, Inc., 505 Eagleview Boulevard, Suite 212, Exton, PA 19341.
- (2) On June 1, 2021, Pillar Pharmaceuticals 6, L.P. (“Pillar 6”), together with Pillar Invest Corporation (“Pillar GP”), Pillar Partners Foundation, L.P. (“Pillar Foundation,” and, together with Pillar 6 and Pillar GP, the “Pillar Entities”), Abude Umari and Youssef El Zein (together with the Pillar Entities and Mr. Umari, the “Reporting Persons”) filed Amendment No. 10 to a Schedule 13D with the SEC reporting the following beneficial ownership: (i) sole voting power with respect to zero shares; (ii) shared voting power with respect to 16,748,500 shares; (iii) sole dispositive power with respect to zero shares; and (iv) shared dispositive power with respect to 16,748,500 shares. The percentage reported for the shares of common stock is capped at 19.99% as a result of blocker provisions that limit the number of warrants exercisable for shares of common stock that are held by certain of the Pillar Entities.  
  
The Reporting Persons expressly disclaim status as a “group” for purposes of Amendment No. 10 to the Schedule 13D. The Pillar Entities exercise no voting or dispositive power over and expressly disclaim beneficial ownership of any shares held directly by Messrs. Umari and El Zein, and Messrs. Umari and El Zein expressly disclaim beneficial ownership of any shares of common stock held directly by Pillar 6, Pillar Foundation and indirectly by Pillar GP.
- (3) Includes 709,371 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 1, 2022.
- (4) Includes 290,847 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 1, 2022.
- (5) Includes 355,750 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 1, 2022.
- (6) Includes 200,000 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 1, 2022.
- (7) Dr. Tarka served as our Senior Vice President, Chief Medical Officer until May 28, 2021. As the Company no longer has any affiliation with Dr. Tarka and was unable to obtain beneficial ownership information for Dr. Tarka as of April 1, 2022, the number of shares beneficially owned represents Dr. Tarka’s beneficial ownership as of March 29, 2021.
- (8) Includes 46,000 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 1, 2022.
- (9) Includes 46,000 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 1, 2022.
- (10) Includes 125,686 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 1, 2022.
- (11) Includes 57,375 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 1, 2022.
- (12) Includes 48,625 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 1, 2022, and 875 shares of common stock held in the name Brian Macdonald for Maxine Gowen Trust, for which Dr. Gowen is a beneficiary and trustee.
- (13) Includes 46,000 shares of common stock subject to outstanding stock options that are exercisable within 60 days after April 1, 2022.
- (14) Includes 1,925,654 shares of common stock subject to outstanding stock options held by the directors and executive officers as a group that are exercisable within 60 days after April 1, 2022.

## EXECUTIVE COMPENSATION

### Compensation Discussion and Analysis

This Compensation Discussion and Analysis (“CD&A”) should be read in conjunction with the compensation tables and narratives that immediately follow this section.

#### Overview and Outlook

We are focused on the acquisition, development, and ultimate commercialization of drug candidates for rare disease indications characterized by small, well-defined patient populations with serious unmet needs. As such, we operate in an environment that is very competitive from both a business and talent perspective. We believe our competitive compensation program is key element of our employee value proposition that allows us to attract and retain the talent and leadership resources we need to drive our business success.

We are actively identifying and evaluating new development or commercial-stage assets for our portfolio through acquisition or in-licensing opportunities, as well as pursuing additional strategic alternatives.

#### Purpose

The purpose of this CD&A is to provide our stockholders with an overview and understanding of the philosophy, objectives, process, components, and decision-making of our 2021 executive compensation program. This analysis focuses on the compensation paid to our named executive officers (“NEOs”):

- Vincent J. Milano, President and Chief Executive Officer
- John J. Kirby, Senior Vice President and Chief Financial Officer
- Bryant D. Lim, Senior Vice President, General Counsel and Corporate Secretary
- Daniel B. Soland, Senior Vice President and Chief Operating Officer
- Elizabeth Tarka, M.D., former Senior Vice President and Chief Medical Officer(1)

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(1) Dr. Tarka served as our Senior Vice President, Chief Medical Officer until May 28, 2021; thereafter, she provided consulting services to the Company until October 12, 2021.

#### Business Update

Our executive compensation program is designed to, among other goals, align executive compensation with the achievement of measurable corporate objectives. During 2021, the Company:

- concluded the ILLUMINATE-301 trial in anti-PD 1 refractory melanoma through its primary endpoints;
- reported top line data for the second cohort of ten patients in our phase 2 trial of tilsotolimod in microsatellite-stable colorectal cancer (“MSS-CRC”);
- entered into a collaboration with Scriptr Global, Inc. (“Scriptr”) for the development of gene therapy technologies in certain rare diseases; and
- enhanced our financial position through financing activities.

Further detail regarding our 2021 goals and performance can be found in the section entitled “Annual Cash Incentive Award.”

#### Key Compensation Decisions and Actions

Taking into consideration our compensation philosophy and objectives, the needs and performance of our Company, individual performance, and other factors such as market data and industry best practices, our compensation committee took the following actions in 2021:

- **Base Salary.** The compensation committee reviewed the base salaries of our NEOs in January 2021. No adjustments were made to the base salaries of Messrs. Milano or Soland. With respect to Mr. Milano, the compensation committee determined that his base salary was market competitive in connection with its benchmark analysis. As Mr. Soland was hired in January 2021, he did not receive a salary increase in 2021. Messrs. Kirby and Lim and Dr. Tarka each received salary adjustments to maintain reasonable positioning relative to the 50<sup>th</sup> percentile of the base salary compensation of like positions among our peer companies. Further detail regarding the compensation committee’s base salary review and decision-making process is provided below in the section entitled “Base Salary.”
- **Annual Cash Incentive Award.** In January 2021, the compensation committee approved corporate goals as part of our 2021 bonus program. The corporate goals consisted of three primary corporate objectives, each with its own weighting to reflect their importance relative to our business. To the extent goals are partially met or exceeded, the compensation committee may exercise discretion and ascribe a partial achievement or overachievement percentage to each goal, as applicable. In addition, the compensation committee may exercise discretion and ascribe an additional percentage for achievements that were not contemplated when goals were originally set. The compensation committee also reviews individual performance to determine whether the potential bonus should be increased or decreased.  
  
In January 2022, the compensation committee reviewed our 2021 performance against our 2021 corporate objectives and agreed to attribute a corporate performance score of 50%. Further detail relating to this program, including information regarding our 2021 corporate goals and the weighting thereof, is provided below in the section entitled “Annual Cash Incentive Award.”
- **Long-Term Equity Incentive Awards.** In January 2021, the compensation committee approved the grant of the first tranche of the biannual option awards to our NEOs, and in July 2021, the compensation committee approved the grant of the second tranche of biannual option awards to our NEOs. Further detail relating to our stock incentive program is provided in the section “Long-Term Equity Compensation.”

#### ***Compensation Philosophy and Objectives***

Our general executive compensation philosophy has been established by our compensation committee, which acts pursuant to authority delegated to it by our board and as set forth in its charter. Our compensation committee is comprised solely of independent directors as defined by applicable rules and regulations of Nasdaq and the SEC. See “Board Committees—Compensation Committee” for further detail regarding the composition, independence, and responsibilities of our compensation committee.

Our executive compensation program is designed to achieve the following broad goals:

- attract, retain, and motivate the best possible executive talent;
- ensure executive compensation is aligned with our corporate strategies and business objectives, including our short-term operating goals and longer-term strategic objectives;
- promote the achievement of key strategic and financial performance measures by linking short- and long-term cash and equity incentives to the achievement of measurable corporate and individual performance goals; and
- align executives’ incentives with the creation of stockholder value.

To achieve these objectives, the compensation committee:

- sets short- and long-term compensation at levels the compensation committee believes are competitive with those of other companies in our industry and our region that compete with us for executive talent;
- conditions a substantial portion of each NEO’s overall cash compensation on the achievement of key strategic, financial, research, and operational goals, such as clinical trial and regulatory progress, intellectual property portfolio development, establishment and maintenance of key strategic

relationships, and exploration of business development opportunities, as well as our financial and operational performance; and

- provides a portion of our executive compensation in the form of equity awards that vest (i) over time from the date of grant of the awards and/or, when applicable, (ii) upon the achievement of performance milestones, which we believe helps retain our NEOs and align their interests with those of our stockholders by allowing them to participate in the longer-term success of our Company as reflected in stock price appreciation.

#### ***Advisory Vote on Executive Compensation***

We conducted an advisory vote on executive compensation, commonly referred to as a “say-on-pay” proposal, at our 2021 Annual Meeting of Stockholders. While this advisory vote was not binding, we value the opinions of our stockholders and, to the extent there is any significant vote against the compensation of our NEOs, we will consider our stockholders’ concerns and our board and compensation committee will evaluate whether any actions are necessary to address those concerns.

At our 2021 Annual Meeting of Stockholders, approximately 97% of the votes cast on the advisory vote on executive compensation approved the 2020 compensation paid to our NEOs as disclosed in the proxy statement for that meeting. The board and compensation committee considered the results of this advisory vote, together with the other factors and data, in determining executive compensation for 2021. Specifically, the compensation committee viewed the outcome of the say-on-pay vote as overwhelming approval of the Company’s executive compensation program and therefore did not make any significant changes to the structure or elements of the executive compensation program. The board and the compensation committee will continue to consider the outcome of our say-on-pay votes when making future compensation decisions for our NEOs.

#### ***Executive Compensation Process***

##### *Role of Our Compensation Committee and Our Chief Executive Officer*

In order to accomplish its objectives consistent with its philosophy for executive compensation and determine compensation for our NEOs, our compensation committee reviews competitive information on executive compensation practices from peer companies as well as an assessment of overall corporate performance and individual performance. In connection therewith, our compensation committee typically takes the following actions annually:

- reviews chief executive officer performance;
- seeks input from our chief executive officer on the performance of the other NEOs;
- reviews all components of our executive compensation program, including base salary, cash bonus targets and awards, equity compensation, and the estimated payout obligations under severance and change in control scenarios;
- considers historic compensation and amounts realizable from prior awards;
- consults with its independent compensation consultant;
- holds executive sessions (without our management present);
- reviews information regarding the executive compensation of its peer companies;
- considers the say-on-pay vote from the prior year; and
- reviews the outcomes from the foregoing with the board.

Our chief executive officer does not submit an assessment of his own performance and does not participate in the compensation committee’s deliberations or the determination of his own compensation. Our compensation committee reviews and approves, or recommends for approval by the board, the compensation of our NEOs, including our chief executive officer.

Under our annual performance review program, annual performance goals are determined for our Company as a whole and for each individual NEO.

- **Annual corporate goals** are proposed by management and approved by the board. These corporate goals target the achievement of specific research, clinical, operational, and financial milestones. The compensation committee determines the weighting of and how the components of our annual corporate goals will contribute to the overall performance evaluation.
- **Annual individual goals** focus on contributions that facilitate the achievement of our corporate goals. Individual goals are proposed at the start of each year by each NEO and approved by the chief executive officer (except with respect to himself) and, in the case of the chief executive officer and as appropriate for the other NEOs, the compensation committee. Typically, the compensation committee sets the chief executive officer's goals and reviews and discusses with the chief executive officer the goals for the other NEOs. The individual performance goals of each NEO consist primarily of the key objectives and goals from our annual business plan that relate to the functional area for which such NEO is responsible. As the chief executive officer oversees all aspects of our business, the individual performance goals for the chief executive officer are largely coextensive with the corporate goals.

At the end of each year, the compensation committee evaluates corporate and individual NEO performance.

In assessing corporate performance, the compensation committee evaluates corporate performance relative to the approved corporate goals for the applicable year, as well as other aspects of corporate performance, including progress and achievement of milestones outside of the corporate goals.

The compensation committee evaluates individual performance with respect to the areas that fall within each NEO's responsibility. In doing so, the compensation committee relies on the chief executive officer's evaluation of the other NEOs. The chief executive officer prepares evaluations of the other NEOs, which includes comparing such individual's performance to his or her individual performance goals. The chief executive officer recommends annual executive salary increases, annual stock option awards, and bonuses, if any, for the other NEOs; the compensation committee then reviews and approves, as appropriate, the chief executive officer's recommendations. In the case of the chief executive officer, the compensation committee independently conducts his individual performance evaluation and determines his compensation accordingly.

During this process, the compensation committee consults with its independent compensation consultant. In connection with the compensation committee's annual performance and compensation review in the fourth quarter of each year, the independent compensation consultant provides the compensation committee with a blend of the data from the peer group (identified below for 2021 compensation decisions) and relevant compensation survey data from the Radford Global Life Sciences Survey. We refer to this blended data as the "market compensation data."

For all NEOs, annual base salary increases, if any, are awarded during the first quarter following the end of the fiscal year. Equity awards and bonuses, if any, are granted as determined by the compensation committee. Annual target bonuses and performance goals are typically established in the first quarter of the fiscal year, with payout for such bonuses in January of the following fiscal year upon the compensation committee's determination of the achievement of the applicable performance goals. Equity awards are typically given in two biannual tranches, generally in the first and third quarters of the fiscal year. Special equity awards, if any, are granted on an ad hoc basis as determined by the compensation committee.

#### *Role of the Compensation Committee's Independent Consultant*

In the third quarter of 2020, our compensation committee engaged Pearl Meyer & Partners, LLC ("Pearl Meyer") in connection with our 2021 annual compensation assessment to review our executive compensation practices and to provide the compensation committee with an assessment of our compensation program against competitive market data. See "Use of Market Compensation Data" below for a discussion of the competitive market compensation data compiled by Pearl Meyer. Based on this assessment, Pearl

Meyer made recommendations to our compensation committee regarding the amount and form of executive officer compensation, including the ratio of cash to equity compensation and “at risk” and variable compensation.

Pearl Meyer did not provide any additional services to our Company during 2021 other than pursuant to their respective engagement by the compensation committee, which was limited to the aforementioned assessment of our executive officer compensation program.

Our compensation committee analyzed whether the engagement of Pearl Meyer as our compensation consultant raised any conflict of interest, taking into consideration the following factors: (a) the provision of other services to us by Pearl Meyer; (b) the amount of fees received from us by Pearl Meyer, as a percentage of the total revenue of Pearl Meyer; (c) Pearl Meyer’s policies and procedures that are designed to prevent conflicts of interest; (d) any business or personal relationship with Pearl Meyer or the individual advisors employed by Pearl Meyer and a member of the compensation committee or any executive officer; and (e) any shares of our stock owned by Pearl Meyer or the individual advisors employed by Pearl Meyer. Our compensation committee determined, based on its analysis of the above factors, that the work of Pearl Meyer and the individual compensation advisors employed by Pearl Meyer as compensation consultants did not create any conflict of interest. Accordingly, the compensation committee determined that Pearl Meyer is independent. Going forward, the compensation committee intends to assess the independence of any of our compensation advisers by reference to the foregoing factors, consistent with applicable rules and regulations of Nasdaq and the SEC.

*Benchmarking: Use of Market Compensation Data*

In making compensation decisions, our compensation committee reviewed competitive market compensation data compiled by Pearl Meyer. As part of its engagement, Pearl Meyer worked with the compensation committee in the fourth quarter of 2020 to create a peer group of publicly traded companies to be used in connection with our 2021 compensation decisions, including stock options granted during 2021, fiscal year 2021 salary adjustments, and fiscal year 2021 target bonus percentages. In selecting this peer group, the compensation committee and Pearl Meyer generally targeted mid- to late-development stage companies in the pharmaceutical and biotechnology sectors that generally met the following screening criteria:

- Company Size: pre-commercial companies, small or micro-cap companies (under \$1 billion in market capitalization), companies with a last twelve months’ (“LTM”) operating expense of less than \$100 million, and companies with fewer than 100 employees;
- Business Operations: companies with five or fewer Phase 2 or Phase 3 assets focused on cancer/ oncology/immune-oncology, and with no or few other areas of research and development; and
- Other: exclude subsidiaries, companies with business challenges, and companies that have recently conducted an initial public offering.

The following table lists the companies included in the peer group used in connection with our 2021 compensation decisions referred to above:

Aeglea BioTherapeutics, Inc.	Marker Therapeutics, Inc.*	Syndax Pharmaceuticals, Inc.
Calithera Biosciences, Inc.	MEI Pharma, Inc.	Syros Pharmaceuticals, Inc.
Diffusion Pharmaceuticals Inc.*	Miragen Therapeutics, Inc.	Tyme Technologies, Inc.
Galectin Therapeutics, Inc.	OncoSec Medical Incorporated*	ZIOPHARM Oncology, Inc.
GlycoMimetics, Inc.*	Selecta Biosciences, Inc.	
Leap Therapeutics, Inc.	Sunesis Pharmaceuticals, Inc	

\* Newly added company to the peer group used in connection with our 2021 compensation decisions. Such addition(s) replaced the following peer companies used in connection with our 2020 compensation decisions: Molecular Templates, Inc., NewLink Genetics Corp., Sensen Bio, Inc., and Spring Bank Pharmaceuticals, Inc.

The foregoing peer group companies were recommended by Pearl Meyer and approved by our compensation committee because they have similar business profiles with respect to number of employees, market value, and stage of development. Based on application of the screening criteria, certain companies were excluded from or added to the peer group used for the 2021 compensation decisions.

Our compensation committee intends that if we achieve our corporate goals and the NEO performs at the level expected, the NEO should have the opportunity to receive compensation that is competitive with industry norms. Accordingly, our compensation committee generally targets overall compensation for NEOs around the 50th percentile of the market data. However, the compensation committee does not apply those targets formulaically and allows for NEOs to be positioned at different percentiles based on each individual NEO's experience, performance level, and duties and responsibilities.

#### ***Components of Executive Compensation***

The primary elements of our executive compensation program are:

- base salary;
- annual cash bonuses;
- long-term equity awards (i.e., stock option);
- severance and change in control benefits; and
- broad-based benefits and limited perquisites.

Base salaries are an important part of the NEOs' total compensation package and are intended to reflect their respective positions, duties, and responsibilities. Base salary provides a baseline compensation level, serving as a stable, fixed component of compensation that delivers cash income to each NEO. Annual base salaries have historically been based on, among other factors, a NEO's knowledge, experience, expertise, perceived abilities, and expected contributions. The factors considered are not assigned specific weights.

Our variable or "at-risk," performance-based compensation consists of short-term compensation in the form of an annual cash bonus and long-term compensation in the form of equity awards that vest over time from the date of grant of the award or from the time of achievement of performance milestones. The annual cash bonus is intended to provide an incentive to our NEOs to achieve short-term operational objectives, while equity awards are intended to incentivize our NEOs to achieve longer-term strategic business goals, which should ultimately lead to higher stock prices and increased stockholder value. We do not have any formal or informal policy or target for allocating compensation between short- and long-term compensation, between cash and non-cash compensation, or among the different forms of non-cash compensation. Instead, the compensation committee, after reviewing industry information, including the compensation practices of our peer companies, and our cash resources, determines subjectively what it believes to be the appropriate level and mix of the various compensation components.

We do not have any defined benefit pension plans or non-qualified deferred compensation plans. We maintain broad-based benefits, including health, dental, and vision insurance, life and disability insurance, and a 401(k) plan, that are provided to all employees. Our NEOs may also participate in our employee stock purchase plan, which is generally available to all employees who work over 20 hours per week, so long as they own less than 5% of our common stock, including for this purpose vested and unvested stock options and restricted stock units (RSUs). We provide limited perquisites consisting of certain relocation benefits.

We are party to employment agreements and employment offer letters with each of our NEOs. Employment agreements and employment offer letters with our NEOs are described below under the caption "Employment Agreements with Our NEOs."

#### ***Base Salary***

In establishing base salaries for our NEOs, our compensation committee typically:

- reviews the market compensation data provided by the compensation consultant;



- considers historic salary levels of the NEO and the nature of the NEO's responsibilities;
- compares each NEO's base salary with the salaries of our other NEOs; and
- considers the NEO's experience, performance, and contributions.

The compensation committee also typically considers the challenges involved in hiring and retaining executive talent in our industry and region. In assessing the NEO's performance, the compensation committee considers his or her role in achieving the annual corporate goals, as well as, in the case of our NEOs other than our chief executive officer, the performance evaluation prepared by our chief executive officer with respect to such NEO. The chief executive officer's evaluation provides the compensation committee insight as to whether each individual NEO's performance was generally consistent with our expectations.

As part of our 2020 annual performance and compensation review, the compensation committee approved annual base salaries for our executive officers for 2021. In setting these annual base salaries, the compensation committee reviewed the 2020 market compensation data presented by Pearl Meyer. The compensation committee approved the following base salaries:

NEO	2020 Base Salary	2021 Base Salary	% Increase
Mr. Milano	\$600,000	\$600,000	—
Mr. Kirby	\$336,000	\$365,000	8.6
Mr. Lim	\$336,000	\$365,000	8.6
Mr. Soland(1)	—	\$425,000	—
Dr. Tarka(2)	\$375,000	\$413,000	10.1

- (1) Mr. Soland joined Idera as Senior Vice President and Chief Commercial Officer in January 2021.
- (2) Dr. Tarka served as our Senior Vice President and Chief Medical Officer, until May 28, 2021; thereafter, she provided consulting services to the Company until October 12, 2021.

As discussed above, no adjustments were made to the base salaries of Messrs. Milano or Soland. With respect to Mr. Milano, the compensation committee determined that his base salary was market competitive in connection with its benchmark analysis. As Mr. Soland was hired in January 2021, he did not receive a salary increase in 2021. Messrs. Kirby and Lim and Dr. Tarka each received salary adjustments to maintain reasonable positioning relative to the 50<sup>th</sup> percentile of the compensation of like positions relative to our peer companies.

#### *Annual Cash Incentive Award*

The annual cash incentive award provides an opportunity for additional compensation to NEOs if pre-established annual performance goals are attained. The compensation committee generally links cash awards to the achievement of the annual corporate goals, including unexpected corporate performance outside of the corporate goals and individual performance. The amount of the bonus paid, if any, varies among the NEOs depending on individual performance, individual contribution to the achievement of our annual corporate goals, and corporate performance generally and the compensation committee may exercise discretion in its determinations. The annual cash incentive award targets are based on a target percentage of each NEO's salary. In determining the target bonus percentages for each of our NEOs, the compensation committee concluded that the target bonus percentages should be competitive with the 50th percentile of the market compensation data and that the target bonus percentage for each NEO, with the exception of our chief executive officer, be the same. The target bonus percentage was established by the compensation committee for each NEO at the time of hire, with the exception of Mr. Kirby, whose target bonus was adjusted concurrent with his promotion to Chief Financial Officer in 2019. Each year, the compensation committee reviews the individual bonus target percentages against the market data to ensure its competitiveness.

The following table sets forth the individual bonus target percentages for each of our NEOs for 2021.

NEO	2021 Target Cash Bonus (% of Base Salary)
Mr. Milano	50%
Mr. Kirby	40%
Mr. Lim	40%
Mr. Soland	40%
Dr. Tarka	40%

Consistent with our Company-wide annual incentive plan applicable to all employees, including our NEOs, both a corporate performance score and individual performance score factored into the determination of each NEO's cash bonus award for 2021.

Under the terms of our incentive plan, the corporate performance score is based on the degree to which corporate performance objectives have been achieved. This score is determined by the compensation committee and may range from 0-125%. The individual performance score also may range from 0-125% and is based on:

- the degree to which individual performance objectives have been achieved;
- the competencies and behaviors, such as leadership, judgment, decision-making, management, and collaboration, demonstrated in achieving results;
- the technical skills required by the position; and
- the completion of the ongoing responsibilities required by the position.

The corporate performance score and the individual performance score is approved by the compensation committee. The individual's actual award is then calculated as follows:

$$\begin{array}{r}
 \text{Annual Base Salary (\$)} \\
 \times \\
 \text{Individual Target Bonus \%} \\
 \times \\
 \text{Corporate Performance Score} \\
 \text{(0-125\%)} \\
 \times \\
 \text{Individual Performance Score} \\
 \text{(0-125\%)} \\
 = \\
 \text{Annual Incentive Award (\$)} \\
 \text{(Individual Payout)}
 \end{array}$$

In setting corporate goals in the first quarter of 2021, the compensation committee agreed to group the business objectives into one of three primary categories, each of which would contribute toward the overall assessment of our corporate performance. In assessing our achievement of the 2021 corporate goals, and determining the corporate performance score, the compensation committee considered the extent to which the Company achieved the business objectives in each of the categories, and assigned a score for each category, as summarized in the following table:

<b>Primary Goals</b>	<b>Contribution toward Corporate Performance Score(1)</b>	<b>Weighted Achievement of Performance Goal(2)</b>	<b>Highlights of Performance on Key Objectives</b>
<b>Continue moving Tilsotolimod (IMO-2125) program toward registration</b>	80%	25%	<ul style="list-style-type: none"> <li>Delivered ILLUMINATE-301 topline results, which failed to meet primary endpoint.</li> <li>Completed cohort expansion in the first phase of MSS-CRC cohort for ILLUMINATE-206.</li> </ul>
<b>Continue business development initiatives through rare disease exploration</b>	10%	10%	<ul style="list-style-type: none"> <li>Active due diligence on multiple strategic business development options.</li> </ul>
<b>Enhance ability to be successful through relevant foundational objectives</b>	10%	10%	<ul style="list-style-type: none"> <li>On target with respect to financial budget.</li> <li>Maintained strong corporate compliance.</li> </ul>
<b>Modifier(3)</b>	n/a	5%	<ul style="list-style-type: none"> <li>Entered collaboration with Scriptr Global for discovery of gene therapy techniques.</li> <li>Improved cash position.</li> </ul>
<b>TOTAL</b>	100%	50%	

- (1) Percentages shown in this column represent the weight allocated to each performance goal.
- (2) Amounts represent the weighted achievement of each performance goal.
- (3) The modifier may be applied based on compensation committee discretion to reflect additional outcomes not contemplated when goals were set.

Based on these achievements and resulting category scores, in January 2022, the compensation committee approved a corporate performance score of 50%.

In assessing each NEO's individual performance score, the compensation committee determined:

- Mr. Milano's overall score was equivalent to the corporate performance score of 50%; however, Mr. Milano voluntarily declined to accept his bonus in light of the Company's business circumstances.
- In recognition of his achievement against his personal objectives, including his role in contributing to improvement in our cash position through execution of financing vehicles and to business development activities as well as his overall leadership contributions, Mr. Kirby's individual performance score was 100%. Using the broader corporate score of 50%, as noted above, this resulted in an overall bonus equal to 50% of his bonus target.
- Recognizing his achievement against his personal objectives, including legal support to the ILLUMINATE program, the Scriptr collaboration, business development activities, and corporate governance-related matters, along with his overall leadership contributions, Mr. Lim's individual performance score was 100%. Using the broader corporate score of 50% as noted above, this resulted in an overall bonus equal to 50% of his bonus target.
- Recognizing his achievement against his personal objectives, including commercial activities related to tilsotolimod and commercial input to business development activities, along with his overall leadership contributions, Mr. Soland's individual performance score was 100%. Using the broader corporate score of 50% as noted above, this resulted in an overall bonus equal to 50% of his bonus target. However, Mr. Soland voluntarily declined to accept his bonus in light of the Company's business circumstances.

- Dr. Tarka's employment was terminated before an individual performance score was awarded for the year. Accordingly, Dr. Tarka did not receive an annual cash incentive award for 2021.

The following table sets forth the target bonus amounts, the corporate and individual performance scores, the overall scores, and the resulting bonus amounts for each NEO.

NEO	Target Bonus	Overall Score	Bonus Earned	Bonus Payout(1)
Mr. Milano	\$300,000	50%	\$150,000	\$ 0
Mr. Kirby	\$146,000	50%	\$ 73,000	\$73,000
Mr. Lim	\$146,000	50%	\$ 73,000	\$73,000
Mr. Soland	\$170,000	50%	\$ 85,000	\$ 0
Dr. Tarka(2)	\$165,200	—	—	—

- (1) As discussed above, Messrs. Milano and Soland voluntarily declined to accept their respective bonuses. Accordingly, neither Mr. Milano nor Mr. Soland received an annual cash incentive award for 2021.
- (2) As Dr. Tarka's employment terminated on May 28, 2021, she did not receive an annual cash incentive award for 2021.

#### *Long-Term Equity Compensation*

Our equity award program is the primary vehicle for offering long-term incentives to our NEOs. We believe that equity awards provide our NEOs with a strong link to our long-term performance, create an ownership culture, and help to align the interests of our NEOs with those of our stockholders. Equity grants are intended as both a reward for contributing to our long-term success and an incentive for future performance. Additionally, the vesting feature of our equity awards is intended to further our goal of retention by providing an incentive to our NEOs to remain in our employ during the vesting period. In determining the size of equity awards to our NEOs, our compensation committee considers:

- the achievement of our annual corporate goals;
- individual performance;
- the previous awards granted to each executive officer, including the exercise price of such previous awards;
- the recommendations of management;
- the market compensation data presented by the compensation committee's independent compensation consultant; and
- the combined components of the NEO's compensation.

The compensation committee approves all equity awards to our NEOs. Our equity awards have historically been in the form of stock options. However, under the terms of our 2013 Stock Incentive Plan, as amended (the "2013 Plan"), we may grant equity restricted stock awards, stock appreciation rights, and RSUs.

The compensation committee typically makes initial stock option awards to our NEOs upon commencement of their employment. Thereafter, the compensation committee grants annual stock option awards, and as it deems appropriate, may occasionally grant retention or recognition awards, usually in the form of RSUs. Annual stock option awards for all employees, including our NEOs, are granted in two biannual tranches in order to increase the recognition and retention related aspect of the awards. Determination of the total annual award amount typically occurs at the regularly scheduled meeting of the compensation committee held in the first quarter of each fiscal year. The second biannual grant is approved by the compensation committee before distributed. In general, 25% of the stock option grant vests on the first anniversary of the date of grant with the balance of the shares subject to the option vesting in 12-equal quarterly installments over the three-year period thereafter. The exercise price of stock options equals the fair market value of our common stock on the date of grant, which is typically equal to the closing price of

our common stock on Nasdaq on the date of compensation committee approval, except in the case of new hire grants, which are approved in advance by the compensation committee and granted on the first day of employment.

In December 2020, as part of its annual executive compensation and performance review, the compensation committee reviewed the 2020 market compensation data regarding annual stock option grants. In January 2021, the compensation committee approved the grant of the first tranche of the biannual option awards to our NEOs and in July 2021, the compensation committee approved the grant of the second tranche of biannual option awards to our NEOs.

The following table sets forth the number of options granted to our NEOs in 2021:

NEO	January 2021 Grants	July 2021 Grants	Total
	Stock Options (# options)	Stock Options (# options)	Stock Options (# options)
Mr. Milano	95,000	124,000	219,000
Mr. Kirby	51,000	66,500	117,500
Mr. Lim	51,000	66,500	117,500
Mr. Soland	200,000(1)	66,500	266,500
Dr. Tarka	51,000	—(2)	51,000

- (1) Mr. Soland did not receive an annual grant in January 2021. Such amount represents the initial grant that Mr. Soland received in connection with the commencement of his employment on January 04, 2021.
- (2) Dr. Tarka did not receive an annual grant in July 2021 because her employment terminated in May 2021.

*Broad-Based Benefits.* We maintain broad-based benefits, including health and dental insurance, life and disability insurance, and a 401(k) plan, that are provided to all employees. During 2021, we matched 100% of the employee contributions to our 401(k) plan up to a maximum of 5% of the participating employee's annual salary, subject to annual IRS limitations. Our NEOs are eligible to participate in all our employee benefit plans, in each case, on the same basis as other employees and subject to any limitations in such plans. In 2021, each of our NEOs contributed to our 401(k) plan and their contributions were matched by us.

*Retirement Policy Regarding the Treatment of Equity Awards.* Our board has adopted a retirement policy to address the treatment of options and RSUs in the event of an employee's retirement that applies to all employees, including all officers and NEOs. For purposes of this policy, an employee will be deemed to have retired if (i) the employee terminates his or her employment with us, (ii) has been an employee of ours for more than 10 years, and (iii) is older than 65 upon termination of employment. Under the policy, if an employee retires, then:

- all outstanding, unvested equity awards held by the employee will automatically vest in full; and
- the period during which the employee may exercise the options will be extended to the expiration of the term of the option under the applicable option agreement.

Our board adopted this policy for our employees in recognition of the importance of equity awards to the compensation of employees and in order to provide each of our employees with the opportunity to get the full benefit of the options and RSUs held by the employee in the event of his or her retirement after making 10 years of contributions to our Company.

*ESPP.* Our NEOs may also participate in our employee stock purchase plan (the "ESPP"), which is generally available to all employees who work over 20 hours per week, so long as they own less than 5% of our common stock, including for this purpose vested and unvested stock options and unvested RSUs. None of our NEOs participated in the ESPP in 2021.

*Perquisites.* Apart from the discussed benefits, we do not provide our NEOs with perquisites.

### Severance and Change in Control Benefits and Agreements with NEOs

We believe providing severance and/or change in control benefits as a component of our compensation structure can help us compete for executive talent and attract and retain highly talented executive officers whose contributions are critical to our long-term success. In that regard, we periodically review our severance and/or change in control practices. We believe that our severance and change in control benefits are appropriate.

#### *Severance and Change in Control Agreements*

In 2017, the board approved a form of Severance and Change of Control Agreement (the “Form Severance/CIC Agreement”), which the Company subsequently entered into with each of our NEOs. The severance benefits terms contained in the Form Severance/CIC Agreements entered with each of our NEOs are controlling and superseded the severance and change of control terms provided for under any NEO’s pre-existing employment agreement or employment offer letter.

The Form Severance/CIC Agreement provides that if we consummate a change of control (as defined therein), we will employ the NEO for a period of 24 months from the date of the consummation of the change of control. Pursuant to the Form Severance/CIC Agreement, during such period:

- (i) the NEO’s position and duties for the Company will be commensurate with the most significant of the duties and positions held by the NEO during the 90-day period preceding the date of the change of control;
- (ii) the NEO’s annual base salary will equal at least 12 times the highest monthly base salary paid to the NEO during the 12 months prior to the date of the change of control;
- (iii) the NEO will be entitled to an annual bonus equal to at least the greatest of (a) the average bonus paid to the NEO in respect of the three years immediately preceding the year in which the change of control occurs, (b) the annual bonus paid for the year immediately preceding the year in which the change of control occurs, and (c) 100% of the target bonus for (1) the year immediately preceding the year in which the change of control occurs, (2) the year in which the change of control occurs, or (3) any year following the year in which the change of control occurs and prior to the then-current year, whichever is highest; and
- (iv) the NEO will be entitled to certain other benefits as are consistent with the benefits paid to the NEO during the year prior to the change of control.

The Form Severance/CIC Agreement also provides that if a NEO is terminated without “cause” or resigns for “good reason” (as such terms are defined therein) in either case, within 24 months following a change of control, subject to the NEO’s timely execution and non-revocation of a general release of claims in a form provided by us and the NEO’s continued compliance with the invention, non-disclosure, and non-competition agreement previously entered into in connection with the commencement of NEO’s employment, the NEO would receive a lump sum cash payment payable within 30 days after the date of termination equal to:

- (i) the NEO’s target bonus for the year of termination prorated for the portion of the year worked;
- (ii) 150% of the sum of (a) such NEO’s annual base salary for the year immediately preceding the year of termination and (b) the greatest of (1) the average bonus paid or earned and accrued, but unpaid to the NEO in respect of the three years immediately preceding the year of termination, (2) the annual bonus paid for the year immediately preceding the year of termination, and (3) the target bonus for the year of termination; and
- (iii) 150% of the Company’s share of the annual premium for group medical and/or dental insurance coverage that was in place for the NEO immediately prior to the date of termination.

In addition, all unvested options, restricted stock, RSUs, or stock appreciation rights held by the NEO as of the date of termination will be immediately and automatically vested and/or exercisable in full as of the date of termination, and the NEO will have the right to exercise any such options or stock appreciation

rights for the longer of (A) the period of time provided for in the applicable equity award agreement or plan, or (B) the shorter of one year after the date of termination or the remaining term of the applicable equity award.

If the NEO is terminated without “cause” or resigns for “good reason,” without regard to whether a change of control has occurred, such NEO will be entitled to the following under the Form Severance/CIC Agreement (collectively, the “Without Cause/For Good Reason Benefits”), subject to the NEO’s timely execution and non-revocation of a general release of claims in a form provided by us and the NEO’s continued compliance with the invention, non-disclosure, and non-competition agreement previously entered into in connection with the commencement of NEO’s employment:

- (i) a lump sum cash payment payable within 30 days after the date of termination in an amount equal to the greater of (x) the average bonus paid or earned and accrued, but unpaid to the NEO in respect of the three years immediately preceding the year of termination, and (y) the annual bonus paid for the year immediately preceding the year of termination prorated for the portion of the year worked;
- (ii) continued payment of the NEO’s base salary payable in accordance with our standard payroll practices over the one-year period following termination; and
- (iii) if the NEO elects to continue receiving group medical and/or dental insurance under COBRA (to the extent the NEO previously participated in such group insurance plans immediately prior to the date of termination), payment by us of our share of the premium for such coverage that we pay for active and similarly-situated employees who receive the same type of coverage for the one-year period following termination.

#### ***Employment Agreements with Our NEOs***

We have entered into employment agreements with each of our NEOs. All the NEOs are at-will employees.

##### *Vincent J. Milano*

We are a party to an Employment Agreement, dated as of December 1, 2014, with Mr. Milano, our President and Chief Executive Officer (the “Milano Employment Agreement”). Under the Milano Employment Agreement, Mr. Milano is entitled to receive an annual base salary of \$600,000 or such higher amount as our compensation committee or our board may determine. In addition, pursuant to the Milano Employment Agreement, Mr. Milano is eligible to receive an annual bonus of 50% of his base salary, subject to adjustment, based on the achievement of both individual and Company performance objectives as developed and determined by our board.

Mr. Milano’s severance and change in control benefits are governed by the Form Severance/CIC Agreement.

##### *John J. Kirby*

We are a party to an Employment Offer Letter, dated October 15, 2015, with Mr. Kirby, our Senior Vice President and Chief Financial Officer (the “Kirby Employment Agreement”). Under the terms of the Kirby Employment Agreement, Mr. Kirby is entitled to receive an annual base salary of \$225,000 or such higher amount as our compensation committee or our board may determine. In addition, under the Kirby Employment Agreement, Mr. Kirby is eligible to receive an annual bonus of 30% of his base salary, subject to adjustment, based on the achievement of both individual and Company performance objectives. Concurrent with his promotion to Chief Financial Officer in 2019, Mr. Kirby’s base salary and bonus target were adjusted to \$336,000 and 40%, respectively, or such higher amount as our compensation committee or our board may determine.

Mr. Kirby’s severance and change in control benefits are governed by the Form Severance/CIC Agreement.

*Bryant D. Lim*

We are a party to an Employment Offer Letter, dated as of August 20, 2018, with Mr. Lim, our Senior Vice President, General Counsel, and Secretary (the “Lim Employment Agreement”). Under the terms of the Lim Employment Agreement, Mr. Lim is entitled to receive an annual base salary of \$330,000 or such higher amount as our compensation committee or our board may determine. In addition, under the Lim Employment Agreement, Mr. Lim is eligible to receive an annual bonus of 40% of his base salary, subject to adjustment, based on the achievement of both individual and Company performance objectives.

Mr. Lim’s severance and change in control benefits are governed by the Form Severance/CIC Agreement.

*Daniel B. Soland*

We are a party to an Employment Offer Letter, dated as of November 16, 2020, with Mr. Soland, our Senior Vice President and Chief Operating Officer (the “Soland Employment Agreement”), which was effective for Mr. Soland’s employment commencing January 4, 2021. Under the terms of the Soland Employment Agreement, Mr. Soland is entitled to receive an annual base salary of \$425,000 or such higher amount as our compensation committee or our board may determine. In addition, under the Soland Employment Agreement, Mr. Soland is eligible to receive an annual bonus of 40% of his base salary, subject to adjustment, based on the achievement of both individual and Company performance objectives.

Mr. Soland’s severance and change in control benefits are governed by the Form Severance/CIC Agreement.

*Elizabeth Tarka*

Dr. Tarka served as our Senior Vice President and Chief Medical Officer until May 28, 2021. The terms of her employment were set forth in an Employment Offer Letter, dated as of June 26, 2019 (the “Tarka Employment Agreement”). Under the terms of the Tarka Employment Agreement, Dr. Tarka was entitled to receive an annual base salary of \$375,000 or such higher amount as our compensation committee or our board may determine. In addition, under the Tarka Employment Agreement, Dr. Tarka was eligible to receive an annual bonus of 40% of her base salary, subject to adjustment, based on the achievement of both individual and Company performance objectives.

Dr. Tarka’s severance and change in control benefits were governed by the Form of Severance/CIC Agreement; provided, however, in connection with her departure in May 2021, the Company entered into an Amendment to the Severance and Change of Control Agreement, dated as of May 18, 2021, with Dr. Tarka (the “Consulting Agreement”), pursuant to which Dr. Tarka agreed to provide certain consulting services to the Company. Dr. Tarka was entitled (1) to receive the Without Cause/For Good Reason Severance Benefits and, in exchange for the consulting services, (2) her unvested stock options and RSUs continued to vest during the Consultancy Term (as defined below). Further, under the Consulting Agreement, any options that were vested as of the end of the Consultancy Term were exercisable until the later of: (i) March 31, 2022 or (ii) ninety days from the end of the Consultancy Term. The Consulting Agreement terminated on October 12, 2021 (the “Consultancy Term”).

**Indemnification Agreements**

In March 2017, the board approved a form of Indemnification Agreement (the “Form Indemnification Agreement”) to be entered into between the Company and each of our officers. Each of Messrs. Milano, Kirby, Lim, and Soland and Dr. Tarka entered into the Form Indemnification Agreement with the Company. In general, the Indemnification Agreements provide that the Company will indemnify the NEO to the fullest extent permitted by law for claims arising in his or her capacity as an officer of the Company or in connection with his or her service at our request for another corporation or entity. The Indemnification Agreements also provide for procedures that will apply in the event that the NEO makes a claim for indemnification and establish certain presumptions that are favorable to the NEO.

**Formal Clawback Policy**

In April 2015, ahead of any such requirement in the Dodd-Frank Wall Street Reform and Consumer Protection Act, our compensation committee adopted a formal clawback policy, which applies in the event



we are required to prepare an accounting restatement due to any material noncompliance with any financial reporting requirement under the U.S. federal securities laws. This policy requires us to use reasonable efforts to recover from any of our current or former executive officers who receive incentive-based compensation (including stock options and RSUs awarded as compensation) during the three-year period preceding the date on which we are required to prepare an accounting restatement based on erroneous data, the excess of what would have been paid to such executive officer under the accounting restatement.

**Compensation Committee Report**

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 that the Compensation Discussion and Analysis be included in this proxy statement.

By the compensation committee of the board of directors,

Maxine Gowen, Chair  
Cristina Csimma  
Michael Dougherty

*The report of the compensation committee is not “soliciting material,” is not deemed “filed” with the SEC and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933 or the Securities Exchange Act of 1934, both as amended.*

**Summary Compensation Table**

The table below summarizes compensation paid to or earned by our NEOs for 2021, 2020, and 2019.

**Summary Compensation Table**

NAME AND PRINCIPAL POSITION	YEAR	SALARY (\$)	STOCK AWARDS (\$)(1)	OPTION AWARDS (\$)(2)	NON-EQUITY	ALL OTHER COMPENSATION (\$)(3)	TOTAL (\$)
					INCENTIVE PLAN COMPENSATION (\$)		
<b>Vincent J. Milano</b>	2021	600,000	—	340,189	150,000(4)	44,244	1,134,433
President and Chief Executive Officer	2020	24,786	764,713(5)	234,642	285,000	37,929	1,347,070
	2019	600,000	105,975	279,160	315,000	37,082	1,337,217
<b>John J. Kirby</b>	2021	365,000	—	182,575	73,000	39,408	659,983
Senior Vice President, Chief Financial Officer	2020	336,000	123,755	127,523	140,448	37,519	765,245
	2019	308,000	32,185	113,955	114,660	36,849	605,649
<b>Bryant D. Lim</b>	2021	365,000	—	182,575	73,000	42,965	663,540
Senior Vice President, General Counsel and Corporate Secretary	2020	336,000	39,679	127,523	140,448	37,779	681,429
	2019	336,000	56,834	150,317	155,232	33,412	731,795
<b>Daniel B. Soland</b>	2021	423,390	—	534,621	85,000(4)	44,437	1,087,448
Senior Vice President, Chief Commercial Officer							
<b>Elizabeth Tarka</b>	2021	172,594	—	131,407	—	489,502	793,503
Senior Vice President, Chief Medical Officer	2020	375,000	35,800	127,523	142,500	17,082	697,905

- (1) Represents the aggregate grant date fair value of RSUs as computed in accordance with ASC 718. See Note 11 to the financial statements included in our annual report on Form 10-K for the year ended December 31, 2021 regarding assumptions we made in determining these values. The grant date fair value of RSUs is determined using the fair value of our common stock on the date of grant. The equity incentive awards included in this column were all awarded under the Company's 2013 Stock Incentive Plan, as amended and restated.
- (2) Represents the aggregate grant date fair value of options granted to each of the NEOs as computed in accordance with ASC 718. These amounts do not represent the actual amounts paid to or realized by the NEOs. See Note 11 to the financial statements included in our annual report on Form 10-K for the year ended December 31, 2021 regarding assumptions we made in determining the fair value of option awards. The equity incentive awards included in this column were all awarded under the Company's 2013 Stock Incentive Plan, as amended and restated.
- (3) "All Other Compensation" for 2021 for each of the NEOs includes the following:

	Premiums Paid by us for all Insurance Plans (\$)	Company Match on 401(K) (\$)	Severance (\$)	Total (\$)
Mr. Milano	29,744	14,500	—	44,244
Mr. Kirby	24,908	14,500	—	39,408
Mr. Lim	28,465	14,500	—	42,965
Mr. Soland	29,937	14,500	—	44,437
Dr. Tarka	1,180	14,500	473,822	489,502

- (4) Messrs. Milano and Soland voluntarily declined to accept their respective earned 2021 bonuses. Accordingly, neither Mr. Milano nor Mr. Soland received an annual cash incentive award for 2021.
- (5) Approximately \$575,218 of Mr. Milano's base salary was paid in the form of a RSU award which was granted to Mr. Milano on December 18, 2020, as more fully described under the caption "Employment Agreements with our NEOs."

**Grants of Plan-Based Awards**

The following table sets forth information regarding grants of plan-based awards to our NEOs during 2021.

**Grants of Plan-Based Awards for Fiscal Year 2021**

Name	Grant Date	Estimated Possible Payouts Under Non-Equity Incentive Plan Awards		All Other Option Awards: Number of Securities Underlying Options (#)(1)	Exercise or Base Price of Option Awards (\$/Sh)	Grant Date Fair Value of Stock and Option Awards \$(2)
		Target (\$)	Maximum (\$)			
Vincent J. Milano	N/A	300,000	468,750	—	—	—
	1/8/2021(3)(4)			95,000	4.28	244,788
	7/8/2021(3)(4)			124,000	1.11	95,411
John J. Kirby	N/A	146,000	228,125	—	—	—
	1/8/2021(3)(4)			51,000	4.28	131,407
	7/8/2021(3)(4)			66,500	1.11	51,168
Bryant D. Lim	N/A	146,000	228,125	—	—	—
	1/8/2021(3)(4)			51,000	4.28	131,407
	7/8/2021(3)(4)			66,500	1.11	51,168
Daniel B. Soland	N/A	170,000	265,625	—	—	—
	1/4/2021(3)(5)			200,000	4.02	483,453
	7/8/2021(3)(4)			66,500	1.11	51,168
Elizabeth Tarka	N/A	165,200	258,125	—	—	—
	1/8/2021(3)(4)			51,000	4.28	131,407

- (1) The term of these options is ten years. The vesting of these stock options is time-based. See “Compensation Discussion and Analysis—Components of Executive Compensation—Long-Term Equity Compensation” for a full description of the vesting terms for these options. See “Employment Agreements with our NEOs” for further information about acceleration of vesting of options in the event of the termination of employment and/or a change of control.
- (2) Represents the aggregate grant date fair value of awards made to the NEOs in 2021 as computed in accordance with ASC 718. These amounts do not represent the actual amounts paid to or realized by the NEOs during 2021. See Note 11 to the financial statements included in our annual report on Form 10-K for the year ended December 31, 2021 regarding assumptions we made in determining the fair value of equity awards.
- (3) Granted pursuant to our 2013 Stock Incentive Plan, as amended and restated.
- (4) Represents the biannual option awards, 25% of which vest on the first anniversary of the date of grant with the balance of the shares subject to the option vesting in 12 equal quarterly installments over the three-year period thereafter.
- (5) Represents Mr. Soland’s initial grant in connection with the commencement of his employment. The stock option vests and becomes exercisable over a four-year period commencing on the date of grant, with 25% of the stock option vesting and becoming exercisable on the first anniversary of the date of grant and the balance vesting in 12 equal quarterly installments over the three-year period thereafter.

**Outstanding Equity Awards at Fiscal Year-End**

The following table sets forth information regarding the outstanding equity held by our NEOs as of December 31, 2021.

## Outstanding Equity Awards at Fiscal Year-End

Name	Option Awards				Stock Awards			
	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)(1)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights that have Not Vested #(20)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights Not Vested (\$)
Vincent J. Milano	250,000	—	24.96	12/1/2024				
	37,499	—	23.04	1/6/2026				
	37,500	—	12.72	1/4/2027				
	70,311	4,688(2)	17.92	1/3/2028				
	52,812	12,188(3)	7.39	8/13/2028				
	58,093	26,407(4)	3.14	1/3/2029				
	47,531	36,969(5)	2.52	7/9/2029				
	40,250	51,750(6)	1.79	1/10/2030				
	28,750	63,250(7)	2.48	7/21/2030				
	—	95,000(8)		1/8/2031				
	—	124,000(9)		7/8/2031				
					44,625(19)	25,436		
							100,000	57,000
John J. Kirby	18,750	—	24.88	11/2/2025				
	11,249	—	23.04	1/6/2026				
	12,499	—	12.72	1/4/2027				
	15,819	1,055(2)	17.92	1/3/2028				
	8,125	1,875(3)	7.39	8/13/2028				
	25,600(10)	—(11)	3.14	1/3/2029				
	45,500(10)	—(12)	2.52	7/9/2029				
	50,000(10)	—(13)	1.79	1/10/2030				
	50,000(10)	—(14)	2.48	7/21/2030				
	51,000(10)	—(15)	4.28	1/8/2031				
	—	66,500(9)	1.11	7/8/2031				
							57,203	32,606
Bryant D. Lim	105,625	24,375(16)	9.29	9/10/2028				
	45,500(10)	—(17)	3.14	1/3/2029				
	45,500(10)	—(12)	2.52	7/9/2029				
	50,000(10)	—(13)	1.79	1/10/2030				
	50,000(10)	—(14)	2.48	7/21/2030				
	51,000(10)	—(15)	4.28	01/8/2031				
	—	66,500(9)	1.11	07/8/2031				
							2,523	1,438

Name	Option Awards				Stock Awards			
	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)(1)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights that have Not Vested (#)(20)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights Not Vested (\$)
Daniel B. Soland	200,000(10)	—(18)	4.02	01/4/2031				
	—	66,500(9)	1.11	07/8/2031				
Elizabeth Tarka	130,000(10)	—	2.54	07/22/2029				
	50,000 (10)	—	1.79	01/10/2030				
	50,000 (10)	—	2.48	07/21/2030				
	51,000 (10)	—	4.28	01/8/2031				

- (1) Market Value is calculated based on a price per share of \$0.57, which was the closing price of our common stock on December 31, 2021.
- (2) Represents unvested portion of stock option award that will vest 25% on the first anniversary date following the January 3, 2018 grant date, with the remainder vesting in 12 equal quarterly installments thereafter (until January 3, 2022), provided the NEO is still employed with us on each vesting date.
- (3) Represents unvested portion of stock option award that will vest 25% on the first anniversary date following the August 13, 2018 grant date, with the remainder vesting in 12 equal quarterly installments thereafter (until August 13, 2022), provided the NEO is still employed with us on each vesting date.
- (4) Represents unvested portion of stock option award that will vest 25% on the first anniversary date following the January 3, 2019 grant date, with the remainder vesting in 12 equal quarterly installments thereafter (until January 3, 2023), provided the NEO is still employed with us on each vesting date.
- (5) Represents unvested portion of stock option award that will vest 25% on the first anniversary date following the July 9, 2019 grant date, with the remainder vesting in 12 equal quarterly installments thereafter (until July 9, 2023), provided the NEO is still employed with us on each vesting date.
- (6) Represents unvested portion of stock option award that will vest 25% on the first anniversary date following the January 10, 2020 grant date, with the remainder vesting in 12 equal quarterly installments thereafter (until January 10, 2024), provided the NEO is still employed with us on each vesting date.
- (7) Represents unvested portion of stock option award that will vest 25% on the first anniversary date following the July 21, 2020 grant date, with the remainder vesting in 12 equal quarterly installments thereafter (until July 21, 2024), provided the NEO is still employed with us on each vesting date.
- (8) Represents unvested portion of stock option award that will vest 25% on the first anniversary date following the January 8, 2021 grant date, with the remainder vesting in 12 equal quarterly installments thereafter (until January 8, 2025), provided the NEO is still employed with us on each vesting date.
- (9) Represents unvested portion of stock option award that will vest 25% on the first anniversary date following the July 8, 2021 grant date, with the remainder vesting in 12 equal quarterly installments thereafter (until July 8, 2025), provided the NEO is still employed with us on each vesting date.
- (10) In March 2021, the compensation committee approved the acceleration of the vesting terms of all outstanding, unvested options that had a value equal to less than \$5.00 and RSUs (the “2021 Acceleration”). The 2021 Acceleration applied to all employees, including the NEOs, except Mr. Milano; however, in January 2022, for the NEOs, the compensation committee implemented a holding period (the “Holding Period”) prohibiting the sale of shares associated with the 2021 Acceleration according to a schedule not more favorable than the original vesting schedule (i.e., 6.25% of the total option grant

every quarter and 25% of the total RSU grant every year). No NEOs exercised any options that became exercisable as a result of the 2021 Acceleration or sold any shares that related to the RSUs that vested in connection with the 2021 Acceleration during the intervening period of March 2021 to January 2022.

- (11) 8,000 options are subject to the Holding Period.
- (12) 19,906 options are subject to the Holding Period.
- (13) 28,2125 options are subject to the Holding Period.
- (14) 34,875 options are subject to the Holding Period.
- (15) 51,000 options are subject to the Holding Period.
- (16) Represents unvested portion of stock option award that will vest 25% on the first anniversary date following the September 10, 2018 grant date, with the remainder vesting in 12 equal quarterly installments thereafter (until September 10, 2022), provided the NEO is still employed with us on each vesting date.
- (17) 14,219 options are subject to the Holding Period.
- (18) 200,000 options are subject to the Holding Period.
- (19) Includes the unvested portion of RSUs granted to Mr. Milano on January 3, 2019 and January 10, 2020, which vest in four equal installments over the four-year period following the grant date.
- (20) Represents unvested, performance-based RSUs granted to Messrs. Milano, Kirby, and Lim, on July 21, 2020, which vest subject to and on the date the market capitalization of the Company equals or exceeds \$500,000,000.

#### Option Exercised and Stock Vested

The following table sets forth information regarding our NEOs' awards of restricted stock units that vested during 2021.

#### Option Exercised and Stock Vested

Name	Stock Awards	
	Number of Shares Acquired on Vesting(1) (#)	Value Realized on Vesting(2) (\$)
Vincent Milano	17,688	70,557
John Kirby	27,688(3)	61,597
Bryant Lim	33,575(4)	74,803
Elizabeth Tarka	20,000	44,350

- (1) Amounts in this column represent the number of RSUs that vested in accordance with the terms of the applicable award agreements and in connection with the 2021 Acceleration (except with respect to Mr. Milano, whose RSUs were not accelerated in connection with the 2021 Acceleration).
- (2) Stock awards value realized is determined by multiplying (i) the closing market price of the Company's common stock on the vesting date by (ii) the number of shares of common stock that vested on that date.
- (3) Includes 20,125 shares that vested pursuant to the 2021 Acceleration and are subject to the Holding Period.
- (4) Includes 24,050 shares that vested pursuant to the 2021 Acceleration and are subject to the Holding Period.

#### Potential Payments Upon Termination or Change in Control

As discussed above, we entered into the Form Severance/CIC Agreement with each of Messrs. Milano, Kirby, Lim, and Soland and Dr. Tarka. These agreements are described above under the caption "Severance and Change in Control Benefits and Agreements with NEOs."

**Termination of Employment Not in Connection with or Following a Change in Control**

The following table sets forth the estimated potential benefits that our NEOs would be entitled to receive upon their termination of employment with our Company (other than a termination in connection with or following a change in control of our Company) if the NEO's employment was terminated on December 31, 2021 (except in the case of Dr. Tarka). This table represents estimates only and does not necessarily reflect the actual amounts that would be paid to our NEOs (except in the case of Dr. Tarka), which would only be known at the time that they become eligible for payment following their termination. With respect to Dr. Tarka, the below disclosure describes the actual amounts and benefits she received in connection with her termination on May 28, 2021.

Name	Cash Severance(1) (\$)	Benefits(2) (\$)	Total (\$)
Vincent J. Milano	800,000	38,458	838,458
John J. Kirby	474,369	27,657	502,026
Bryant D. Lim	487,893	35,748	523,641
Daniel B. Soland	510,000	38,745	548,745
Elizabeth Tarka(3)	473,822	—	473,822

- (1) Cash severance under the Form Severance/CIC Agreements would be payable to Messrs. Milano, Kirby, Lim, and Soland upon a termination of the NEO's employment by the NEO for "good reason" or by us without "cause," in either case, subject to the NEO's timely execution and non-revocation of a general release of claims in a form provided by the Company and the NEO's continued compliance with the invention, non-disclosure, and non-competition agreement previously entered into in connection with the commencement of NEO's employment. In such an event, NEOs would receive:
- (i) a lump sum cash payment payable within 30 days after the date of termination equal to the greater of (1) the average bonus paid or earned and accrued, but unpaid to the NEO in respect of the three fiscal years immediately preceding the year of termination (\$200,000 for Mr. Milano, \$109,370 for Mr. Kirby, \$122,894 for Mr. Lim, and \$85,000 For Mr. Soland), and (2) the annual bonus earned for the year immediately preceding the year of termination; and
  - (ii) salary continuation payments at the NEO's base salary on termination date for a period of 12 months paid in accordance with the Company's normal payroll practices and subject to applicable tax withholding (\$600,000 for Mr. Milano, \$365,000 for Mr. Kirby, \$365,000 for Mr. Lim, and \$425,000 for Mr. Soland).
- (2) Under the Form Severance/CIC Agreements, upon a qualifying termination by Messrs. Milano, Kirby, Lim, and Soland, to the extent the NEOs participated in our group medical/dental insurance immediately prior to the termination date, if NEOs elect to continue receiving group medical and/or dental insurance under the continuation coverage rules known as COBRA, the Company will pay the Company's share of the premium for such coverage that it pays for active and similarly-situated employees who receive the same type of coverage until the end of the period for which the Company is paying the salary continuation payments described within note (1)(ii), above.

The payments described in this column include an estimated value of the employer share of the premiums for our insurance plans as follows:

Name	Medical Insurance Premiums (\$)	Dental Insurance Premiums (\$)	Total (\$)
Vincent J. Milano	36,526	1,932	38,458
John J. Kirby	25,725	1,932	27,657
Bryant D. Lim	33,816	1,932	35,748
Daniel B. Soland	36,813	1,932	38,745
Elizabeth Tarka(a)	—	—	—

- (a) Dr. Tarka did not participate in our group medical/dental insurance plans.

- (3) Dr. Tarka’s employment with the Company terminated effective May 28, 2021. Pursuant to the terms of her Severance and Change in Control Agreement, as amended by the Consulting Agreement, Dr. Tarka received a severance payment of \$473,822 in connection with her termination of employment. Additionally, as discussed above under “Employment Agreements with Our NEOs,” and any options that were vested as of the end of the Consultancy Term were exercisable until the later of: (i) March 31, 2022 or (ii) ninety days from the end of the Consultancy Term, which ended on October 12, 2021. Dr. Tarka did not participate in our group medical/dental insurance plans prior to her termination and therefore, did not receive any benefits relating thereto following her termination.

#### Termination of Employment in Connection with or Following a Change in Control

The following table sets forth the estimated potential benefits that our NEOs would be entitled to receive upon their termination of employment with our Company in connection with or following a change in control of our Company if the NEO’s employment was terminated on December 31, 2021 (except in the case of Dr. Tarka). The amounts indicated below are estimates based on the material assumptions described in the notes to the table below, which may or may not actually occur. Some of these assumptions are based on information currently available and, as a result, the actual amounts, if any, that may become payable to a NEO (except in the case of Dr. Tarka) may differ in material respects from the amounts set forth below. Furthermore, for purposes of calculating such amounts, we have assumed:

- a change of control date of December 31, 2021;
- each NEO’s employment is terminated by us without “cause” or by the NEO for “good reason,” in each case on the date of the change of control; and
- the value of the accelerated vesting of any equity award is calculated assuming a market price per share of our common stock equal to \$0.57 (which equals the closing price of a share of our common stock on the Nasdaq on December 31, 2021).

This table represents estimates only and does not necessarily reflect the actual amounts that would be paid to our NEOs (except in the case of Dr. Tarka (see footnote 5)), which would only be known at the time that they become eligible for payment following their termination.

Name	Cash Severance(1) (\$)	Equity(2)(3) (\$)	Benefits(4) (\$)	Total (\$)
Vincent J. Milano	1,650,000	82,436	57,691	1,790,127
John J. Kirby	912,500	32,606	41,491	986,597
Bryant D. Lim	912,500	1,438	53,623	967,561
Daniel B. Soland	1,062,500	—	58,123	1,120,623
Elizabeth Tarka(5)	—	—	—	—

- (1) Cash severance under the Form Severance/CIC Agreements would be payable to Messrs. Milano, Kirby, Lim, and Soland upon a termination of the NEO’s employment by the NEO for “good reason” or by us without “cause,” in either case, within 24 months following a change of control (i.e., pursuant to a “double-trigger” arrangement), subject to the NEO’s timely execution and non-revocation of a general release of claims in a form provided by the Company and the NEO’s continued compliance with the invention, non-disclosure, and non-competition agreement previously entered into in connection with the commencement of NEO’s employment. In such an event, NEOs would receive a lump sum cash payment payable within 30 days after the date of termination equal to:
- (i) the NEO’s target bonus for the year of termination prorated for the portion of the year worked (\$300,000 for Mr. Milano, \$146,000 for Mr. Kirby, \$146,000 for Mr. Lim, and \$170,000 for Mr. Soland); and
  - (ii) 150% of the sum of (a) such NEO’s annual base salary for the year immediately preceding the year of termination and (b) the greatest of (1) the average bonus paid or earned and accrued, but unpaid to the NEO in respect of the three years immediately preceding the year of termination, (2) the annual bonus paid for the year immediately preceding the year of termination, and (3) the



target bonus for the year in which the termination occurs (\$1,350,000 for Mr. Milano, \$766,500 for Mr. Kirby, \$766,500 for Mr. Lim, and \$892,500 for Mr. Soland).

- (2) Amounts in this column quantify the intrinsic value of the unvested stock options and/or unvested RSUs held by the NEO that would accelerate upon a qualifying termination of employment in connection with a change in control based on the assumptions described above.
- (3) Under the Form Severance/CIC Agreements, upon a qualifying termination by Messrs. Milano, Kirby, Lim, and Soland within 24 months following a change of control, all outstanding stock options and unvested RSUs (including the performance-based Special Awards) held by the NEO as of the date of termination will be automatically vested in full as of the date of termination, and the NEO will have the ability to exercise any such options until the three year anniversary of such NEO's termination and/or be entitled to receive shares underlying such RSUs, but in no event past the remaining term of the applicable equity award.
- (4) Under the Form Severance/CIC Agreements, upon a qualifying termination by Messrs. Milano, Kirby, Lim, and Soland within 24 months following a change of control, the NEO will be eligible to receive 150% of the Company's share of the annual premium for group medical and/or dental insurance coverage that was in place for the NEO immediately prior to the date of termination, payable in a lump sum cash payment within 30 days after the date of termination.

The payments described in this column include an estimated value of the employer share of the premiums for our insurance plans as follows:

Name	Medical Insurance Premiums (\$)	Dental Insurance Premiums (\$)	Total (\$)
Vincent J. Milano	54,792	2,899	57,691
John J. Kirby	38,592	2,899	41,491
Bryant D. Lim	50,724	2,899	53,623
Daniel B. Soland	55,224	2,899	58,123
Elizabeth Tarka(a)	—	—	—

(a) Dr. Tarka did not participate in our group medical/dental insurance plans.

- (5) As discussed above, Dr. Tarka's employment with the Company terminated on May 28, 2021. See "Termination of Employment Not In Connection With or Following a Change in Control" for a description of the actual amounts and benefits she received in connection with her termination.

#### CEO Pay Ratio

As required by Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 402(u) of Regulation S-K, we are providing the ratio of the annual total compensation of our CEO, on December 31, 2021, to that of our median employee. In making this pay ratio disclosure, other companies may use assumptions, estimates, and methodologies different than ours; as a result, the following information may not be directly comparable to the information provided by other companies in our peer group or otherwise. The pay ratio included in this information is a reasonable estimate calculated in a manner consistent with Item 402(u) of Regulation S-K.

The following is a reasonable estimate, prepared in accordance with applicable SEC rules, of the ratio of the annual total compensation of our CEO to the median of the annual total compensation of our other employees. We determined our median employee based on annualized 2021 base salary and annualized 2021 bonus awards for each of our 12 employees (excluding the CEO) as of December 31, 2021. We did not make any other assumptions, adjustments, or estimates with respect to total cash compensation. The annual total cash compensation of our median employee (other than the CEO) for 2021 was \$592,830. As disclosed in the Summary Compensation Table included in this CD&A, our CEO's annual total compensation for 2021 was \$1,134,433. Based on the foregoing, the ratio of the 2021 annual total compensation of our CEO to the median of the annual total compensation of all other employees was 2 to 1.

**Compensation Risk Management**

Our compensation committee has reviewed and considered whether our compensation programs and policies create risks that are reasonably likely to have a material adverse effect on us. In that regard, we design our programs in a balanced and diversified manner while also creating significant, yet appropriate, incentives for strong performance based on our business and strategic plan. We believe that our compensation programs reflect a balance of short-term, long-term, guaranteed, and performance-based compensation in order not to encourage excessive risk-taking. We believe that this ensures that our NEOs focus on the health of our business that will deliver stockholder value over time and discourages excess risk-taking by our NEOs. Our clawback and anti-hedging policies also help to manage potential risks and promote alignment with stockholder interests. Accordingly, there were no material adjustments made to our compensation policies and practices. We will continue to monitor our compensation policies and practices to determine whether our risk management objectives are being met with respect to incentivizing the Company's employees.

**PROPOSAL TWO**  
**APPROVAL, BY NON-BINDING VOTE, OF THE NAMED EXECUTIVE OFFICER 2021**  
**COMPENSATION**

We are providing our stockholders the opportunity to vote to approve, on an advisory, non-binding basis, the compensation of our NEOs for 2021 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 Wall Street Reform and Consumer Protection Act of 2010, which added Section 14A to the Exchange Act. The advisory vote on executive compensation will occur every year until the next vote on the frequency of stockholder votes on executive compensation, which will occur at the Company's 2023 annual meeting of stockholders.

The "Executive Compensation" section set forth elsewhere in this proxy statement, including the "Compensation Discussion and Analysis," describes in detail our executive compensation programs and the decisions made by the compensation committee and the board with respect to the fiscal year ended December 31, 2021.

Our board is asking stockholders to approve a non-binding advisory vote on the following resolution:

"RESOLVED, that the 2021 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 any related material disclosed in this proxy statement, is hereby approved."

As an advisory vote, this proposal is not binding. The outcome of this advisory vote will not overrule any decision by us or our board (or any committee thereof), create or imply any change to our fiduciary duties or the fiduciary duties of our board (or any committee thereof), or create or imply any additional fiduciary duties on us or our board (or any committee thereof). However, our compensation committee and board value the opinions expressed by our stockholders in their vote on this proposal and will consider the outcome of the vote when making future compensation decisions for named executive officers.

**Recommendation of the Board of Directors**

**Our board unanimously recommends that stockholders vote to approve the 2021 compensation of our named executive officers by voting FOR this proposal.**

**PROPOSAL THREE**  
**RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED**  
**PUBLIC ACCOUNTING FIRM**

The audit committee of our board of directors has selected the firm of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2022. Ernst & Young LLP has served as our independent registered public accounting firm since 2002. Although stockholder approval of the audit committee's selection of Ernst & Young LLP is not required by law, our board believes that it is advisable to give stockholders an opportunity to ratify this selection and is doing so as a matter of good corporate governance. If this proposal is not approved at the Annual Meeting, the audit committee of our board may reconsider its selection; however, the audit committee will not be obligated to change or retain a different independent registered public accounting firm. Even if the selection is ratified, the audit committee in its discretion may select a different independent registered public accounting firm at any time during the year if it determines that such a change would be in the best interests of the Company and its stockholders.

Representatives of Ernst & Young LLP are expected to be present at the Annual Meeting. They will have the opportunity to make a statement if they desire to do so and will also be available to respond to appropriate questions from stockholders.

**Recommendation of the Board of Directors**

**Our board unanimously recommends that you vote FOR the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2022.**

**PROPOSAL FOUR**  
**APPROVAL OF AMENDMENT TO 2013 STOCK INCENTIVE PLAN**

**Overview**

We are asking you to approve an amendment (the “Amendment”) to the Stock Incentive Plan, which amendment was approved by the board on April 15, 2022, acting on the recommendation of the compensation committee and subject to stockholder approval at the Annual Meeting. The Stock Incentive Plan originally was adopted by our board in May 2013 and approved by our stockholders in July 2013, and subsequently amended by the board in April 2014, April 2015, March 2017, and April 2019, which amendments were thereafter approved by our stockholders.

The board believes that equity awards are a critical part of our compensation program. Our compensation philosophy emphasizes equity-based awards because they align the interests of our employees (including our executive officers), directors, consultants, and advisors with those of our stockholders, encourage long-term retention and incentivize long-term value creation. To enable us to continue offering meaningful equity-based incentives to our employees, officers, and directors, as well as consultants and advisors, the board believes that it is both necessary and appropriate to increase the number of shares available for these purposes.

Accordingly, the board is seeking stockholder approval of the Amendment in order to authorize an additional 4,600,000 new shares for issuance thereunder. If approved by stockholders at the Annual Meeting, the Amendment will be effective upon such approval (the “Effective Date”).

A copy of the Amendment is attached as Appendix A to this proxy statement and is incorporated herein by reference. All other provisions of the Stock Incentive Plan will remain in full force and effect. A copy of the Stock Incentive Plan as amended by the Amendment, is attached as Appendix B to this proxy statement.

***Background for Request to Increase the Number of Shares Reserved for Equity Incentive Awards***

Equity compensation is a vital component of our executive compensation philosophy. The board believes it is in the best interests of the Company and its stockholders to approve the Amendment in order to continue to motivate outstanding performance by our executive officers, employees, consultants, and non-employee directors. If this proposal is not approved, we believe that our efforts to motivate these individuals would be negatively impacted and that we would be at a disadvantage against our competitors for recruiting, retaining, and motivating those individuals who are critical to our success. We could be forced to increase cash compensation, thus reducing resources available to meet our business needs.

In consideration of the limited number of shares remaining available for issuance under the Stock Incentive Plan and our need for equity compensation to maintain a competitive position in attracting, retaining, and motivating key personnel, our board adopted the Amendment, subject to stockholder approval. In calculating the size of the increase in the authorized number of shares issuable under the Stock Incentive Plan, our board considered, among other things, our hiring plans and expected number of employees, our historic share usage under our stock incentive plans, our “burn rate,” our current overhang in shares issuable upon exercise of outstanding awards granted under our stock incentive plans or as inducement grants, the existing terms of such outstanding awards, and assumptions regarding stock option exercise activity and forfeiture rates. On April 1, 2022, the last reported sale price of our common stock on the Nasdaq Capital Market was \$0.54 per share.

If stockholders approve the Amendment, we will have 4,794,994 shares of common stock available for issuance pursuant to future awards under the Stock Incentive Plan (plus such additional number of shares of common stock as is equal to the number of shares of common stock subject to awards granted under our 2008 Stock Incentive Plan which awards expire, terminate, or are otherwise surrendered, cancelled, forfeited, or repurchased by us at their original issuance price pursuant to a contractual repurchase right). We expect that this number of shares available for issuance, given our historical and projected utilization and assuming relative stock price stability, will meet our grant needs until approximately the first half of 2025. This is only an estimate, and circumstances could cause the share reserve to be used more quickly or more

slowly. These circumstances include, but are not limited to, the future price of shares of our common stock, the mix of cash, options, and full value awards provided as long-term incentive compensation, grant amounts provided by our competitors, payout of performance-based awards in excess of target in the event of superior performance, hiring activity, and promotions during the next few years.

#### *Dilution Analysis*

As of April 1, 2022, our capital structure consisted of 52,966,025 shares of common stock outstanding. As of April 1, 2022, 194,994 shares remained available for awards under the Stock Incentive Plan. The proposed share authorization is a request for 4,600,000 new shares of common stock to be available for awards under the Stock Incentive Plan.

Overhang provides a measure of the potential dilutive effect of all outstanding equity awards and shares available for future grant. We calculated overhang as the total number of options outstanding, plus shares available to be granted, divided by the total shares of common stock outstanding. Our overhang at December 31, 2021 was 11.3%, and our overhang at April 1, 2022 was 11.1%. If the 4,600,000 additional shares proposed to be authorized for issuance under our Stock Incentive Plan are included in the calculations our overhang would have been 20.0% at December 31, 2021 and 19.8% at April 1, 2022. If we also add the shares of common stock issuable upon exercise of our pre-funded warrants to our total shares of common stock outstanding, our overhang would have been 19.5% at December 31, 2021 and 19.2% at April 1, 2022. See Note 8 to the financial statements in our annual report on Form 10-K for the year ended December 31, 2021 for more information regarding our pre-funded warrants.

The board believes that this number of shares represents a reasonable amount of potential equity dilution, which will allow us to continue granting equity awards, which are an important component of our equity compensation program.

#### *Burn Rate*

Burn rate provides a measure of the potential dilutive impact of the equity awards we grant. Set forth below is a table that reflects our burn rate for 2019, 2020, and 2021, as well as the average over those years.

<u>Fiscal Year</u>	<u>Equity Awards Granted</u>	<u>Basic Weighted Average Number of Shares of Common Stock Outstanding</u>	<u>Gross Burn Rate(1)</u>
2021	1,356,700	49,203,000	2.8%
2020	1,581,227	33,821,000	4.7%
2019	1,473,566	28,545,000	5.2%
Three-Year Average	1,470,498	37,189,667	4.0%

- (1) "Gross Burn Rate" is defined as the number of equity awards granted in the year divided by the basic weighted average of shares of common stock outstanding.

The only equity compensation plans from which we may currently issue new awards are our 2017 Employee Stock Purchase Plan and our Stock Incentive Plan. We may also issue new awards as inducement grants. The following table summarizes information regarding all of our outstanding options under all of our equity compensation plans and shares available for future awards under all of our equity plans as of April 1, 2022.

	<u>April 1, 2022*</u>
Total shares of common stock underlying all outstanding options and RSUs	5,677,159
Weighted-average exercise price of outstanding options	\$ 7.92
Weighted-average remaining contractual life of outstanding options (in years)	6.71
Total shares available for future awards	194,994

- \* Excludes inducement awards granted pursuant to Nasdaq Listing Rule 5635(c)(4).

### Promotion of Sound Corporate Governance Practices

We have designed the Stock Incentive Plan to include a number of features that reinforce and promote alignment of equity compensation arrangements for employees, officers, non-employee directors, and consultants with the interests of our stockholders. These features include, but are not limited to, the following:

- *Limitation on Awards to Non-Employee Directors.* The limit for the aggregate number of shares with respect to which awards that may be granted to non-employee directors of the Company under the Stock Incentive Plan is 2,050,611.
- *No Discounted Stock Options or Stock Appreciation Rights.* Stock options and Stock Appreciation Rights (“SAR(s)”) may not be granted with exercise prices lower than the fair market value of the underlying shares on the grant date.
- *Prohibition on Repricing.* The exercise price of a stock option or SAR may not be reduced, directly or indirectly, without the prior approval of stockholders, including by a cash repurchase of “underwater” awards.
- *Minimum Vesting Requirements.* Subject to certain limited exceptions, awards granted under the Stock Incentive Plan will be subject to a minimum vesting period of one year.
- *No Liberal Share Recycling.* Shares retained by or delivered to the Company to pay the exercise price of a stock option or SAR or to satisfy tax withholding taxes in connection with the exercise or settlement of an award count against the number of shares remaining available under the Stock Incentive Plan.
- *No Dividends on Unearned or Unvested Awards.* The Stock Incentive Plan prohibits the current payment of dividends or dividend equivalent rights on unearned or unvested awards.
- *Awards Subject to Clawback Policy.* Awards under the Stock Incentive Plan are subject to the Company’s compensation recoupment policy as described above under the caption “Formal Clawback Policy.”
- *No Tax Gross-Ups.* The Stock Incentive Plan does not provide for any tax gross-ups.
- *No Liberal Change in Control Definition.* The Stock Incentive Plan defines “reorganization event” based on the consummation of the transaction rather than the announcement or stockholder approval of the transaction.

### Description of the Stock Incentive Plan

References to the Board in this summary include the compensation committee of the Board or any similar committee appointed by the Board to administer the Stock Incentive Plan.

#### *Types of Awards; Shares Available for Issuance*

The Stock Incentive Plan allows for the issuance of Incentive Stock Options (“ISO(s)”) intended to qualify under Section 422 of the Internal Revenue Code (the “Code”), Nonstatutory Stock Options (“NSO(s)”), SARS, restricted stock awards, restricted stock units, other stock-based awards, and performance awards (collectively, “Awards”). Subject to adjustment in the event of stock splits, stock dividends, or similar events, and assuming the Amendment is approved by our stockholders, Awards may be made under the Stock Incentive Plan for up to 10,253,057 shares of common stock, plus such additional number of shares of common stock (up to 155,968 shares) as is equal to the number of shares of common stock subject to awards granted under our 2008 Stock Incentive Plan which awards expire, terminate, or are otherwise surrendered, cancelled, forfeited, or repurchased by us at their original issuance price pursuant to a contractual repurchase right (subject, however, in the case of ISOs to any limitations under the Code). In addition, if any Award granted under the Stock Incentive Plan expires or is terminated, surrendered, cancelled, forfeited, or otherwise results in any common stock not being issued, the unused common stock covered by such Award will again be available for the grant of Awards under the Stock Incentive Plan (subject, in the case of ISOs, to any limitations under the Code). However, shares of common stock delivered to us by a participant to purchase common stock upon exercise of an Award or to satisfy tax withholding obligations (including

shares retained from the Award creating the tax obligation) will not be added back to the number of shares of common stock available for the future grant of Awards under the Stock Incentive Plan. In addition, common stock repurchased by us on the open market using proceeds from the exercise of an Award will not increase the number of shares of common stock available for future grant of Awards under the Stock Incentive Plan.

All shares of common stock covered by SARs, if any, will be counted against the number of shares available for grant under the Stock Incentive Plan and the sub-limitations on Awards to non-employee directors. However, SARs that may be settled only in cash will not be so counted, and if a SAR is granted in tandem with an option for the same number of shares of common stock and the grant provides that only one such Award may be exercised, or tandem SAR, only the shares covered by the option will be counted, and the expiration of one in connection with the other's exercise will not restore shares to the Stock Incentive Plan. The shares covered by a tandem SAR will not again become available for grant under the Stock Incentive Plan upon the expiration or termination of the tandem SAR. In the case of the exercise of a SAR, the number of shares counted against the shares available under the Stock Incentive Plan and the sub-limitation on Awards to non-employee directors (described below) and will be the full number of shares subject to the SAR multiplied by the percentage of the SAR actually exercised, regardless of the number of shares actually used to settle the SAR upon exercise.

Subject to adjustment in the event of changes in capitalization and reorganization events (as defined below), any Award granted under the Stock Incentive Plan that is not a "full-value award" will be counted against the number of shares available for grant under the Stock Incentive Plan and the sub-limitation on Awards to non-employee directors as one share for each share of common stock subject to such Award, and any Award that is a "full-value award" will be counted as 1.25 shares for each share of common stock subject to such Award. "Full-value award" means any Award of restricted stock or restricted stock units or any other stock-based Award with a per share price or per unit purchase price lower than 100% of the fair market value of our common stock on the date of grant. To the extent a share that was subject to an Award that counted as one share is returned to the plan as described above, each applicable share reserve will be credited with one share, and to the extent a share that was subject to an Award that counted as 1.25 shares is returned to the plan as described above, each applicable share reserve will be credited with 1.25 shares.

Certain sub-limitations apply to the shares of common stock available for issuance under the Stock Incentive Plan. The maximum number of shares with respect to which Awards may be granted to any participant under the Stock Incentive Plan is 1,500,000 shares per calendar year. The maximum number of shares with respect to which Awards may be granted to directors who are not employees of Idera at the time of grant will be 20% of the maximum number of authorized shares under the Stock Incentive Plan. Performance Awards can also provide for cash payments of up to a maximum of \$1,500,000 per fiscal year per individual.

In connection with a merger or consolidation of an entity with us or our acquisition of property or stock of an entity, our board may grant Awards under the Stock Incentive Plan in substitution for an option or other stock or stock-based Awards granted by such entity or an affiliate thereof on such terms as our board determines appropriate in the circumstances, notwithstanding any limitation on Awards contained in the Stock Incentive Plan. Substitute Awards granted under the Stock Incentive Plan in connection with a merger or consolidation of an entity with Idera or the acquisition by Idera of property or stock of an entity will not count against the overall share limits and sub-limitations described above, except as required by reason of Section 422 and related provisions of the Code.

Shares issued under the Stock Incentive Plan may consist in whole or in part of authorized but unissued shares or treasury shares.

#### *Descriptions of Awards*

*Options.* Optionees receive the right to purchase a specified number of shares of common stock at a specified option price and subject to such other terms and conditions as are specified in connection with the option grant. Only our employees or employees of our subsidiaries, if any, may receive ISOs as defined in Section 422 of the Code. An option that is not intended to be an ISO is an NSO. Options may not be granted



at an exercise price that is less than 100% of the fair market value of the common stock on the effective date of grant; provided, however, that if our Board approves the grant of an option with an exercise price to be determined on a future date, the exercise price may not be less than 100% of the fair market value of the common stock on such future date. Under present law, ISOs may not be granted at an exercise price less than 110% of the fair market value in the case of stock options granted to optionees holding more than 10% of the total combined voting power of all classes of our stock. Under the terms of the Stock Incentive Plan, stock options may not be granted for a term in excess of 10 years (and, under present law, five years in the case of ISOs granted to optionees holding greater than 10% of the total combined voting power of all classes of our stock). Any or all of the Awards available under the Stock Incentive Plan may be in the form of ISOs. The Stock Incentive Plan permits participants to pay the exercise price of options using one or more of the following manners of payment: (i) payment by cash, check, or wire transfer, or, except as may otherwise be provided in the applicable option agreement or approved by our board, in connection with a “cashless exercise” through a broker, (ii) to the extent provided in the applicable option agreement or approved by our board, and subject to certain conditions, by surrender to us of shares of common stock owned by the participant valued at their fair market value, (iii) to the extent provided in an applicable NSO agreement or approved by our board, and subject to certain conditions, by delivery of a notice of “net exercise” as a result of which we will retain a number of shares of common stock otherwise issuable pursuant to the stock option equal to the aggregate exercise price for the portion of the option being exercised divided by the fair market value of our common stock on the date of exercise, (iv) to the extent provided by applicable law and provided for in the applicable option agreement or approved by our board, by any other lawful means, or (v) any combination of the foregoing.

*Stock Appreciation Rights.* A SAR is an award entitling the holder, upon exercise, to receive a number of shares of common stock or cash (or a combination thereof) determined by reference to appreciation, from and after the date of grant, in the fair market value of a share of our common stock over the measurement price. SARs may be granted independently or in tandem with stock options granted under the Stock Incentive Plan. When a SAR is granted in tandem with a stock option, the SAR will be exercisable only at such time or times, and to the extent, that the related stock option is exercisable (except to the extent designated by our board in connection with a reorganization event), will terminate and no longer be exercisable upon the termination or exercise of the related option (except to the extent designated by our board in connection with a reorganization event), and will be transferable only with the related stock option. The related stock option will terminate and no longer be exercisable upon the exercise of the SAR. The Stock Incentive Plan provides that the measurement price of an SAR may not be less than 100% of the fair market value of our common stock on the effective date of grant (provided, however, that if our board approves the grant of a SAR effective as of a future date, the measurement price will not be less than 100% of the fair market value on such future date) and that SARs granted under the Stock Incentive Plan may not have a term in excess of 10 years.

*Limitation on Repricing of Options or SARs; No Reload Rights or Dividend Equivalents.* With respect to options and SARs, unless such action is approved by stockholders or otherwise permitted under the terms of the Stock Incentive Plan in connection with certain changes in capitalization and reorganization events, we may not (i) amend any outstanding option or SAR granted under the Stock Incentive Plan to provide an exercise price or measurement price per share that is lower than the then-current exercise price or measurement price per share of such outstanding option or SAR, (ii) cancel any outstanding option or SAR (whether or not granted under the Stock Incentive Plan) and grant in substitution therefor new Awards under the Stock Incentive Plan (other than certain substitute Awards described above) covering the same or a different number of shares of common stock and having an exercise price or measurement price per share lower than the then-current exercise price or measurement price per share of the cancelled option or SAR, (iii) cancel in exchange for a cash payment any outstanding option or SAR with an exercise price or measurement price per share above the then-current fair market value of our common stock, or (iv) take any other action under the Stock Incentive Plan that constitutes a “repricing” within the meaning of the rules of the Nasdaq Stock Market. No option or SAR granted under the Stock Incentive Plan will contain any provision entitling the grantee to the automatic grant of additional options or SARs in connection with any exercise of the original option or SAR or provide for the payment or accrual of dividend equivalents.

*Restricted Stock Awards.* We may issue Awards entitling recipients to acquire shares of our common stock subject to our right to repurchase all or part of such shares at their issue price or other stated or formula

price (or to require forfeiture of such shares if issued at no cost) from the recipient in the event that conditions specified by the board in the applicable Award are not satisfied prior to the end of the applicable restriction period established for such Award. We refer to these Awards as Restricted Stock. Unless otherwise provided in the applicable Award agreement, any dividend declared and paid by us with respect to a share of Restricted Stock will be paid to the participant (without interest) only if and when such shares of Restricted Stock become free from any applicable restrictions on transferability and forfeitability.

*Restricted Stock Units.* We may also grant Awards entitling the recipient to receive shares of our common stock (or cash equal to the fair market value of such shares) to be delivered at the time such Award vests. We refer to these Awards as Restricted Stock Units. Our board may, in its discretion, provide that settlement of Restricted Stock Units will be deferred, on a mandatory basis or at the election of the participant in a manner that complies with Section 409A of the Code. A participant has no voting rights with respect to any Restricted Stock Units. A grant of Restricted Stock Units may provide the participant with a right to receive dividend equivalents, which will be subject to the same restrictions on transfer and forfeitability as the underlying Restricted Stock Units.

*Other Stock-Based Awards.* Under the Stock Incentive Plan, our board may grant other Awards of shares of common stock and other Awards that are valued in whole or in part by reference to, or are otherwise based upon our common stock or other property, having such terms and conditions as the board may determine. We refer to these types of Awards as Other Stock-Based Awards. Other Stock-Based Awards may be available as a form of payment in the settlement of other Awards granted under the Stock Incentive Plan or as payment in lieu of compensation to which a participant is otherwise entitled. Other Stock-Based Awards may be paid in shares of our common stock or cash, as our Board determines. Unless otherwise provided in the applicable Award agreement, any dividend declared and paid by us with respect to a share of common stock granted under an Other Stock-Based Award will be paid to the participant (without interest) only if and when such shares become free from any applicable restrictions on transferability and forfeitability. A grant of an Other Stock-Based Award may provide the participant with a right to receive dividend equivalents, which will be subject to the same restrictions on transfer and forfeitability as the underlying Other Stock-Based Award.

*Performance Awards.* Restricted Stock, Restricted Stock Units, and Other Stock-Based Awards granted under the Stock Incentive Plan may be made subject to achievement of performance goals. We refer to these types of Awards as Performance Awards. Performance Awards may also provide for cash payments of up to \$1,500,000 per fiscal year per individual. With respect to Performance Awards intended to qualify as “performance-based compensation” under Section 162(m) of the Code, the compensation committee of our board will specify, at the time of grant, that such Performance Award will be granted, vest and/or pay out solely upon the achievement of specified objective performance criteria that are based on the relative or absolute attainment of specified levels of one or any combination of the following, which may be determined pursuant to generally accepted accounting principles, or GAAP, or on a non-GAAP basis, as determined by the compensation committee:

- earnings per share;
- return on average equity or average assets with respect to a pre-determined peer group;
- earnings;
- earnings growth;
- revenues;
- expenses;
- stock price;
- market share;
- return on sales, assets, equity or investment;
- regulatory compliance;
- achievement of balance sheet or income statement objectives;

- total shareholder return;
- net operating profit after tax;
- pre-tax or after tax income;
- cash flow;
- achievement of research, development, clinical or regulatory milestones;
- product sales;
- business development activities;
- the entry into an arrangement or agreement with a third party for the development, commercialization, marketing or distribution of products, services or technologies, or for conducting a research program to discover and develop a product, service or technology, and/or the achievement of milestones under such arrangement or agreement, including events that trigger an obligation or payment right;
- achievement of domestic and international regulatory milestones, including the submission of filings required to advance products, services and technologies in clinical development and the achievement of approvals by regulatory authorities relating to the commercialization of products, services and technologies;
- the achievement of discovery, preclinical and clinical stage scientific objectives, discoveries or inventions for products, services and technologies under research and development;
- the entry into or completion of a phase of clinical development for any product, service or technology, such as the entry into or completion of Phase 1, 2, and/or 3 clinical trials;
- the consummation of debt or equity financing transactions, or acquisitions of business, technologies and assets;
- new product or service releases;
- specified levels of product sales, net income, earnings before or after discontinued operations, interest, taxes, depreciation and/or amortization, operating profit before or after discontinued operations and/or taxes, sales, sales growth, earnings growth, cash flow or cash position, gross margins, stock price, market share, return on sales, assets, equity or investment; and
- improvement of financial ratings.

The preceding performance criteria may reflect absolute entity or business unit performance or a relative comparison to the performance of a peer group of entities or other external measure of selected performance criteria and may be absolute in their terms or measured against or in relationship to other companies comparably, similarly, or otherwise situated. The compensation committee may specify that such performance measures will be adjusted to exclude any one or more of:

- extraordinary items;
- gains or losses on the dispositions of discontinued operations;
- the cumulative effects of changes in accounting principles;
- the write-down of any asset;
- fluctuation in foreign currency exchange rates; and
- charges for restructuring and rationalization programs.

Such performance measures (i) may vary by participant and may be different for different Awards; (ii) may be particular to a participant or the department, branch, line of business, subsidiary, or other unit in which the participant works and may cover such period as may be specified by the compensation committee; and (iii) will be set by the compensation committee within the time period prescribed by, and will otherwise comply with the requirements of, Section 162(m). The compensation committee may adjust downwards,

but not upwards, the cash or number of shares payable pursuant to such Awards and may not waive the achievement of the applicable performance measures except in the case of the death or disability of the participant or a change in control of Idera. Performance Awards that are not intended to qualify as “performance-based compensation” under Section 162(m) may be based on these or other performance measures as determined by our board. Dividend equivalents with respect to Performance Awards will be subject to the same restrictions on transfer and forfeitability as the underlying Performance Award.

#### *Transferability of Awards*

Except as the board may otherwise determine or provide in an Award in connection with certain gratuitous transfers, Awards may not be sold, assigned, transferred, pledged, or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an ISO, pursuant to a qualified domestic relations order. During the life of the participant, Awards are exercisable only by the participant.

#### *Eligibility to Receive Awards*

Employees, officers, directors, consultants, and advisors of Idera and of our present or future parent or subsidiary corporations and any other business venture in which Idera has a controlling interest (as determined by our board) are eligible to be granted Awards under the Stock Incentive Plan. However, ISOs may only be granted to our employees, employees of our present or future parent or subsidiary corporations, and employees of any other entities the employees of which are eligible to receive ISOs under the Code. The granting of Awards under the Stock Incentive Plan is discretionary, and we cannot now determine the number or type of Awards to be granted in the future to any particular person or group, except that Awards are subject to the limitations described above. Because our executives and non-employee directors are eligible to receive awards under the Stock Incentive Plan, they may be deemed to have a personal interest in the approval of this Proposal. As of April 1, 2022, approximately 13 employees, including four executive officers, six non-employee directors, and zero consultants and advisors were eligible to receive Awards under the Stock Incentive Plan.

#### *Administration*

Our board administers the Stock Incentive Plan and is authorized to grant Awards and to adopt, amend, and repeal the administrative rules, guidelines and practices relating to the Stock Incentive Plan and to construe and interpret the provisions of the Stock Incentive Plan and any Award agreements entered into under the Stock Incentive Plan. Our board may correct any defect, supply any omission or reconcile any inconsistency in the Stock Incentive Plan or any Award in the manner and to the extent it will deem expedient and it will be the sole and final judge of such expediency.

Pursuant to the terms of the Stock Incentive Plan, our board may delegate authority under the Stock Incentive Plan to one or more committees or subcommittees of our board. Our board has authorized the compensation committee to administer certain aspects of the Stock Incentive Plan, including the granting of awards to non-employee directors and executive officers. The compensation committee, with the input of management, selects the recipients of Awards and determines, in addition to other items, and subject to the terms of the Stock Incentive Plan:

- the number of shares of common stock, cash, or other consideration covered by Awards and the terms and conditions of such Awards, including the dates upon which such Awards become exercisable or otherwise vest;
- the exercise or measurement price of Awards, if any;
- the effect on Awards of a change in control of Idera; and
- the duration of Awards.

To the extent permitted by applicable law, our board may delegate to one or more of our officers the power to grant stock options and certain Awards to our employees or non-executive officers and to exercise such other powers under the Stock Incentive Plan as the board may determine, provided that the board will fix the terms of the Awards to be granted by such officers (including the exercise price of such Awards,

which may include a formula by which the exercise price will be determined) and the maximum number of shares subject to Awards that the officers may grant. No officer will be authorized to grant Awards to any of our executive officers. The board has delegated to our chief executive officer the authority under the Stock Incentive Plan to grant stock options and restricted stock units to our non-executive employees subject to certain specified limitations and oversight by the compensation committee.

Awards to non-employee directors will only be granted and administered by a committee, all the members of which are independent as defined by Section 5605(a)(2) of the Nasdaq Listing Rules.

Except as otherwise provided under the Stock Incentive Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award need not be identical, and our board need not treat participants uniformly. Our board will determine the effect on an Award of the disability, death, retirement, termination, or other cessation of employment, authorized leave of absence or other change in the employment or other status of a participant and the extent to which, and the period during which, the participant (or the participant's legal representative, conservator, guardian or designated beneficiary) may exercise rights under the Award.

We are required to make equitable adjustments (in the manner determined by our board) to the number and class of securities available under the Stock Incentive Plan and any outstanding awards under the Stock Incentive Plan and the share counting rules and sub-limits set forth in the Stock Incentive Plan to reflect stock splits, stock dividends, recapitalizations, combinations of shares, reclassifications of shares, spin-offs, and other similar changes in capitalization or events or any dividends or distributions to holders of our common stock other than ordinary cash dividends.

All decisions by the board will be made in the board's sole discretion and will be final and binding on all persons having or claiming any interest in the Stock Incentive Plan or in any Award. We will indemnify and hold harmless each director, officer, employee, or agent to whom any duty or power relating to the administration or interpretation of the Stock Incentive Plan has been or will be delegated against any cost or expense (including attorneys' fees) or liability (including any sum paid in settlement of a claim with the board's approval) arising out of any act or omission to act concerning the Stock Incentive Plan unless arising out of such person's own fraud or bad faith.

*Minimum Vesting.* No Award granted after April 13, 2015 under the Stock Incentive Plan may vest earlier than the first anniversary of its date of grant. This vesting limitation does not apply to (i) Awards granted on or prior to April 13, 2015 and (ii) Awards granted after April 13, 2015 representing an aggregate of up to 5% of the maximum number of authorized shares available for issuance under the Stock Incentive Plan. In addition, the Stock Incentive Plan prohibits our board from amending any Award granted after April 13, 2015 to make such Award immediately exercisable in whole or in part, free of some or all restrictions or conditions, or otherwise realizable in whole or in part, as the case may be, except (i) to the extent required under any contractual obligation or other policy of Idera in effect on April 13, 2015, (ii) upon the death or disability of the participant, or (iii) upon the merger, consolidation, reorganization, or change in control of Idera or as a result of any other circumstance described below under the heading "Reorganization Events."

*Amendment of Awards.* Except as otherwise provided under the Stock Incentive Plan with respect to repricing outstanding stock options or SARs, Performance Awards, the minimum vesting rules and exclusions thereto, the prohibitions on acceleration of vesting and exclusions thereto, or actions requiring stockholder approval, our board may amend, modify, or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or realization, and converting an ISO to a NSO, provided that the participant's consent to any such action will be required unless our board determines that the action, taking into account any related action, does not materially and adversely affect the participant's rights under the Stock Incentive Plan or the change is otherwise permitted under the terms of the Stock Incentive Plan in connection with a change in capitalization or reorganization event.

#### *Reorganization Events*

*Definitions.* The Stock Incentive Plan contains provisions addressing the consequences of any reorganization event. A "reorganization event" is defined under the terms of the Stock Incentive Plan to

mean (a) any merger or consolidation of us with or into another entity as a result of which all of our common stock is converted into or exchanged for the right to receive cash, securities or other property, or is cancelled, (b) any transfer or disposition of all of our common stock for cash, securities, or other property pursuant to a share exchange or other transaction, or (c) our liquidation or dissolution.

*Awards Other than Restricted Stock; Options Available to the Board.* Under the Stock Incentive Plan, if a reorganization event occurs, our board may take any one or more of the following actions as to all or any (or any portion of) outstanding Awards other than Restricted Stock on such terms as the board determines (except to the extent specifically provided otherwise in an applicable Award agreement or another agreement between a participant and us): (A) provide that such Awards will be assumed, or substantially equivalent Awards will be substituted, by the acquiring or succeeding corporation (or an affiliate thereof), (B) upon written notice to a participant, provide that all of the participant's unexercised Awards will terminate immediately prior to the consummation of such reorganization event unless exercised by the participant (to the extent then exercisable) within a specified period following the date of such notice, (C) provide that outstanding Awards will become exercisable, realizable, or deliverable, or restrictions applicable to an Award will lapse, in whole or in part prior to or upon such reorganization event, (D) in the event of a reorganization event under the terms of which holders of common stock will receive upon consummation thereof a cash payment for each share surrendered in the reorganization event, which we refer to as the Acquisition Price, make or provide for a cash payment to participants with respect to each Award held by a participant equal to (X) the number of shares of common stock subject to the vested portion of the Award (after giving effect to any acceleration of vesting that occurs upon or immediately prior to such reorganization event) multiplied by (Y) the excess, if any, of (I) the Acquisition Price over (II) the exercise, measurement, or purchase price of such Award and any applicable tax withholdings, in exchange for the termination of such Award, (E) provide that, in connection with our liquidation or dissolution, Awards will convert into the right to receive liquidation proceeds (if applicable, net of the exercise, measurement or purchase price thereof and any applicable tax withholdings), and (F) any combination of the foregoing. Our board is not obligated to treat all Awards, all Awards held by a participant, or all Awards of the same type, identically.

The Stock Incentive Plan also provides, however, that for Restricted Stock Units that are subject to Section 409A of the Code: (A) if the applicable Restricted Stock Unit agreement provides that the Restricted Stock Units will be settled upon a "change in control event" within the meaning of Treasury Regulation Section 1.409A-3(i)(5)(i), and the reorganization event constitutes such a "change in control event," then no assumption or substitution of the Restricted Stock Unit will be permitted, and the Restricted Stock Units will instead be settled in accordance with the terms of the applicable Restricted Stock Unit agreement; and (B) the board may only undertake the actions set forth in clauses (C), (D), or (E) above if the reorganization event is a "change in control event" as so defined under the Treasury Regulation and such action is permitted or required by Section 409A of the Code. If the reorganization event does not constitute a "change in control event" as defined in the Treasury Regulation or such action is not permitted or required by Section 409A of the Code, and the acquiring or succeeding corporation does not assume or substitute the Restricted Stock Units pursuant to clause (A) above, then the unvested Restricted Stock Units will terminate immediately prior to the consummation of the reorganization event without any payment in exchange therefor.

*Provisions Applicable to Restricted Stock.* Upon the occurrence of a reorganization event other than our liquidation or dissolution, our repurchase and other rights with respect to outstanding Restricted Stock will inure to the benefit of our successor and will, unless the board determines otherwise, apply to the cash, securities or other property which the common stock was converted into or exchanged for pursuant to such reorganization event in the same manner and to the same extent as they applied to such Restricted Stock; provided, however, that the board may provide for termination or deemed satisfaction of such repurchase or other rights under the instrument evidencing any Restricted Stock or any other agreement between a participant and us, either initially or by amendment.

Upon the occurrence of a reorganization event involving our liquidation or dissolution, except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock or any other agreement between the participant and us, all restrictions and conditions on all Restricted Stock then outstanding will automatically be deemed terminated or satisfied.

*Amendment or Termination*

Our board may amend, suspend, or terminate the Stock Incentive Plan or any portion thereof at any time provided that (i) to the extent required by Section 162(m) of the Code, no Award granted to a participant that is intended to comply with Section 162(m) after the date of such amendment will become exercisable, realizable or vested, as applicable to such Award, unless and until our stockholders approve such amendment in the manner required by Section 162(m); (ii) no amendment that would require stockholder approval under the rules of the Nasdaq Stock Market may be made effective unless and until our stockholders approve such amendment; and (iii) if the Nasdaq Stock Market amends the rules of the Nasdaq Stock Market so that such rules no longer require stockholder approval of material amendments to equity compensation plans, then, from and after the effective date of such amendment to the rules of the Nasdaq Stock Market, no amendment to the Stock Incentive Plan (A) materially increasing the number of shares authorized under the Stock Incentive Plan (other than as provided for in the Stock Incentive Plan in connection with substitute Awards, changes in capitalization or reorganization events), (B) expanding the types of Awards that may be granted under the Stock Incentive Plan, or (C) materially expanding the class of participants eligible to participate in the Stock Incentive Plan will be effective unless and until our stockholders approve such amendment. In addition, if at any time the approval of our stockholders is required as to any other modification or amendment under Section 422 of the Code or any successor provision with respect to ISOs, the board may not effect such modification or amendment without such approval. Unless otherwise specified in the amendment, any amendment to the Stock Incentive Plan adopted in accordance with the procedures described above will apply to, and be binding on the holders of, all Awards outstanding under the Stock Incentive Plan at the time the amendment is adopted, provided that the Board determines that such amendment, taking into account any related action, does not materially and adversely affect the rights of participants under the Stock Incentive Plan.

*Effective Date and Term of Stock Incentive Plan*

The Stock Incentive Plan became effective on July 26, 2013, the date the plan was approved by our stockholders. No Awards will be granted under the Stock Incentive Plan after the expiration of 10 years from the effective date, but Awards previously granted may extend beyond that date. Approval of the Amendment at the Annual Meeting will extend the term of the Stock Incentive Plan for ten years after the date of the Annual Meeting, which is June 23, 2022.

**Federal Income Tax Consequences**

The following generally summarizes the United States federal income tax consequences that generally will arise with respect to Awards granted under the Stock Incentive Plan. This summary is based on the federal tax laws in effect as of the date of this proxy statement. In addition, this summary assumes that all Awards are exempt from, or comply with, the rules under Section 409A of the Code regarding nonqualified deferred compensation. Changes to these laws or assumptions could alter the tax consequences described below.

*Incentive Stock Options.* A participant will not have income upon the grant of an ISO. Also, except as described below, a participant will not have income upon exercise of an ISO if the participant has been employed by us or our corporate parent or 50% or more-owned corporate subsidiary at all times beginning with the option grant date and ending three months before the date the participant exercises the option. If the participant has not been so employed during that time, then the participant will be taxed as described below under “Nonstatutory Stock Options.” The exercise of an ISO may subject the participant to the alternative minimum tax.

A participant will have income upon the sale of the stock acquired under an ISO, which we refer to as ISO stock, at a profit (if sales proceeds exceed the exercise price). The type of income will depend on when the participant sells the ISO stock. If a participant sells the ISO stock more than two years after the option was granted and more than one year after the option was exercised, then all of the profit will be long-term capital gain. If a participant sells the ISO stock prior to satisfying these waiting periods, then the participant will have engaged in a disqualifying disposition and a portion of the profit will be ordinary income and a portion may be capital gain. This capital gain will be long-term if the participant has held the ISO stock for more than one year and otherwise will be short-term. If a participant sells the ISO stock at a loss (sales

proceeds are less than the exercise price), then the loss will be a capital loss. This capital loss will be long-term if the participant held the ISO stock for more than one year and otherwise will be short-term.

*Nonstatutory Stock Options.* A participant will not have income upon the grant of a NSO. A participant will have compensation income upon the exercise of a NSO equal to the fair market value of the stock on the day the participant exercised the option less the exercise price. Upon sale of the stock, which we refer to as NSO stock, the participant will have capital gain or loss equal to the difference between the sales proceeds and the fair market value of the NSO stock on the day the option was exercised. This capital gain or loss will be long-term if the participant has held the NSO stock for more than one year and otherwise will be short-term.

*Stock Appreciation Rights.* A participant will not have income upon the grant of an SAR but generally will recognize compensation income upon the exercise of an SAR equal to the amount of the cash and the fair market value of any stock received. Upon the sale of the stock, the participant will have capital gain or loss equal to the difference between the sales proceeds and the fair market value of the stock on the day the SAR was exercised. This capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

*Restricted Stock.* A participant will not have income upon the grant of Restricted Stock unless an election under Section 83(b) of the Code is made within 30 days of the date of grant. If a timely Section 83(b) election is made, then a participant will have compensation income equal to the fair market value of the stock less the purchase price, if any. When the stock is sold, the participant will have capital gain or loss equal to the difference between the sales proceeds and the fair market value of the stock on the date of grant. If the participant does not make a Section 83(b) election, then when the shares of Restricted Stock vest the participant will have compensation income equal to the fair market value of the stock on the vesting date less the purchase price. When the stock is sold, the participant will have capital gain or loss equal to the sales proceeds less the fair market value of the stock on the vesting date. Any capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

*Restricted Stock Units.* A participant will not have income upon the grant of a Restricted Stock Unit. A participant is not permitted to make a Section 83(b) election with respect to a Restricted Stock Unit. When the Restricted Stock Unit vests, the participant will have compensation income on the vesting date in an amount equal to the fair market value of the stock on the vesting date less the purchase price, if any. When the stock is sold, the participant will have capital gain or loss equal to the sales proceeds less the fair market value of the stock on the vesting date. Any capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

*Other Stock-Based Awards.* The tax consequences associated with any Other Stock-Based Award granted under the Stock Incentive Plan will vary depending on the specific terms of the Award. Among the relevant factors are whether or not the Award has a readily ascertainable fair market value, whether or not the Award is subject to forfeiture provisions or restrictions on transfer, the nature of the property to be received by the participant under the Award and the participant's holding period and tax basis for the Award or underlying common stock.

*Tax Consequences to Idera.* There will be no tax consequences to us except that we will be entitled to a deduction when a participant has compensation income. Any such deduction will be subject to the limitations of Section 162(m) of the Code.

#### **New Plan Benefits**

The Board has full discretion to determine the amount of any future awards to be made to participants under the Stock Incentive Plan, subject to the limits described above. Additionally, no awards have been made under the Stock Incentive Plan that are contingent upon stockholder approval of the Stock Incentive Plan. Therefore, it is not possible to determine the benefits or amounts that will be received by or allocated to participants under the Stock Incentive Plan.

#### **Existing Plan Benefits**

The following table sets forth information with respect to awards previously granted under the Stock Incentive Plan as of April 1, 2022:



Name and Position(1)	Number of Shares of Common Stock Underlying Options and RSUs Granted under the Stock Incentive Plan
<b>Named Executive Officers</b>	
Vincent J. Milano (President and Chief Executive Officer)	1,209,918
John J. Kirby (Senior Vice President, Chief Financial Officer)	511,925
Bryant D. Lim (Senior Vice President General Counsel, and Secretary)	545,623
Daniel B. Soland (Senior Vice President, Chief Operating Officer)	333,333
Elizabeth A. Tarka (Former Senior Vice President, Chief Medical Officer)	301,000
<b>All current executive officers as a group(2)</b>	<b>2,600,799</b>
<b>All current directors (who are not executive officers) as a group(3)</b>	<b>469,436</b>
<b>Nominees for director</b>	
Mark Goldberg, M.D.	83,375
Carol A. Schafer	72,000
<b>All other employees, including all current officers who are not executive officers, as a group</b>	<b>5,287,767</b>

(1) No awards have been granted under the Stock Incentive Plan to any associate of any of our directors (including director nominees) or executive officers and no person received 5% or more of the total awards granted under the Stock Incentive Plan since its inception.

(2) Consists of Messrs. Milano, Kirby, Lim, and Soland.

(3) Consists of Dr. Csimma, Mr. Dougherty, Mr. Geraghty, Dr. Goldberg, Dr. Gowen, and Ms. Schafer.

#### **Recommendation of the Board of Directors**

**Our board unanimously recommends that you vote FOR the approval of the amendment to the Company's Stock Incentive Plan.**

**PROPOSAL FIVE**  
**APPROVAL OF AMENDMENT TO 2017 EMPLOYEE STOCK PURCHASE PLAN**

**Overview**

Our 2017 Employee Stock Purchase Plan (the “2017 ESPP”) was adopted by our board in March 2017 and approved by our stockholders in June 2017, and subsequently amended by the board in April 2019, which amendment was thereafter approved by our stockholders. The board believes that the future success of the Company depends, in large part, upon our ability to maintain a competitive position in attracting, retaining, and motivating key personnel, and the board believes that the ability to participate in the 2017 ESPP is an attractive feature for our employees and potential employees. Participation in the 2017 ESPP is entirely voluntary.

On April 15, 2022, the board adopted an amendment (the “Amendment”) to the 2017 ESPP, subject to stockholder approval, to increase the number of shares of common stock authorized for issuance under the 2017 ESPP by 600,000 shares. If the Amendment is approved, the total number of shares of common stock authorized for issuance under the 2017 ESPP would be 1,450,000 shares. A copy of the Amendment is attached as Appendix C to this proxy statement and is incorporated herein by reference. All other provisions of the 2017 ESPP will remain in full force and effect. A copy of the 2017 ESPP is attached as Appendix D to this proxy statement.

**Summary of the Material Provisions of the 2017 ESPP, as amended**

The following is a summary of the material features of the 2017 ESPP. This summary is qualified in its entirety by the full text of the 2017 ESPP and the Amendment, as found on Appendix C and Appendix D.

The 2017 ESPP is intended to be an “employee stock purchase plan” within the meaning of Section 423 (“Section 423”) of the Code. The 2017 ESPP is not subject to the provisions of the Employee Retirement Income Security Act of 1974, nor is it qualified as a pension, profit-sharing, or stock bonus plan under Section 401(a) of the Code.

*Plan Administration*

The 2017 ESPP will be administered by the board or by a committee appointed by the board (for purposes of this Proposal Five, the “committee”).

The board or the committee will have full authority to interpret and construe any provision of the 2017 ESPP and to adopt such rules and regulations for administering the 2017 ESPP as it may deem necessary in order to bring one or more offerings under the 2017 ESPP into compliance with the requirements of Section 423.

*Shares Subject to the 2017 ESPP*

As of April 1, 2022, approximately 695,975 shares of common stock had been issued under the 2017 ESPP. Thus, as amended, the 2017 ESPP will provide participants with the opportunity to purchase an aggregate of 754,025 If Idera’s capital structure changes because of a stock dividend, stock split, or similar event, the number of shares that can be issued under the 2017 ESPP will be appropriately adjusted.

*Eligibility*

Any employee of the Company or of any subsidiary of the Company (as defined in Section 424(f) of the Code) designated by the board or the committee from time to time (a “Designated Subsidiary”), are eligible to participate in any one or more of the offerings of Options (as defined below) to purchase common stock under the 2017 ESPP provided that:

- they are customarily employed by the Company or a Designated Subsidiary for more than 20 hours a week and for more than five months in a calendar year;
- they have been employed by the Company or a Designated Subsidiary for at least three months prior to enrolling in the 2017 ESPP; and

- they are employees of the Company or a Designated Subsidiary on the first day of the applicable offering period.

The Company retains the discretion to determine which eligible employees may participate in an offering pursuant to and consistent with Treasury Regulation Sections 1.423-2(e) and (f)

Although non-employee directors are not eligible to participate in the 2017 ESPP, employee directors and executive officers who satisfy the above requirements are eligible to participate in the 2017 ESPP. As of April 1, 2022, approximately 13 employees, including four executive officers (which includes one employee director), of the Company were eligible to participate in the 2017 ESPP.

#### *Participation; Payroll Deductions*

Eligible employees may participate in an offering period by completing and forwarding either a written or electronic payroll deduction authorization form to the employee's appropriate payroll office at least 14 days prior to the applicable offering period. The participant must authorize a payroll deduction of a minimum of 1% of base pay and a maximum of 10% of his or her Compensation. For the purposes of the 2017 ESPP, "Compensation" means the amount of money reportable on the employee's Federal Income Tax Withholding Statement, excluding overtime, shift premium, incentive or bonus awards, allowances and reimbursements for expenses such as relocation allowances for travel expenses, income or gains associated with the grant or vesting of restricted stock, income or gains on the exercise of Company stock options or stock appreciation rights, and similar items, whether or not shown or separately identified on the employee's Federal Income Tax Withholding Statement, but including, in the case of salespersons, sales commissions to the extent determined by the board or the committee.

Once an employee becomes a participant in the 2017 ESPP, that employee will automatically participate in successive offering periods, with his or her deductions and purchases continuing at the same rate for successive offering periods under the 2017 ESPP as long as the 2017 ESPP remains in effect, until such time as that participant files a new form or withdraws from the 2017 ESPP, becomes ineligible to participate in the 2017 ESPP, or his or her employment ceases. Upon the termination of the participant's purchase right, all payroll deductions or other contributions will automatically cease.

#### *Deduction Changes*

A participant may decrease or discontinue his or her payroll deduction once during any offering period, by filing either a written or electronic new payroll deduction authorization form. However, a participant may not increase his or her payroll deduction during an offering period. If a participant elects to discontinue his or her payroll deductions during an offering period, but does not elect to withdraw his or her funds previously deducted, funds deducted prior to his or her election to discontinue will be applied to the purchase of common stock on the Exercise Date (as defined below).

#### *Offering Periods*

Shares of common stock will be offered for purchase under the 2017 ESPP through a series of successive offering periods, as determined by the board or the committee, until such time as (i) the maximum number of shares of common stock available for issuance under the 2017 ESPP have been purchased or (ii) the 2017 ESPP has been sooner terminated. Each offering period will commence at such time and be of such duration as determined by the board or the committee prior to the start of the applicable offering period. The first day of such offering period being the offering commencement date ("Offering Commencement Date"). The board or the committee may, at its discretion, choose an offering period of twelve months or less for offerings.

#### *Option; Option Price*

On the Offering Commencement Date of each offering period, a participant will be granted an option (an "Option") to purchase on the last business day of such offering period (the "Exercise Date") at the applicable purchase price (the "Option Price") up to a whole number of shares of common stock determined by multiplying \$2,083 by the number of full months of the offering period and dividing the result by the

closing price on the Offering Commencement Date, subject to certain limitations set forth in the 2017 ESPP. The board or the committee shall determine the applicable purchase price (the "Option Price") for each offering period. In the absence of a determination by the board or the committee, the Option Price will be 85% of the lesser of the closing price of the common stock on (i) the first business day of the offering period and (ii) the Exercise Date.

Each participant who continues to participate in the 2017 ESPP on the Exercise Date shall be deemed to have exercised his or her Option at the Option Price on such date and shall be deemed to have purchased from the Company the number of whole shares of common stock reserved for the purpose of the 2017 ESPP that his or her accumulated payroll deductions on such date will pay for, but not in excess of the maximum numbers determined in the manner set forth above.

#### *Withdrawal*

A participant may at any time prior to the close of business on the last business day in an offering period and for any reason permanently draw out the balance accumulated in the participant's account and thereby withdraw from participation in an offering period.

Partial withdrawals are not permitted. The employee may not begin participation again during the remainder of the offering period during which the employee withdrew his or her balance. The employee may participate in any subsequent offering period in accordance with terms and conditions established by the board or the committee.

#### *Limitations*

No purchase of shares under the 2017 ESPP will exceed any statutory limits imposed under Section 423(b)(8) of the Code, which generally limits the accrual of the right of any participant to purchase shares under employee stock purchase plans to an annual rate of \$25,000 in fair market value (determined at the date such Option is granted) for each calendar year in which the Option is outstanding at any time. No participant may be granted an Option hereunder if such participant, immediately after the Option is granted, owns 5% or more of the total combined voting power or value of all classes of stock of the Company or any subsidiary.

#### *Merger or Reorganization Events*

Our board or the committee may take any one or more of the following actions as to outstanding options to purchase shares of our common stock under the 2017 ESPP on such terms as our board or committee determines:

- provide that options shall be assumed, or substantially equivalent options shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof);
- upon written notice to participants, provide that all outstanding options will be terminated immediately prior to the consummation of such reorganization event and that all such outstanding options will become exercisable to the extent of accumulated payroll deductions as of a date specified by our board or committee in such notice, which date shall not be less than ten days preceding the effective date of the reorganization event;
- upon written notice to participants, provide that all outstanding options will be cancelled as of a date prior to the effective date of the reorganization event and that all accumulated payroll deductions will be returned to participants on such date;
- in the event of a reorganization event under the terms of which holders of our common stock will receive upon consummation thereof a cash payment for each share surrendered in the reorganization event, change the last day of the offering period to be the date of the consummation of the reorganization event and make or provide for a cash payment to each participant equal to (1) the cash payment for each share surrendered in the reorganization event times the number of shares of our common stock that the participant's accumulated payroll deductions as of immediately prior to the reorganization event could purchase at the applicable purchase price, where the acquisition price is treated as the fair market value of our common stock on the last day of the applicable offering

period for purposes of determining the purchase price and where the number of shares that could be purchased is subject to the applicable limitations under the 2017 ESPP minus (2) the result of multiplying such number of shares by the purchase price; and/or

- provide that, in connection with our liquidation or dissolution, options shall convert into the right to receive liquidation proceeds (net of the purchase price thereof).

#### *Rights on Retirement, Death or Termination of Employment*

If a participant's employment ends before the last business day of an offering period, no additional payroll deductions will be made and the balance in the participant's account will be paid to the participant. In the event of the participant's death before the last business day of an offering period, the Company will pay the balance of the participant's account (a) to the executor or administrator of the participant's estate or (b) if no such executor or administrator has been appointed to the knowledge of the Company, to such other person(s) as the Company may, in its discretion, designate. If, before the last business day of the offering period, the Designated Subsidiary by which a participant is employed ceases to be a subsidiary of the Company, or if the participant is transferred to a subsidiary of the Company that is not a Designated Subsidiary, the participant will be deemed to have terminated employment for the purposes of the 2017 ESPP.

#### *Transferability*

Options under the 2017 ESPP are not transferable by a participant other than by will or the laws of descent and distribution, and are exercisable during the participant's lifetime only by the participant.

#### *Stockholder Rights*

A participant will not have any stockholder rights with respect to the shares subject to his or her outstanding purchase right until the shares are purchased on the participant's behalf and the participant has become a holder of record of the purchased shares.

#### *Amendment and Termination of the 2017 ESPP*

The 2017 ESPP may be terminated at any time by the board, and will terminate on the date on which all purchase rights are exercised, assumed, terminated, or canceled in connection with a reorganization event. Upon termination of the 2017 ESPP, all amounts in the accounts of the participants will be promptly refunded.

The board may at any time, and from time to time, amend or suspend the 2017 ESPP or any portion thereof, except that (a) if the approval of any such amendment by the stockholders of the Company is required by Section 423 of the Code, such amendment shall not be effected without such approval, and (b) in no event may any amendment be made that would cause the 2017 ESPP to fail to comply with Section 423 of the Code.

#### **Summary of U.S. Federal Income Tax Consequences**

The following is only a summary of the effect of the U.S. income tax laws and regulations upon a participant and Idera with respect to a participant's participation in the 2017 ESPP. This summary does not purport to be a complete description of all federal tax implications or participation in the 2017 ESPP, nor does it discuss the income tax laws of any municipality, state or foreign country in which a participant may reside or otherwise be subject to tax.

A participant in the 2017 ESPP will be taxed on amounts withheld for the purchase of shares as if such amounts were actually received. A participant will recognize ordinary income in the year in which the participant makes a disposition of the shares purchased under the 2017 ESPP, which amount will depend on whether such disposition is made (i) more than two years after the start date of the offering period in which those shares were purchased and (ii) more than one year after the actual purchase date of such shares. If the participant is employed by Idera or a Company affiliate, that income will be subject to applicable

withholding taxes. The participant's capital gain holding period for those shares will begin on the day after they are transferred to the participant.

Upon a participant's purchase of shares under the 2017 ESPP, Idera or a Company affiliate will be entitled to a tax deduction equal to the amount recognized as ordinary income by the participant. There are no U.S. federal income tax consequences to Idera or a Company affiliate by reason of the grant of rights under the 2017 ESPP.

**New Plan Benefits**

Since participation in the 2017 ESPP is voluntary, the benefits or amounts that will be received by or allocated to any individual or group of individuals under the 2017 ESPP in the future are not determinable.

**Recommendation of the Board of Directors**

**Our board unanimously recommends that you vote FOR the approval of the amendment to the Company's 2017 Employee Stock Purchase Plan**

### SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

The following table provides information as of December 31, 2021 regarding total shares subject to outstanding stock options, warrants, and rights and total additional shares available for issuance under our existing equity incentive and employee stock purchase plans. In addition, from time to time, we may grant “inducement grants” pursuant to Nasdaq Listing Rule 5635(c)(4).

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)
Equity compensation plans approved by stockholders(1)	5,158,269	\$ 8.38	1,084,142
Equity compensation plans not approved by stockholders(2)	359,375	\$26.35	—
Total	<u>5,517,644</u>	<u>\$ 9.78</u>	<u>1,084,142</u>

- (1) Consists of our: 2008 Stock Incentive Plan, 2013 Stock Incentive Plan, and 2017 Employee Stock Purchase Plan. Amounts in column (a) include stock options and unvested restricted stock units outstanding. Shares are available for future issuance only under our 2013 Stock Incentive Plan and 2017 Employee Stock Purchase Plan.
- (2) Consists of stock options issued as inducement grants (issued prior to 2017) as of December 31, 2021. These stock options are generally subject to the same terms and conditions as those awarded pursuant to the plans approved by our stockholders.

## ACCOUNTING MATTERS

**Report of the Audit Committee**

The audit committee has reviewed our audited financial statements for the fiscal year ended December 31, 2021 and discussed them with our management and our independent registered public accounting firm.

The audit committee has also received from, and discussed with, our independent registered public accounting firm various communications that our independent registered public accounting firm is required to provide to the audit committee, including the matters required to be discussed by the AS 1301: *Communications with Audit Committees*, as adopted by the Public Company Accounting Oversight Board.

The audit committee has received from Ernst & Young LLP the letter and other written disclosures required by applicable requirements of the Public Company Accounting Oversight Board regarding its communication with the audit committee concerning independence, and has discussed with Ernst & Young LLP its independence from the Company. The audit committee has also considered whether the provision of other non-audit services by Ernst & Young LLP is compatible with maintaining their independence.

Based on the review and discussions referred to above, the audit committee recommended to our board that the audited financial statements be included in our annual report on Form 10-K for the year ended December 31, 2021.

By the audit committee of the board of directors,

Carol Schafer, Chair  
Michael R. Dougherty  
Mark Goldberg, M.D.

*The report of the Audit Committee is not “soliciting material,” is not deemed “filed” with the SEC and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933 or the Securities Exchange Act of 1934, both as amended.*

**Independent Registered Public Accounting Firm Fees**

The following table sets forth all fees paid or accrued by us for professional services rendered by Ernst & Young LLP during the years ended December 31, 2021 and 2020:

Fee Category	2021	2020
Audit Fees	\$475,000	\$475,000
Audit-Related Fees	\$ 15,000	\$ 89,000
Tax Fees	—	\$ 25,235
Total Fees	\$490,000	\$598,235

*Audit Fees*

Audit fees represent the aggregate fees billed for professional services rendered by our independent registered public accounting firm for the audit of our annual financial statements and internal controls over financial reporting, review of financial statements included in our quarterly reports on Form 10-Q, and services that are normally provided in connection with statutory and regulatory filings or engagements.

*Audit-Related Fees*

Audit-related fees represent the aggregate fees billed for assurance and related professional services rendered by our independent registered public accounting firm that are reasonably related to the performance of the audit or review of our financial statements and that are not reported under “Audit Fees” including consultations regarding internal controls, financial accounting and reporting standards; the issuance of consents in connection with registration statement filings with the SEC and comfort letters in connection with securities offerings.



*Tax Fees*

Tax fees represent the aggregate fees billed for professional services rendered by our independent registered public accounting firm for tax compliance, tax advice, and tax planning services. Tax compliance services, which relate to preparation of tax returns, accounted for all of the tax fees billed in 2020.

Our audit committee believes that the non-audit services described above did not compromise Ernst & Young LLP's independence. Our audit committee charter, which you can find by clicking "Investors" and "Corporate Governance" on our website, [www.iderapharma.com](http://www.iderapharma.com), requires that all proposals to engage Ernst & Young LLP for services, and all proposed fees for these services, be submitted to the audit committee for approval before Ernst & Young LLP may provide the services.

**Pre-Approval Policies and Procedures**

Our audit committee has adopted policies and procedures relating to the approval of all audit and non-audit services that are to be performed by our independent registered public accounting firm. This policy generally provides that we will not engage our independent registered public accounting firm to render audit or non-audit services unless the service is specifically approved in advance by the audit committee or the engagement is entered into pursuant to the pre-approval procedures described below.

From time to time, the audit committee may pre-approve specified types of services that are expected to be provided to us by our independent registered public accounting firm during the next 12 months. Any such pre-approval is detailed as to the particular service or type of services to be provided and is also generally subject to a maximum dollar amount. All of the services described above under the headings "Audit Fees," "Audit-Related Fees," and "Tax Fees" were pre-approved by our audit committee.

## TRANSACTIONS WITH RELATED PERSONS

Since January 1, 2020 we have not entered into or engaged in any related party transactions, as defined by the SEC, with our directors, officers, and stockholders who beneficially owned more than 5% of our outstanding common stock (“5% holders”), as well as affiliates or immediate family members of those directors, officers, and 5% holders, except with respect to the transactions described below. As discussed in Note 15 of the Notes to Financial Statements included in the 2021 Annual Report, during March 2021, affiliates of Baker Brothers Advisors, LLC (collectively, “Baker Brothers”) exercised warrants to purchase 2,708,812 shares of the Company’s common stock at an exercise price of \$0.08 per share for a total exercise price of approximately \$0.2 million. At the time of such transaction, Baker Brothers was a 5% holder. As discussed in further detail in Item 5 and Note 8 of the Notes to Financial Statements included in our annual report on Form 10-K for the year ended December 31, 2020, on April 7, 2020, we entered into the April 2020 Securities Purchase Agreement and on July 13, 2020, we entered into the July 2020 Securities Purchase Agreement, each with the Pillar Entities, pursuant to which we issued and sold shares of our common stock, par value \$0.01 per share, warrants and prefunded warrants to purchase shares of our common stock, for aggregate gross proceeds of approximately \$15.1 million.

### **Policies and Procedures for Related Person Transactions**

Our board is committed to upholding the highest legal and ethical conduct in fulfilling its responsibilities and recognizes that related party transactions can present a heightened risk of potential or actual conflicts of interest. Accordingly, as a general matter, it is our preference to avoid related party transactions.

In accordance with our audit committee charter, members of the audit committee, all of whom are independent directors, review and approve all related party transactions for which approval is required under applicable laws or regulations, including SEC and the Nasdaq Listing Rules. Current SEC rules define a related party transaction for smaller reporting companies to include any transaction, arrangement, or relationship in which we are a participant and the amount involved is the lesser of \$120,000 or 1% of total assets, and in which any of the following persons has or will have a direct or indirect interest:

- our executive officers, directors, or director nominees;
- any person who is known to be the beneficial owner of more than 5% of our common stock;
- any person who is an immediate family member, as defined under Item 404 of Regulation S-K, of any of our executive officers, directors, or director nominees or beneficial owners of more than 5% of our common stock; or
- any firm, corporation, or other entity in which any of the foregoing persons is employed or is a partner or principal or in a similar position or in which such person, together with any other of the foregoing persons, has a 5% or greater beneficial ownership interest.

Under our code of business conduct and ethics, our directors, officers, and employees are expected to avoid any relationship, influence or activity that would cause or even appear to cause a conflict of interest. Under our code of business conduct and ethics, a director is required to promptly disclose to our board any potential or actual conflict of interest involving him or her. In accordance with our code of business conduct and ethics, the board will determine an appropriate resolution on a case-by-case basis. All directors must recuse themselves from any discussion or decision affecting their personal, business, or professional interests. In addition, the audit committee is responsible for reviewing with our primary counsel the results of their review of the monitoring of compliance with our code of business conduct and ethics.

## APPENDIX A

**AMENDMENT TO THE  
IDERA PHARMACEUTICALS, INC.  
2013 STOCK INCENTIVE PLAN**

WHEREAS, Idera Pharmaceuticals, Inc. (the “Company”) desires to amend the Idera Pharmaceuticals, Inc. 2013 Stock Incentive Plan, as amended (the “2013 Plan”), in the manner set forth below (the “Amendment”); and

WHEREAS, on April 15, 2022, subject to stockholder approval, the Board of Directors of the Company approved the Amendment; and

NOW THEREFORE, in accordance with Section 11(d) of the 2013 Plan, the 2013 Plan is hereby amended as follows:

1. Section 4(a) of the 2013 Plan is hereby amended by deleting subsection (1) thereof in its entirety and substituting the following in lieu thereof:

“(1) Authorized Number of Shares. Subject to adjustment under Section 9, Awards may be made under the Plan, any or all of which Awards may be in the form of Incentive Stock Options (as defined in Section 5(b)), for up to such number of shares of common stock, \$0.001 par value per share, of the Company (the “Common Stock”) as is equal to the sum of:

(A) 10,253,057 shares of Common Stock; plus

(B) such additional number of shares of Common Stock (up to 155,968 shares) as is equal to the sum of the number of shares of Common Stock subject to awards granted under the Company’s 2008 Stock Incentive Plan (the “Existing Plan”) which awards expire, terminate, or are otherwise surrendered, canceled, forfeited, or repurchased by the Company at their original issuance price pursuant to a contractual repurchase right (subject, however, in the case of Incentive Stock Options to any limitations of the Code).

Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares.”

2. Section 11(c) of the 2013 Plan is hereby amended by deleting Section 11(c) in its entirety and substituting the following in lieu thereof:

“(c) Effective Date and Term of Plan. The Plan shall become effective if, and at such time as, the stockholders of the Company have approved the Plan in accordance with applicable law and stock exchange requirements (such date, the “Effective Date”). Unless earlier terminated by action of the Board, the authority of the Committee to make grants under the Plan shall terminate on the date that is ten years after the latest date upon which stockholders of the Company have approved the Plan or an amendment thereto, and the Plan will remain in effect until such time as no shares of Common Stock remain available for delivery under the Plan or as set forth above and the Company has no further rights or obligations under the Plan with respect to outstanding Awards under the Plan.”

The Amendment shall be effective upon approval of the stockholders of the Company at the Company’s 2022 annual meeting of stockholders and shall only be applicable with respect to Awards granted after such approval. If the Amendment is not so approved at such meeting, then the amendment to the 2013 Plan set forth herein shall be void ab initio.

Except as herein above provided, the 2013 Plan is hereby ratified, confirmed, and approved in all respects.

## APPENDIX B

## IDERA PHARMACEUTICALS, INC.

2013 STOCK INCENTIVE PLAN1. Purpose

The purpose of this 2013 Stock Incentive Plan (the “**Plan**”) of Idera Pharmaceuticals, Inc., a Delaware corporation (the “**Company**”), is to advance the interests of the Company’s stockholders by enhancing the Company’s ability to attract, retain and motivate persons who are expected to make important contributions to the Company and by providing such persons with equity ownership opportunities and performance-based incentives that are intended to better align the interests of such persons with those of the Company’s stockholders. Except where the context otherwise requires, the term “**Company**” shall include any of the Company’s present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Internal Revenue Code of 1986, as amended, and any regulations thereunder (the “**Code**”) and any other business venture (including, without limitation, joint venture or limited liability company) in which the Company has a controlling interest, as determined by the Board of Directors of the Company (the “**Board**”).

2. Eligibility

All of the Company’s employees, officers and directors, as well as consultants and advisors to the Company (as such terms are defined and interpreted for purposes of Form S-8 under the Securities Act of 1933, as amended (the “**Securities Act**”), or any successor form) are eligible to be granted Awards under the Plan. Each person who is granted an Award under the Plan is deemed a “**Participant**.” “**Award**” means Options (as defined in Section 5), SARs (as defined in Section 6), Restricted Stock (as defined in Section 7), Restricted Stock Units (as defined in Section 7) and Other Stock-Based Awards (as defined in Section 8).

3. Administration and Delegation

(a) Administration by Board of Directors. The Plan will be administered by the Board. The Board shall have authority to grant Awards and to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Board may construe and interpret the terms of the Plan and any Award agreements entered into under the Plan. The Board may correct any defect, supply any omission or reconcile any inconsistency in the Plan or any Award in the manner and to the extent it shall deem expedient and it shall be the sole and final judge of such expediency. All decisions by the Board shall be made in the Board’s sole discretion and shall be final and binding on all persons having or claiming any interest in the Plan or in any Award.

(b) Appointment of Committees. To the extent permitted by applicable law, the Board may delegate any or all of its powers under the Plan to one or more committees or subcommittees of the Board (a “**Committee**”). All references in the Plan to the “**Board**” shall mean the Board or a Committee of the Board or the officers referred to in Section 3(c) to the extent that the Board’s powers or authority under the Plan have been delegated to such Committee or officers.

(c) Delegation to Officers. To the extent permitted by applicable law, the Board may delegate to one or more officers of the Company the power to grant Options and other Awards that constitute rights under Delaware law (subject to any limitations under the Plan) to employees or officers of the Company and to exercise such other powers under the Plan as the Board may determine, *provided* that the Board shall fix the terms of such Awards to be granted by such officers (including the exercise price of such Awards, which may include a formula by which the exercise price will be determined) and the maximum number of shares subject to such Awards that the officers may grant; *provided further*, however, that no officer shall be authorized to grant such Awards to any “executive officer” of the Company (as defined by Rule 3b-7 under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”)) or to any “officer” of the Company (as defined by Rule 16a-1 under the Exchange Act). The Board may not delegate authority under this Section 3(c) to grant Restricted Stock, unless Delaware law then permits such delegation.

(d) Awards to Non-Employee Directors. Discretionary Awards to non-employee directors may be granted and administered only by a Committee, all of the members of which are independent directors as defined by Section 5605(a)(2) of the NASDAQ Marketplace Rules.

4. Stock Available for Awards(a) Number of Shares; Share Counting.

(1) Authorized Number of Shares. Subject to adjustment under Section 9, Awards may be made under the Plan, any or all of which Awards may be in the form of Incentive Stock Options (as defined in Section 5(b)) for up to such number of shares of common stock, \$0.001 par value per share, of the Company (the “**Common Stock**”) as is equal to the sum of:

(A) 10,000,000 shares of Common Stock; plus

(B) such additional number of shares of Common Stock (up to 5,945,000 shares) as is equal to the sum of (x) the number of shares of Common Stock reserved for issuance under the Company’s 2008 Stock Incentive Plan (the “**Existing Plan**”) that remain available for grant under the Existing Plan immediately prior to the date this Plan is approved by the Company’s stockholders and (y) the number of shares of Common Stock subject to awards granted under the Existing Plan which awards expire, terminate or are otherwise surrendered, canceled, forfeited or repurchased by the Company at their original issuance price pursuant to a contractual repurchase right (subject, however, in the case of Incentive Stock Options to any limitations of the Code).

Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares.

(2) Fungible Share Pool. Subject to adjustment under Section 9, any Award that is not a Full-Value Award shall be counted against the share limits specified in Sections 4(a)(1) and 4(b)(2) as one share for each share of Common Stock subject to such Award and any Award that is a Full-Value Award shall be counted against the share limits specified in Sections 4(a)(1) and 4(b)(2) as 1.25 shares for each one share of Common Stock subject to such Full-Value Award. “Full-Value Award” means any Award of Restricted Stock, Restricted Stock Unit Award or Other Stock-Based Award (as defined below) with a per share price or per unit purchase price lower than 100% of Fair Market Value (as defined below) on the date of grant. To the extent a share that was subject to an Award that counted as one share is returned to the Plan pursuant to Section 4(a)(3), each applicable share reserve will be credited with one share. To the extent that a share that was subject to an Award that counts as 1.25 shares is returned to the Plan pursuant to Section 4(a)(3), each applicable share reserve will be credited with 1.25 shares.

(3) Share Counting. For purposes of counting the number of shares available for the grant of Awards under the Plan and under the sublimits contained in Section 4(b)(2):

(A) all shares of Common Stock covered by SARs shall be counted against the number of shares available for the grant of Awards under the Plan and against the sublimit listed in the first clause of this Section 4(a)(3); *provided, however*, that (i) SARs that may be settled only in cash shall not be so counted and (ii) if the Company grants an SAR in tandem with an Option for the same number of shares of Common Stock and provides that only one such Award may be exercised (a “**Tandem SAR**”), only the shares covered by the Option, and not the shares covered by the Tandem SAR, shall be so counted, and the expiration of one in connection with the other’s exercise will not restore shares to the Plan;

(B) if any Award (i) expires or is terminated, surrendered or canceled without having been fully exercised or is forfeited in whole or in part (including as the result of shares of Common Stock subject to such Award being repurchased by the Company at the original issuance price pursuant to a contractual repurchase right) or (ii) results in any Common Stock not being issued (including as a result of an SAR that was settleable either in cash or in stock actually being settled in cash), the unused Common Stock covered by such Award shall again be available for the grant of Awards; *provided, however*, that (1) in the case of Incentive Stock Options, the foregoing shall be subject to any limitations under the Code, (2) in the case of the exercise of an SAR, the number of shares counted against the shares available under the Plan and against the sublimit listed in the first clause of this Section 4(a)(3) shall be the full number of shares subject to the SAR multiplied by the percentage of the SAR actually exercised, regardless of the number of shares actually used to

settle such SAR upon exercise and (3) the shares covered by a Tandem SAR shall not again become available for grant upon the expiration or termination of such Tandem SAR;

(C) shares of Common Stock delivered (either by actual delivery, attestation, or net exercise) to the Company by a Participant to (i) purchase shares of Common Stock upon the exercise of an Award or (ii) satisfy tax withholding obligations (including shares retained from the Award creating the tax obligation) shall not be added back to the number of shares available for the future grant of Awards; and

(D) shares of Common Stock repurchased by the Company on the open market using the proceeds from the exercise of an Award shall not increase the number of shares available for future grant of Awards.

(b) Sub-limits. Subject to adjustment under Section 9, the following sub-limits on the number of shares subject to Awards shall apply:

(1) Section 162(m) Per-Participant Limit. The maximum number of shares of Common Stock with respect to which Awards may be granted to any Participant under the Plan shall be 1,500,000 per calendar year. For purposes of the foregoing limit, (i) the combination of an Option in tandem with an SAR shall be treated as a single Award and (ii) each share of Common Stock subject to an Award (including each share of Common Stock subject to a Full-Value Award) shall be counted as one share of Common Stock. The per Participant limit described in this Section 4(b)(1) shall be construed and applied consistently with Section 162(m) of the Code or any successor provision thereto, and the regulations thereunder ("Section 162(m)").

(2) Limit on Awards to Directors. The maximum number of shares with respect to which Awards may be granted to directors who are not employees of the Company at the time of grant shall be 20% of the maximum number of authorized shares set forth in Section 4(a)(1).

(c) Substitute Awards. In connection with a merger or consolidation of an entity with the Company or the acquisition by the Company of property or stock of an entity, the Board may grant Awards in substitution for any options or other stock or stock-based awards granted by such entity or an affiliate thereof. Substitute Awards may be granted on such terms as the Board deems appropriate in the circumstances, notwithstanding any limitations on Awards contained in the Plan. Substitute Awards shall not count against the overall share limit set forth in Section 4(a)(1) or any sublimits contained in the Plan, except as may be required by reason of Section 422 and related provisions of the Code.

#### 5. Stock Options

(a) General. The Board may grant options to purchase Common Stock (each, an "Option") and determine the number of shares of Common Stock to be covered by each Option, the exercise price of each Option and the conditions and limitations applicable to the exercise of each Option, including conditions relating to applicable federal or state securities laws, as it considers necessary or advisable.

(b) Incentive Stock Options. An Option that the Board intends to be an "incentive stock option" as defined in Section 422 of the Code (an "Incentive Stock Option") shall only be granted to employees of Idera Pharmaceuticals, Inc., any of Idera Pharmaceuticals, Inc.'s present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Code, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code, and shall be subject to and shall be construed consistently with the requirements of Section 422 of the Code. An Option that is not intended to be an Incentive Stock Option shall be designated a "Nonstatutory Stock Option." The Company shall have no liability to a Participant, or any other party, if an Option (or any part thereof) that is intended to be an Incentive Stock Option is not an Incentive Stock Option or if the Company converts an Incentive Stock Option to a Nonstatutory Stock Option.

(c) Exercise Price. The Board shall establish the exercise price of each Option and specify the exercise price in the applicable Option agreement. The exercise price shall be not less than 100% of the fair market value per share of Common Stock as determined by (or in a manner approved by) the Board ("Fair Market Value") on the date the Option is granted; *provided* that if the Board approves the grant of an

Option with an exercise price to be determined on a future date, the exercise price shall be not less than 100% of the Fair Market Value on such future date.

(d) Duration of Options. Each Option shall be exercisable at such times and subject to such terms and conditions as the Board may specify in the applicable option agreement; *provided, however*, that no Option will be granted with a term in excess of 10 years.

(e) Exercise of Options. Options may be exercised by delivery to the Company of a notice of exercise in a form (which may be electronic) approved by the Company, together with payment in full (in the manner specified in Section 5(f)) of the exercise price for the number of shares for which the Option is exercised. Shares of Common Stock subject to the Option will be delivered by the Company as soon as practicable following exercise.

(f) Payment Upon Exercise. Common Stock purchased upon the exercise of an Option granted under the Plan shall be paid for as follows:

(1) in cash, by check or by wire transfer, payable to the order of the Company;

(2) except as may otherwise be provided in the applicable Option agreement or approved by the Board, in its sole discretion, by (i) delivery of an irrevocable and unconditional undertaking by a creditworthy broker to deliver promptly to the Company sufficient funds to pay the exercise price and any required tax withholding or (ii) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a creditworthy broker to deliver promptly to the Company cash or a check sufficient to pay the exercise price and any required tax withholding;

(3) to the extent provided for in the applicable Option agreement or approved by the Board, in its sole discretion, by delivery (either by actual delivery or attestation) of shares of Common Stock owned by the Participant valued at their Fair Market Value, provided (i) such method of payment is then permitted under applicable law, (ii) such Common Stock, if acquired directly from the Company, was owned by the Participant for such minimum period of time, if any, as may be established by the Board in its discretion and (iii) such Common Stock is not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements;

(4) to the extent provided for in the applicable Nonstatutory Stock Option agreement or approved by the Board in its sole discretion, by delivery of a notice of "net exercise" to the Company, as a result of which the Participant would receive (i) the number of shares underlying the portion of the Option being exercised, less (ii) such number of shares as is equal to (A) the aggregate exercise price for the portion of the Option being exercised divided by (B) the Fair Market Value on the date of exercise;

(5) to the extent permitted by applicable law and provided for in the applicable Option agreement or approved by the Board, in its sole discretion, by payment of such other lawful consideration as the Board may determine; or

(6) by any combination of the above permitted forms of payment.

(g) Limitation on Repricing. Unless such action is approved by the Company's stockholders, the Company may not (except as provided for under Section 9): (1) amend any outstanding Option granted under the Plan to provide an exercise price per share that is lower than the then-current exercise price per share of such outstanding Option, (2) cancel any outstanding option (whether or not granted under the Plan) and grant in substitution therefor new Awards under the Plan (other than Awards granted pursuant to Section 4(c)) covering the same or a different number of shares of Common Stock and having an exercise price per share lower than the then-current exercise price per share of the cancelled option, (3) cancel in exchange for a cash payment any outstanding Option with an exercise price per share above the then-current Fair Market Value, other than pursuant to Section 9, or (4) take any other action under the Plan that constitutes a "repricing" within the meaning of the rules of the NASDAQ Stock Market ("*NASDAQ*").

(h) No Reload Options. No Option granted under the Plan shall contain any provision entitling the Participant to the automatic grant of additional Options in connection with any exercise of the original Option.

(i) No Dividend Equivalents. No option shall provide for the payment or accrual of Dividend Equivalents (as defined below).

6. Stock Appreciation Rights

(a) General. The Board may grant Awards consisting of stock appreciation rights (“SARs”) entitling the holder, upon exercise, to receive an amount of Common Stock or cash or a combination thereof (such form to be determined by the Board) determined by reference to appreciation, from and after the date of grant, in the Fair Market Value of a share of Common Stock over the measurement price established pursuant to Section 6(c). The date as of which such appreciation is determined shall be the exercise date.

(b) Grants. SARs may be granted in tandem with, or independently of, Options granted under the Plan.

(1) Tandem Awards. When SARs are expressly granted in tandem with Options, (i) the SAR will be exercisable only at such time or times, and to the extent, that the related Option is exercisable (except to the extent designated by the Board in connection with a Reorganization Event) and will be exercisable in accordance with the procedure required for exercise of the related Option; (ii) the SAR will terminate and no longer be exercisable upon the termination or exercise of the related Option, except to the extent designated by the Board in connection with a Reorganization Event and except that a SAR granted with respect to less than the full number of shares covered by an Option will not be reduced until the number of shares as to which the related Option has been exercised or has terminated exceeds the number of shares not covered by the SAR; (iii) the Option will terminate and no longer be exercisable upon the exercise of the related SAR; and (iv) the SAR will be transferable only with the related Option.

(2) Independent SARs. A SAR not expressly granted in tandem with an Option will become exercisable at such time or times, and on such conditions, as the Board may specify in the SAR Award.

(c) Measurement Price. The Board shall establish the measurement price of each SAR and specify it in the applicable SAR agreement. The measurement price shall not be less than 100% of the Fair Market Value on the date the SAR is granted; *provided* that if the Board approves the grant of an SAR effective as of a future date, the measurement price shall be not less than 100% of the Fair Market Value on such future date.

(d) Duration of SARs. Each SAR shall be exercisable at such times and subject to such terms and conditions as the Board may specify in the applicable SAR agreement; *provided, however*, that no SAR will be granted with a term in excess of 10 years.

(e) Exercise of SARs. SARs may be exercised by delivery to the Company of a notice of exercise in a form (which may be electronic) approved by the Company, together with any other documents required by the Board.

(f) Limitation on Repricing. Unless such action is approved by the Company’s stockholders, the Company may not (except as provided for under Section 9): (1) amend any outstanding SAR granted under the Plan to provide a measurement price per share that is lower than the then-current measurement price per share of such outstanding SAR, (2) cancel any outstanding SAR (whether or not granted under the Plan) and grant in substitution therefor new Awards under the Plan (other than Awards granted pursuant to Section 4(c)) covering the same or a different number of shares of Common Stock and having an exercise or measurement price per share lower than the then-current measurement price per share of the cancelled SAR, (3) cancel in exchange for a cash payment any outstanding SAR with a measurement price per share above the then-current Fair Market Value, other than pursuant to Section 9, or (4) take any other action under the Plan that constitutes a “repricing” within the meaning of the rules of NASDAQ.

(g) No Reload Rights. No SAR granted under the Plan shall contain any provision entitling the grantee to the automatic grant of additional SARs in connection with any exercise of the original SAR.

(h) No Dividend Equivalents. No SAR shall provide for the payment or accrual of Dividend Equivalents.



## 7. Restricted Stock; Restricted Stock Units

(a) General. The Board may grant Awards entitling recipients to acquire shares of Common Stock (“**Restricted Stock**”), subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price (or to require forfeiture of such shares if issued at no cost) from the recipient in the event that conditions specified by the Board in the applicable Award are not satisfied prior to the end of the applicable restriction period or periods established by the Board for such Award. The Board may also grant Awards entitling the recipient to receive shares of Common Stock or cash to be delivered at the time such Award vests (“**Restricted Stock Units**”) (Restricted Stock and Restricted Stock Units are each referred to herein as a “**Restricted Stock Award**”).

(b) Terms and Conditions for All Restricted Stock Awards. The Board shall determine the terms and conditions of a Restricted Stock Award, including the conditions for vesting and repurchase (or forfeiture) and the issue price, if any.

### (c) Additional Provisions Relating to Restricted Stock.

(1) Dividends. Unless otherwise provided in the applicable Award agreement, any dividends (whether paid in cash, stock or property) declared and paid by the Company with respect to shares of Restricted Stock (“**Accrued Dividends**”) shall be paid to the Participant only if and when such shares become free from the restrictions on transferability and forfeitability that apply to such shares. Each payment of Accrued Dividends will be made no later than the end of the calendar year in which the dividends are paid to stockholders of that class of stock or, if later, the 15th day of the third month following the lapsing of the restrictions on transferability and the forfeitability provisions applicable to the underlying shares of Restricted Stock.

(2) Stock Certificates. The Company may require that any stock certificates issued in respect of shares of Restricted Stock, as well as dividends or distributions paid on such Restricted Stock, shall be deposited in escrow by the Participant, together with a stock power endorsed in blank, with the Company (or its designee). At the expiration of the applicable restriction periods, the Company (or such designee) shall deliver the certificates no longer subject to such restrictions to the Participant or if the Participant has died, to his or her Designated Beneficiary. “**Designated Beneficiary**” means (i) the beneficiary designated, in a manner determined by the Board, by a Participant to receive amounts due or exercise rights of the Participant in the event of the Participant’s death or (ii) in the absence of an effective designation by a Participant, the Participant’s estate.

### (d) Additional Provisions Relating to Restricted Stock Units.

(1) Settlement. Upon the vesting of and/or lapsing of any other restrictions (i.e., settlement) with respect to each Restricted Stock Unit, the Participant shall be entitled to receive from the Company one share of Common Stock or (if so provided in the applicable Award agreement) an amount of cash equal to the Fair Market Value of one share of Common Stock. The Board may, in its discretion, provide that settlement of Restricted Stock Units shall be deferred, on a mandatory basis or at the election of the Participant in a manner that complies with Section 409A of the Code.

(2) Voting Rights. A Participant shall have no voting rights with respect to any Restricted Stock Units.

(3) Dividend Equivalents. The Award agreement for Restricted Stock Units may provide Participants with the right to receive an amount equal to any dividends or other distributions declared and paid on an equal number of outstanding shares of Common Stock (“**Dividend Equivalents**”). Dividend Equivalents will be subject to the same restrictions on transfer and forfeitability as the Restricted Stock Units with respect to which such Dividend Equivalents were granted.

## 8. Other Stock-Based Awards

(a) General. Other Awards of shares of Common Stock, and other Awards that are valued in whole or in part by reference to, or are otherwise based on, shares of Common Stock or other property, may be granted hereunder to Participants (“**Other Stock-Based Awards**”). Such Other Stock-Based Awards shall also

be available as a form of payment in the settlement of other Awards granted under the Plan or as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock-Based Awards may be paid in shares of Common Stock or cash, as the Board shall determine.

(b) Terms and Conditions. Subject to the provisions of the Plan, the Board shall determine the terms and conditions of each Other Stock-Based Award, including any purchase price applicable thereto. Dividend Equivalents will be subject to the same restrictions on transfer and forfeitability as the Other Stock-Based Awards with respect to which such Dividend Equivalents were granted.

9. Adjustments for Changes in Common Stock and Certain Other Events

(a) Changes in Capitalization. In the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event, or any dividend or distribution to holders of Common Stock other than an ordinary cash dividend, (i) the number and class of securities available under the Plan, (ii) the share counting rules and sublimits set forth in Sections 4(a) and 4(b), (iii) the number and class of securities and exercise price per share of each outstanding Option, (iv) the share and per-share provisions and the measurement price of each outstanding SAR, (v) the number of shares subject to and the repurchase price per share subject to each outstanding Restricted Stock Award and (vi) the share and per-share-related provisions and the purchase price, if any, of each outstanding Other Stock-Based Award, shall be equitably adjusted by the Company (or substituted Awards may be made, if applicable) in the manner determined by the Board. Without limiting the generality of the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend and the exercise price of and the number of shares subject to an outstanding Option are adjusted as of the date of the distribution of the dividend (rather than as of the record date for such dividend), then an optionee who exercises an Option between the record date and the distribution date for such stock dividend shall be entitled to receive, on the distribution date, the stock dividend with respect to the shares of Common Stock acquired upon such Option exercise, notwithstanding the fact that such shares were not outstanding as of the close of business on the record date for such stock dividend.

(b) Reorganization Events.

(1) Definition. A “**Reorganization Event**” shall mean: (a) any merger or consolidation of the Company with or into another entity as a result of which all of the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property or is cancelled, (b) any transfer or disposition of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange or other transaction or (c) any liquidation or dissolution of the Company.

(2) Consequences of a Reorganization Event on Awards Other than Restricted Stock.

(A) In connection with a Reorganization Event, the Board may take any one or more of the following actions as to all or any (or any portion of) outstanding Awards other than Restricted Stock on such terms as the Board determines (except to the extent specifically provided otherwise in an applicable Award agreement or another agreement between the Company and the Participant): (i) provide that such Awards shall be assumed, or substantially equivalent Awards shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof), (ii) upon written notice to a Participant, provide that all of the Participant’s unexercised Awards will terminate immediately prior to the consummation of such Reorganization Event unless exercised by the Participant (to the extent then exercisable) within a specified period following the date of such notice, (iii) provide that outstanding Awards shall become exercisable, realizable, or deliverable, or restrictions applicable to an Award shall lapse, in whole or in part prior to or upon such Reorganization Event, (iv) in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share surrendered in the Reorganization Event (the “**Acquisition Price**”), make or provide for a cash payment to Participants with respect to each Award held by a Participant equal to (A) the number of shares of Common Stock subject to the vested portion of the Award (after giving effect to any acceleration of vesting that occurs upon or immediately prior to such Reorganization Event) multiplied by (B) the excess, if any, of (I) the Acquisition Price over (II) the exercise, measurement

or purchase price of such Award and any applicable tax withholdings, in exchange for the termination of such Award, (v) provide that, in connection with a liquidation or dissolution of the Company, Awards shall convert into the right to receive liquidation proceeds (if applicable, net of the exercise, measurement or purchase price thereof and any applicable tax withholdings) and (vi) any combination of the foregoing. In taking any of the actions permitted under this Section 9(b)(2), the Board shall not be obligated by the Plan to treat all Awards, all Awards held by a Participant, or all Awards of the same type, identically.

(B) Notwithstanding the terms of Section 9(b)(2)(A), in the case of outstanding Restricted Stock Units that are subject to Section 409A of the Code: (i) if the applicable Restricted Stock Unit agreement provides that the Restricted Stock Units shall be settled upon a “change in control event” within the meaning of Treasury Regulation Section 1.409A-3(i)(5)(i), and the Reorganization Event constitutes such a “change in control event”, then no assumption or substitution shall be permitted pursuant to Section 9(b)(2)(A)(i) and the Restricted Stock Units shall instead be settled in accordance with the terms of the applicable Restricted Stock Unit agreement; and (ii) the Board may only undertake the actions set forth in clauses (iii), (iv) or (v) of Section 9(b)(2)(A) if the Reorganization Event constitutes a “change in control event” as defined under Treasury Regulation Section 1.409A-3(i)(5)(i) and such action is permitted or required by Section 409A of the Code; if the Reorganization Event is not a “change in control event” as so defined or such action is not permitted or required by Section 409A of the Code, and the acquiring or succeeding corporation does not assume or substitute the Restricted Stock Units pursuant to clause (i) of Section 9(b)(2)(A), then the unvested Restricted Stock Units shall terminate immediately prior to the consummation of the Reorganization Event without any payment in exchange therefor.

(C) For purposes of Section 9(b)(2)(A)(i), an Award (other than Restricted Stock) shall be considered assumed if, following consummation of the Reorganization Event, such Award confers the right to purchase or receive pursuant to the terms of such Award, for each share of Common Stock subject to the Award immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); *provided, however*, that if the consideration received as a result of the Reorganization Event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise or settlement of the Award to consist solely of such number of shares of common stock of the acquiring or succeeding corporation (or an affiliate thereof) that the Board determined to be equivalent in value (as of the date of such determination or another date specified by the Board) to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.

(3) Consequences of a Reorganization Event on Restricted Stock. Upon the occurrence of a Reorganization Event other than a liquidation or dissolution of the Company, the repurchase and other rights of the Company with respect to outstanding Restricted Stock shall inure to the benefit of the Company’s successor and shall, unless the Board determines otherwise, apply to the cash, securities or other property which the Common Stock was converted into or exchanged for pursuant to such Reorganization Event in the same manner and to the same extent as they applied to such Restricted Stock; *provided, however*, that the Board may provide for termination or deemed satisfaction of such repurchase or other rights under the instrument evidencing any Restricted Stock or any other agreement between a Participant and the Company, either initially or by amendment. Upon the occurrence of a Reorganization Event involving the liquidation or dissolution of the Company, except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock or any other agreement between a Participant and the Company, all restrictions and conditions on all Restricted Stock then outstanding shall automatically be deemed terminated or satisfied.

#### 10. General Provisions Applicable to Awards

(a) Transferability of Awards. Awards shall not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an Incentive Stock Option, pursuant to a qualified domestic relations order, and, during the life of the Participant, shall be exercisable only by the Participant; *provided, however*, that the Board may permit or provide in an Award for the gratuitous transfer of the Award by the Participant to or for the benefit of any immediate family member, family trust or other entity established for the benefit of the Participant and/or an immediate family member thereof if the Company would be eligible to use a Form S-8 under the Securities Act for the registration of the sale of the Common Stock subject to such Award to such proposed transferee; *provided further*, that the Company shall not be required to recognize any such permitted transfer until such time as such permitted transferee shall, as a condition to such transfer, deliver to the Company a written instrument in form and substance satisfactory to the Company confirming that such transferee shall be bound by all of the terms and conditions of the Award. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees. For the avoidance of doubt, nothing contained in this Section 10(a) shall be deemed to restrict a transfer to the Company.

(b) Documentation. Each Award shall be evidenced in such form (written, electronic or otherwise) as the Board shall determine. Each Award may contain terms and conditions in addition to those set forth in the Plan.

(c) Board Discretion. Except as otherwise provided by the Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award need not be identical, and the Board need not treat Participants uniformly.

(d) Termination of Status. The Board shall determine the effect on an Award of the disability, death, retirement, termination or other cessation of employment, authorized leave of absence or other change in the employment or other status of a Participant and the extent to which, and the period during which, the Participant, or the Participant's legal representative, conservator, guardian or Designated Beneficiary, may exercise rights under the Award.

(e) Withholding. The Participant must satisfy all applicable federal, state, and local or other income and employment tax withholding obligations before the Company will deliver stock certificates or otherwise recognize ownership of Common Stock under an Award. The Company may decide to satisfy the withholding obligations through additional withholding on salary or wages. If the Company elects not to or cannot withhold from other compensation, the Participant must pay the Company the full amount, if any, required for withholding or have a broker tender to the Company cash equal to the withholding obligations. Payment of withholding obligations is due before the Company will issue any shares on exercise, vesting or release from forfeiture of an Award or at the same time as payment of the exercise or purchase price, unless the Company determines otherwise. If provided for in an Award or approved by the Board in its sole discretion, a Participant may satisfy such tax obligations in whole or in part by delivery (either by actual delivery or attestation) of shares of Common Stock, including shares retained from the Award creating the tax obligation, valued at their Fair Market Value; *provided, however*, except as otherwise provided by the Board, that the total tax withholding where stock is being used to satisfy such tax obligations cannot exceed the Company's minimum statutory withholding obligations (based on minimum statutory withholding rates for federal and state tax purposes, including payroll taxes, that are applicable to such supplemental taxable income). Shares used to satisfy tax withholding requirements cannot be subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements.

(f) Amendment of Award. Except as otherwise provided in Section 5(g) with respect to repricings, Section 10(i) with respect to Performance Awards or Section 11(d) with respect to actions requiring stockholder approval, the Board may amend, modify or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or realization, and converting an Incentive Stock Option to a Nonstatutory Stock Option. The Participant's consent to such action shall be required unless (i) the Board determines that the action, taking into account any related action, does not materially and adversely affect the Participant's rights under the Plan or (ii) the change is permitted under Section 9.

(g) Conditions on Delivery of Stock. The Company will not be obligated to deliver any shares of Common Stock pursuant to the Plan or to remove restrictions from shares previously issued or delivered under the Plan until (i) all conditions of the Award have been met or removed to the satisfaction of the Company, (ii) in the opinion of the Company's counsel, all other legal matters in connection with the issuance and delivery of such shares have been satisfied, including any applicable securities laws and regulations and any applicable stock exchange or stock market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Company may consider appropriate to satisfy the requirements of any applicable laws, rules or regulations.

(h) Acceleration. The Board may at any time provide that any Award shall become immediately exercisable in whole or in part, free of some or all restrictions or conditions, or otherwise realizable in whole or in part, as the case may be.

(i) Performance Awards.

(1) Grants. Restricted Stock Awards and Other Stock-Based Awards under the Plan may be made subject to the achievement of performance goals pursuant to this Section 10(i) ("**Performance Awards**"). Performance Awards can also provide for cash payments of up to \$1,500,000 per fiscal year per individual.

(2) Committee. Grants of Performance Awards to any Covered Employee (as defined below) intended to qualify as "performance-based compensation" under Section 162(m) ("**Performance-Based Compensation**") shall be made only by a Committee (or a subcommittee of a Committee) comprised solely of two or more directors eligible to serve on a committee making Awards qualifying as "performance-based compensation" under Section 162(m). In the case of such Awards granted to Covered Employees, references to the Board or to a Committee shall be treated as referring to such Committee (or subcommittee). "**Covered Employee**" shall mean any person who is, or whom the Committee, in its discretion, determines may be, a "covered employee" under Section 162(m)(3) of the Code.

(3) Performance Measures. For any Award that is intended to qualify as Performance-Based Compensation, the Committee shall specify that the degree of granting, vesting and/or payout shall be subject to the achievement of one or more objective performance measures established by the Committee, which shall be based on the relative or absolute attainment of specified levels of one or any combination of the following, which may be determined pursuant to generally accepted accounting principles ("**GAAP**") or on a non-GAAP basis, as determined by the Committee: (a) earnings per share, (b) return on average equity or average assets with respect to a pre-determined peer group, (c) earnings, (d) earnings growth, (e) revenues, (f) expenses, (g) stock price, (h) market share, (i) return on sales, assets, equity or investment, (j) regulatory compliance, (k) achievement of balance sheet or income statement objectives, (l) total shareholder return, (m) net operating profit after tax, (n) pre-tax or after tax income, (o) cash flow, (p) achievement of research, development, clinical or regulatory milestones, (q) product sales, (r) business development activities, (s) the entry into an arrangement or agreement with a third party for the development, commercialization, marketing or distribution of products, services or technologies, or for conducting a research program to discover and develop a product, service or technology, and/or the achievement of milestones under such arrangement or agreement, including events that trigger an obligation or payment right, (t) achievement of domestic and international regulatory milestones, including the submission of filings required to advance products, services and technologies in clinical development and the achievement of approvals by regulatory authorities relating to the commercialization of products, services and technologies, (u) the achievement of discovery, preclinical and clinical stage scientific objectives, discoveries or inventions for products, services and technologies under research and development, (v) the entry into or completion of a phase of clinical development for any product, service or technology, such as the entry into or completion of phase 1, 2 and/or 3 clinical trials, (w) the consummation of debt or equity financing transactions, or acquisitions of business, technologies and assets, (x) new product or service releases, (y) specified levels of product sales, net income, earnings before or after discontinued operations, interest, taxes, depreciation and/or amortization, operating profit before or after discontinued operations and/or taxes, sales, sales growth, earnings growth, cash flow or cash position, gross margins, stock price, market share, return on sales, assets, equity or investment and (z) improvement of financial ratings. Such goals may reflect absolute

entity or business unit performance or a relative comparison to the performance of a peer group of entities or other external measure of the selected performance criteria and may be absolute in their terms or measured against or in relationship to other companies comparably, similarly or otherwise situated. The Committee may specify that such performance measures shall be adjusted to exclude any one or more of (i) extraordinary items, (ii) gains or losses on the dispositions of discontinued operations, (iii) the cumulative effects of changes in accounting principles, (iv) the writedown of any asset, (v) fluctuation in foreign currency exchange rates, and (vi) charges for restructuring and rationalization programs. Such performance measures: (i) may vary by Participant and may be different for different Awards; (ii) may be particular to a Participant or the department, branch, line of business, subsidiary or other unit in which the Participant works and may cover such period as may be specified by the Committee; and (iii) shall be set by the Committee within the time period prescribed by, and shall otherwise comply with the requirements of, Section 162(m). Awards that are not intended to qualify as Performance-Based Compensation may be based on these or such other performance measures as the Board may determine.

(4) Adjustments. Notwithstanding any provision of the Plan, with respect to any Performance Award that is intended to qualify as Performance-Based Compensation, the Committee may adjust downwards, but not upwards, the cash or number of shares payable pursuant to such Award, and the Committee may not waive the achievement of the applicable performance measures except in the case of the death or disability of the Participant or a change in control of the Company.

(5) Other. The Committee shall have the power to impose such other restrictions on Performance Awards as it may deem necessary or appropriate to ensure that such Awards satisfy all requirements for Performance-Based Compensation. Dividend Equivalents will be subject to the same restrictions on transfer and forfeitability as the Performance Awards with respect to which such Dividend Equivalents were granted.

#### 11. Miscellaneous

(a) No Right To Employment or Other Status. No person shall have any claim or right to be granted an Award by virtue of the adoption of the Plan, and the grant of an Award shall not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan, except as expressly provided in the applicable Award.

(b) No Rights As Stockholder. Subject to the provisions of the applicable Award, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any shares of Common Stock to be distributed with respect to an Award until becoming the record holder of such shares.

(c) Effective Date and Term of Plan. The Plan shall become effective on the date the Plan is approved by the Company's stockholders (the "**Effective Date**"). No Awards shall be granted under the Plan after the expiration of 10 years from the Effective Date, but Awards previously granted may extend beyond that date.

(d) Amendment of Plan. The Board may amend, suspend or terminate the Plan or any portion thereof at any time provided that (i) to the extent required by Section 162(m), no Award granted to a Participant that is intended to comply with Section 162(m) after the date of such amendment shall become exercisable, realizable or vested, as applicable to such Award, unless and until the Company's stockholders approve such amendment in the manner required by Section 162(m); (ii) no amendment that would require stockholder approval under the rules of NASDAQ may be made effective unless and until the Company's stockholders approve such amendment; and (iii) if the NASDAQ amends its corporate governance rules so that such rules no longer require stockholder approval of NASDAQ "material amendments" to equity compensation plans, then, from and after the effective date of such amendment to the NASDAQ rules, no amendment to the Plan (A) materially increasing the number of shares authorized under the Plan (other than pursuant to Section 4(c) or 9), (B) expanding the types of Awards that may be granted under the Plan, or (C) materially expanding the class of participants eligible to participate in the Plan shall be effective unless and until the Company's stockholders approve such amendment. In addition, if at any time the approval of the Company's stockholders is required as to any other modification or amendment

under Section 422 of the Code or any successor provision with respect to Incentive Stock Options, the Board may not effect such modification or amendment without such approval. Unless otherwise specified in the amendment, any amendment to the Plan adopted in accordance with this Section 11(d) shall apply to, and be binding on the holders of, all Awards outstanding under the Plan at the time the amendment is adopted, provided the Board determines that such amendment, taking into account any related action, does not materially and adversely affect the rights of Participants under the Plan.

(e) Authorization of Sub-Plans (including for Grants to non-U.S. Employees). The Board may from time to time establish one or more sub-plans under the Plan for purposes of satisfying applicable securities, tax or other laws of various jurisdictions. The Board shall establish such sub-plans by adopting supplements to the Plan containing (i) such limitations on the Board's discretion under the Plan as the Board deems necessary or desirable or (ii) such additional terms and conditions not otherwise inconsistent with the Plan as the Board shall deem necessary or desirable. All supplements adopted by the Board shall be deemed to be part of the Plan, but each supplement shall apply only to Participants within the affected jurisdiction and the Company shall not be required to provide copies of any supplement to Participants in any jurisdiction which is not the subject of such supplement.

(f) Compliance with Section 409A of the Code. Except as provided in individual Award agreements initially or by amendment, if and to the extent (i) any portion of any payment, compensation or other benefit provided to a Participant pursuant to the Plan in connection with his or her employment termination constitutes "nonqualified deferred compensation" within the meaning of Section 409A of the Code and (ii) the Participant is a specified employee as defined in Section 409A(a)(2)(B)(i) of the Code, in each case as determined by the Company in accordance with its procedures, by which determinations the Participant (through accepting the Award) agrees that he or she is bound, such portion of the payment, compensation or other benefit shall not be paid before the day that is six months plus one day after the date of "separation from service" (as determined under Section 409A of the Code) (the "**New Payment Date**"), except as Section 409A of the Code may then permit. The aggregate of any payments that otherwise would have been paid to the Participant during the period between the date of separation from service and the New Payment Date shall be paid to the Participant in a lump sum on such New Payment Date, and any remaining payments will be paid on their original schedule.

The Company makes no representations or warranty and shall have no liability to the Participant or any other person if any provisions of or payments, compensation or other benefits under the Plan are determined to constitute nonqualified deferred compensation subject to Section 409A of the Code but do not to satisfy the conditions of that section.

(g) Limitations on Liability. Notwithstanding any other provisions of the Plan, no individual acting as a director, officer, employee or agent of the Company will be liable to any Participant, former Participant, spouse, beneficiary, or any other person for any claim, loss, liability, or expense incurred in connection with the Plan, nor will such individual be personally liable with respect to the Plan because of any contract or other instrument he or she executes in his or her capacity as a director, officer, employee or agent of the Company. The Company will indemnify and hold harmless each director, officer, employee or agent of the Company to whom any duty or power relating to the administration or interpretation of the Plan has been or will be delegated, against any cost or expense (including attorneys' fees) or liability (including any sum paid in settlement of a claim with the Board's approval) arising out of any act or omission to act concerning the Plan unless arising out of such person's own fraud or bad faith.

(h) Governing Law. The provisions of the Plan and all Awards made hereunder shall be governed by and interpreted in accordance with the laws of the State of Delaware, excluding choice-of-law principles of the law of such state that would require the application of the laws of a jurisdiction other than the State of Delaware.

## APPENDIX C

**AMENDMENT TO THE  
IDERA PHARMACEUTICALS, INC.  
2017 EMPLOYEE STOCK PURCHASE PLAN**

WHEREAS, Idera Pharmaceuticals, Inc. (the “Company”) desires to amend the Idera Pharmaceuticals, Inc. 2017 Employee Stock Purchase Plan (the “ESPP”), in the manner set forth below (the “Amendment”); and

WHEREAS, on April 15, 2022, subject to stockholder approval, the Board of Directors of the Company approved the Amendment; and

NOW THEREFORE, in accordance with Section 16 of the ESPP, the ESPP is hereby amended as follows:

1. The first paragraph of the ESPP is hereby amended by such paragraph in its entirety and substituting the following in lieu thereof is hereby amended in its entirety to read as follows:

“The purpose of this Plan is to provide eligible employees of Idera Pharmaceuticals, Inc. (the “Company”) and certain of its subsidiaries with opportunities to purchase shares of the Company’s common stock, \$0.001 par value (the “Common Stock”). One Million Four Hundred Fifty Thousand (1,450,000) shares of Common Stock in the aggregate have been approved for this purpose, subject to any adjustment pursuant to Section 15 hereof. This Plan is intended to qualify as an “employee stock purchase plan” as defined in Section 423 of the Internal Revenue Code of 1986, as amended (the “Code”), and the regulations issued thereunder, and shall be interpreted consistent therewith.”

The Amendment shall be effective upon approval of the stockholders of the Company at the Company’s 2022 annual meeting of stockholders and shall only be applicable with respect to Awards granted after such approval. If the Amendment is not so approved at such meeting, then the amendment to the ESPP set forth herein shall be void ab initio.

Except as herein above provided, the ESPP is hereby ratified, confirmed, and approved in all respects.



## APPENDIX D

## IDERA PHARMACEUTICALS, INC.

## 2017 EMPLOYEE STOCK PURCHASE PLAN

The purpose of this Plan is to provide eligible employees of Idera Pharmaceuticals, Inc. (the "Company") and certain of its subsidiaries with opportunities to purchase shares of the Company's common stock, \$0.001 par value (the "Common Stock"). Five hundred thousand (500,000) shares of Common Stock in the aggregate have been approved for this purpose, subject to any adjustment pursuant to Section 15 hereof. This Plan is intended to qualify as an "employee stock purchase plan" as defined in Section 423 of the Internal Revenue Code of 1986, as amended (the "Code"), and the regulations issued thereunder, and shall be interpreted consistent therewith.

1. Administration. The Plan will be administered by the Company's Board of Directors (the "Board") or by a Committee appointed by the Board (the "Committee"). The Board or the Committee has authority to make rules and regulations for the administration of the Plan and its interpretation and decisions with regard thereto shall be final and conclusive.

2. Eligibility. All employees of the Company and all employees of any subsidiary of the Company (as defined in Section 424(f) of the Code) designated by the Board or the Committee from time to time (a "Designated Subsidiary"), are eligible to participate in any one or more of the offerings of Options (as defined in Section 9) to purchase Common Stock under the Plan provided that:

- (a) they are customarily employed by the Company or a Designated Subsidiary for more than 20 hours a week and for more than five months in a calendar year;
- (b) they have been employed by the Company or a Designated Subsidiary for at least three months prior to enrolling in the Plan; and
- (c) they are employees of the Company or a Designated Subsidiary on the first day of the applicable Plan Period (as defined below).

No employee may be granted an Option hereunder if such employee, immediately after the Option is granted, owns 5% or more of the total combined voting power or value of the stock of the Company or any subsidiary. For purposes of the preceding sentence, the attribution rules of Section 424(d) of the Code shall apply in determining the stock ownership of an employee, and all stock that the employee has a contractual right to purchase shall be treated as stock owned by the employee.

The Company retains the discretion to determine which eligible employees may participate in an offering pursuant to and consistent with Treasury Regulation Sections 1.423-2(e) and (f).

3. Offerings. The Company will make one or more offerings ("Offerings") to employees to purchase stock under this Plan. Offerings will begin on the dates determined by the Board or the Committee or the first business day thereafter (the "Offering Commencement Dates"). Each Offering Commencement Date will begin a plan period (a "Plan Period") during which payroll deductions will be made and held for the purchase of Common Stock at the end of the Plan Period. The Board or the Committee may, at its discretion, choose a Plan Period of twelve (12) months or less for subsequent Offerings and/or choose a different commencement date for Offerings under the Plan.

4. Participation. An employee eligible on the Offering Commencement Date of any Offering may participate in such Offering by completing and forwarding either a written or electronic payroll deduction authorization form to the employee's appropriate payroll office at least 14 days prior to the applicable Offering Commencement Date. The form will authorize a regular payroll deduction from the Compensation received by the employee during the Plan Period. Unless an employee files a new form or withdraws from the Plan, his or her deductions and purchases will continue at the same rate for future Offerings under the Plan as long as the Plan remains in effect. The term "Compensation" means the amount of money reportable on the employee's Federal Income Tax Withholding Statement, excluding overtime, shift premium, incentive or bonus awards, allowances and reimbursements for expenses such as relocation allowances for travel expenses, income or gains associated with the grant or vesting of restricted stock, income or gains on the

exercise of Company stock options or stock appreciation rights, and similar items, whether or not shown or separately identified on the employee's Federal Income Tax Withholding Statement, but including, in the case of salespersons, sales commissions to the extent determined by the Board or the Committee.

5. Deductions. The Company will maintain payroll deduction accounts for all participating employees. With respect to any Offering made under this Plan, an employee may authorize a payroll deduction in any dollar amount up to a maximum of 10% of the Compensation he or she receives during the Plan Period or such shorter period during which deductions from payroll are made. Payroll deductions may be at the rate of 1%, 2%, 3%, 4%, 5%, 6%, 7%, 8%, 9% or 10% of Compensation with any change in compensation during the Plan Period to result in an automatic corresponding change in the dollar amount withheld. The minimum payroll deduction is such percentage of Compensation as may be established from time to time by the Board or the Committee.

6. Deduction Changes. An employee may decrease or discontinue his or her payroll deduction once during any Plan Period, by filing either a written or electronic new payroll deduction authorization form. However, an employee may not increase his or her payroll deduction during a Plan Period. If an employee elects to discontinue his or her payroll deductions during a Plan Period, but does not elect to withdraw his or her funds pursuant to Section 8 hereof, funds deducted prior to his or her election to discontinue will be applied to the purchase of Common Stock on the Exercise Date (as defined below).

7. Interest. Interest will not be paid on any employee accounts, except to the extent that the Board or the Committee, in its sole discretion, elects to credit employee accounts with interest at such rate as it may from time to time determine.

8. Withdrawal of Funds. An employee may at any time prior to the close of business on the last business day in a Plan Period and for any reason permanently draw out the balance accumulated in the employee's account and thereby withdraw from participation in an Offering. Partial withdrawals are not permitted. The employee may not begin participation again during the remainder of the Plan Period during which the employee withdrew his or her balance. The employee may participate in any subsequent Offering in accordance with terms and conditions established by the Board or the Committee.

9. Purchase of Shares.

(a) Number of Shares. On the Offering Commencement Date of each Plan Period, the Company will grant to each eligible employee who is then a participant in the Plan an option (an "Option") to purchase on the last business day of such Plan Period (the "Exercise Date") at the applicable purchase price (the "Option Price") up to a whole number of shares of Common Stock determined by multiplying \$2,083 by the number of full months in the Plan Period and dividing the result by the closing price (as determined below) on the Offering Commencement Date; provided, however, that no employee may be granted an Option which permits his or her rights to purchase Common Stock under this Plan and any other employee stock purchase plan (as defined in Section 423(b) of the Code) of the Company and its subsidiaries, to accrue at a rate which exceeds \$25,000 of the fair market value of such Common Stock (determined at the date such Option is granted) for each calendar year in which the Option is outstanding at any time.

(b) Option Price. The Board or the Committee shall determine the Option Price for each Plan Period, including whether such Option Price shall be determined based on the lesser of the closing price of the Common Stock on (i) the first business day of the Plan Period or (ii) the Exercise Date, or shall be based solely on the closing price of the Common Stock on the Exercise Date; provided, however, that such Option Price shall be at least 85% of the applicable closing price. In the absence of a determination by the Board or the Committee, the Option Price will be 85% of the lesser of the closing price of the Common Stock on (i) the first business day of the Plan Period and (ii) the Exercise Date. The closing price shall be (a) the closing price (for the primary trading session) on any national securities exchange on which the Common Stock is listed or (b) the average of the closing bid and asked prices in the over-the-counter-market, whichever is applicable, as published in The Wall Street Journal or another source selected by the Board or the Committee. If no sales of Common Stock were made on such a day, the price of the Common Stock shall be the reported price for the next preceding day on which sales were made.

(c) Exercise of Option. Each employee who continues to be a participant in the Plan on the Exercise Date shall be deemed to have exercised his or her Option at the Option Price on such date and shall be deemed to have purchased from the Company the number of whole shares of Common Stock reserved for the purpose of the Plan that his or her accumulated payroll deductions on such date will pay for, but not in excess of the maximum numbers determined in the manner set forth above.

(d) Return of Unused Payroll Deductions. Any balance remaining in an employee's payroll deduction account at the end of a Plan Period will be automatically refunded to the employee, except that any balance that is less than the purchase price of one share of Common Stock will be carried forward into the employee's payroll deduction account for the following Offering, unless the employee elects not to participate in the following Offering under the Plan, in which case the balance in the employee's account shall be refunded.

10. Issuance of Certificates. Certificates representing shares of Common Stock purchased under the Plan may be issued only in the name of the employee, in the name of the employee and another person of legal age as joint tenants with rights of survivorship, or (in the Company's sole discretion) in the name of a brokerage firm, bank, or other nominee holder designated by the employee. The Company may, in its sole discretion and in compliance with applicable laws, authorize the use of book entry registration of shares in lieu of issuing stock certificates.

11. Rights on Retirement, Death or Termination of Employment. If a participating employee's employment ends before the last business day of a Plan Period, no payroll deduction shall be taken from any pay then due and owing to the employee and the balance in the employee's account shall be paid to the employee. In the event of the employee's death before the last business day of a Plan Period, the Company shall, upon notification of such death, pay the balance of the employee's account (a) to the executor or administrator of the employee's estate or (b) if no such executor or administrator has been appointed to the knowledge of the Company, to such other person(s) as the Company may, in its discretion, designate. If, before the last business day of the Plan Period, the Designated Subsidiary by which an employee is employed ceases to be a subsidiary of the Company, or if the employee is transferred to a subsidiary of the Company that is not a Designated Subsidiary, the employee shall be deemed to have terminated employment for the purposes of this Plan.

12. Optionees Not Stockholders. Neither the granting of an Option to an employee nor the deductions from his or her pay shall make such employee a stockholder of the shares of Common Stock covered by an Option under this Plan until he or she has purchased and received such shares.

13. Options Not Transferable. Options under this Plan are not transferable by a participating employee other than by will or the laws of descent and distribution, and are exercisable during the employee's lifetime only by the employee.

14. Application of Funds. All funds received or held by the Company under this Plan may be combined with other corporate funds and may be used for any corporate purpose.

15. Adjustment for Changes in Common Stock and Certain Other Events.

(a) Changes in Capitalization. In the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event, or any dividend or distribution to holders of Common Stock other than an ordinary cash dividend, (i) the number and class of securities available under this Plan, (ii) the share limitations set forth in Section 9, and (iii) the Option Price shall be equitably adjusted to the extent determined by the Board or the Committee.

(b) Reorganization Events.

(1) Definition. A "Reorganization Event" shall mean: (a) any merger or consolidation of the Company with or into another entity as a result of which all of the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property or is cancelled, (b) any transfer or disposition of all of the Common Stock of the Company for cash,

securities or other property pursuant to a share exchange or other transaction or (c) any liquidation or dissolution of the Company.

(2) Consequences of a Reorganization Event on Options. In connection with a Reorganization Event, the Board or the Committee may take any one or more of the following actions as to outstanding Options on such terms as the Board or the Committee determines: (i) provide that Options shall be assumed, or substantially equivalent Options shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof), (ii) upon written notice to employees, provide that all outstanding Options will be terminated immediately prior to the consummation of such Reorganization Event and that all such outstanding Options will become exercisable to the extent of accumulated payroll deductions as of a date specified by the Board or the Committee in such notice, which date shall not be less than ten (10) days preceding the effective date of the Reorganization Event, (iii) upon written notice to employees, provide that all outstanding Options will be cancelled as of a date prior to the effective date of the Reorganization Event and that all accumulated payroll deductions will be returned to participating employees on such date, (iv) in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share surrendered in the Reorganization Event (the "Acquisition Price"), change the last day of the Plan Period to be the date of the consummation of the Reorganization Event and make or provide for a cash payment to each employee equal to (A) (i) the Acquisition Price times (ii) the number of shares of Common Stock that the employee's accumulated payroll deductions as of immediately prior to the Reorganization Event could purchase at the Option Price, where the Acquisition Price is treated as the fair market value of the Common Stock on the last day of the applicable Plan Period for purposes of determining the Option Price under Section 9(b) hereof, and where the number of shares that could be purchased is subject to the limitations set forth in Section 9(a), minus (B) the result of multiplying such number of shares by such Option Price, (v) provide that, in connection with a liquidation or dissolution of the Company, Options shall convert into the right to receive liquidation proceeds (net of the Option Price thereof) and (vi) any combination of the foregoing.

For purposes of clause (i) above, an Option shall be considered assumed if, following consummation of the Reorganization Event, the Option confers the right to purchase, for each share of Common Stock subject to the Option immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); provided, however, that if the consideration received as a result of the Reorganization Event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise of Options to consist solely of such number of shares of common stock of the acquiring or succeeding corporation (or an affiliate thereof) that the Board determines to be equivalent in value (as of the date of such determination or another date specified by the Board) to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.

16. Amendment of the Plan. The Board may at any time, and from time to time, amend or suspend this Plan or any portion thereof, except that (a) if the approval of any such amendment by the shareholders of the Company is required by Section 423 of the Code, such amendment shall not be effected without such approval, and (b) in no event may any amendment be made that would cause the Plan to fail to comply with Section 423 of the Code.

17. Insufficient Shares. If the total number of shares of Common Stock specified in elections to be purchased under any Offering plus the number of shares purchased under previous Offerings under this Plan exceeds the maximum number of shares issuable under this Plan, the Board or the Committee will allot the shares then available on a pro-rata basis.

18. Termination of the Plan. This Plan may be terminated at any time by the Board. Upon termination of this Plan all amounts in the accounts of participating employees shall be promptly refunded.

19. Governmental Regulations. The Company's obligation to sell and deliver Common Stock under this Plan is subject to listing on a national stock exchange (to the extent the Common Stock is then so listed or quoted) and the approval of all governmental authorities required in connection with the authorization, issuance or sale of such stock.
20. Governing Law. The Plan shall be governed by Delaware law except to the extent that such law is preempted by federal law.
21. Issuance of Shares. Shares may be issued upon exercise of an Option from authorized but unissued Common Stock, from shares held in the treasury of the Company, or from any other proper source.
22. Notification upon Sale of Shares. Each employee agrees, by entering the Plan, to promptly give the Company notice of any disposition of shares purchased under the Plan where such disposition occurs within two years after the date of grant of the Option pursuant to which such shares were purchased.
23. Grants to Employees in Foreign Jurisdictions. The Company may, to comply with the laws of a foreign jurisdiction, grant Options to employees of the Company or a Designated Subsidiary who are citizens or residents of such foreign jurisdiction (without regard to whether they are also citizens of the United States or resident aliens (within the meaning of Section 7701(b)(1)(A) of the Code)) with terms that are less favorable (but not more favorable) than the terms of Options granted under the Plan to employees of the Company or a Designated Subsidiary who are resident in the United States. Notwithstanding the preceding provisions of this Plan, employees of the Company or a Designated Subsidiary who are citizens or residents of a foreign jurisdiction (without regard to whether they are also citizens of the United States or resident aliens (within the meaning of Section 7701(b)(1)(A) of the Code)) may be excluded from eligibility under the Plan if (a) the grant of an Option under the Plan to a citizen or resident of the foreign jurisdiction is prohibited under the laws of such jurisdiction or (b) compliance with the laws of the foreign jurisdiction would cause the Plan to violate the requirements of Section 423 of the Code. The Company may add one or more appendices to this Plan describing the operation of the Plan in those foreign jurisdictions in which employees are excluded from participation or granted less favorable Options.
25. Authorization of Sub-Plans. The Board may from time to time establish one or more sub-plans under the Plan with respect to one or more Designated Subsidiaries, provided that such sub-plan complies with Section 423 of the Code.
26. Withholding. If applicable tax laws impose a tax withholding obligation, each affected employee shall, no later than the date of the event creating the tax liability, make provision satisfactory to the Board for payment of any taxes required by law to be withheld in connection with any transaction related to Options granted to or shares acquired by such employee pursuant to the Plan. The Company may, to the extent permitted by law, deduct any such taxes from any payment of any kind otherwise due to an employee.
27. Effective Date and Approval of Shareholders. The Plan shall take effect on June 7, 2017 subject to approval by the shareholders of the Company as required by Section 423 of the Code, which approval must occur within twelve months of the adoption of the Plan by the Board.



ENDORSEMENT LINE \_\_\_\_\_ SACKPACK 000004  
 MR A SAMPLE  
 DESIGNATION (IF ANY)  
 ADD 1  
 ADD 2  
 ADD 3  
 ADD 4  
 ADD 5  
 ADD 6



C123456789  
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**Your vote matters - here's how to vote!**

You may vote online or by phone instead of mailing this card.



**Votes submitted electronically must be received by June 22, 2022 at 11:59 P.M., Eastern Time.**



**Online**  
 Go to <http://www.investorvote.com/IDRA> or scan the QR code – login details are located in the shaded bar below.



**Phone**  
 Call toll free 1-800-652-VOTE (8683) within the USA, US territories, and Canada.



**Save paper, time, and money!**  
 Sign up for electronic delivery at <http://www.investorvote.com/IDRA>

Using a **black ink** pen, mark your votes with an **X** as shown in this example. Please do not write outside the designated areas.



**2022 Annual Meeting Proxy Card**

1234 5678 9012 345

IF VOTING BY MAIL, SIGN, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE.

**A Proposals – The Board of Directors recommends a vote FOR each of the Class III director nominees listed below and FOR Proposals 2, 3, 4, and 5.**

**1. Election of Directors**

	<b>For</b>	<b>Withhold</b>		<b>For</b>	<b>Withhold</b>
01 - Mark Goldberg, M.D.	<input type="checkbox"/>	<input type="checkbox"/>	02 - Carol A. Schafer	<input type="checkbox"/>	<input type="checkbox"/>

<p><b>2. Approval of the advisory vote on the compensation of the Company's named executive officers for 2021.</b></p> <p style="text-align: center;"><b>For</b> <input type="checkbox"/> <b>Against</b> <input type="checkbox"/> <b>Abstain</b> <input type="checkbox"/></p>	<p><b>3. Ratification of the selection of Ernst &amp; Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022.</b></p> <p style="text-align: center;"><b>For</b> <input type="checkbox"/> <b>Against</b> <input type="checkbox"/> <b>Abstain</b> <input type="checkbox"/></p>
<p><b>4. Approval of an Amendment to the Company's 2013 Stock Incentive Plan to increase the number of authorized shares.</b></p> <p style="text-align: center;"><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p><b>5. Approval of an Amendment to the Company's 2017 Employee Stock Purchase Plan to increase the number of authorized shares.</b></p> <p style="text-align: center;"><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>

**B Authorized Signatures – This section must be completed for your vote to count. Please date and sign below.**

Please sign this proxy exactly as your name appears hereon. Joint owners should each sign personally. Trustees and other fiduciaries should indicate the capacity in which they sign. If a corporation or partnership, this signature should be that of an authorized officer who should state his or her title.

Date (mm/dd/yyyy) – Please print date below. Signature 1 – Please keep signature within the box. Signature 2 – Please keep signature within the box.

C 1234567890 J N T  
 2 4 C V 5 4 1 8 3 1

03NOTC

**2022 Annual Meeting Admission Ticket**

Idera Pharmaceuticals, Inc.  
 2022 Annual Meeting of Stockholders  
 Thursday, June 23, 2022  
 8:00 a.m., Eastern Time  
 505 Eagleview Boulevard, Suite 212  
 Exton, Pennsylvania 19341

Upon arrival, please present this admission ticket and photo identification at the registration desk.

**Small steps make an impact.**  
 Help the environment by consenting to receive electronic  
 delivery, sign up at <http://www.investorvote.com/IDRA>

▼ IF VOTING BY MAIL, SIGN, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE. ▼

**Proxy – Idera Pharmaceuticals, Inc.**

2022 Annual Meeting of Stockholders of Idera Pharmaceuticals, Inc.  
 June 23, 2022 at 8:00 a.m. Eastern Time  
 505 Eagleview Boulevard, Suite 212  
 Exton, Pennsylvania 19341



**This proxy is solicited by the Board of Directors for use at the Annual Meeting of Stockholders.**

The undersigned hereby appoints Mr. Vincent J. Milano and Mr. John J. Kirby, and each of them, with full power of substitution, to vote, as designated below, all the shares of Idera Pharmaceuticals, Inc. (the "Company") common stock held of record by the undersigned at the close of business on April 25, 2022, at the 2022 Annual Meeting of Stockholders (the "Annual Meeting"), to be held on June 23, 2022 at 8:00 a.m. Eastern Time, and at any and all adjournments, continuations, or postponements thereof. The undersigned hereby revokes any and all earlier dated proxies with respect to the Annual Meeting. This proxy, when properly executed, will be voted in the manner directed herein by the undersigned. If no direction is made, this proxy will be voted **FOR each of the director nominees for election as a Class III member of the Board of Directors, FOR the approval of the advisory vote on the compensation of the Company's named executive officers for 2021, FOR the ratification of the selection of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022, FOR the approval of an Amendment to the Company's 2013 Stock Incentive Plan to increase the number of authorized shares, and FOR the approval of an Amendment to the Company's 2017 Employee Stock Purchase Plan to increase the number of authorized shares.**

If any other business is presented at the Annual Meeting, including matters incidental to the conduct of the meeting or otherwise, this proxy will be voted by those named in this proxy in their best judgment. At the present time, the Board of Directors knows of no other business to be presented at the Annual Meeting.

**THIS PROXY WHEN PROPERLY EXECUTED WILL BE VOTED AS DIRECTED OR, IF NO DIRECTION IS GIVEN, WILL BE VOTED AS THE BOARD OF DIRECTORS RECOMMENDS.**

*See reverse for voting instructions.*

**C Non-Voting Items**

**Change of Address** – Please print new address below.

**Meeting Attendance**  
 Mark box to the right if you plan to attend the Annual Meeting.

