MERSANA THERAPEUTICS, INC. 840 Memorial Drive Cambridge, Massachusetts 02139

April 28, 2023

To Our Stockholders:

You are cordially invited to attend the 2023 Annual Meeting of Stockholders of Mersana Therapeutics, Inc., or the Annual Meeting, to be held at 10:00 a.m., Eastern time, on Thursday, June 8, 2023. The Annual Meeting will be a completely virtual meeting and will be conducted via live webcast. There will not be a physical location for the Annual Meeting, and you will not be able to attend the Annual Meeting in person. You will be able to attend the Annual Meeting online and submit your questions during the meeting by visiting www.virtualshareholdermeeting.com/MRSN2023.

The Notice of Annual Meeting and Proxy Statement on the following pages describe the matters to be presented at the Annual Meeting. Details regarding how to attend the meeting and the business to be conducted at the Annual Meeting are more fully described in the Notice of Annual Meeting and Proxy Statement.

It is important that your shares be represented at the Annual Meeting. Whether or not you plan to attend the meeting online, we hope that you will have your stock represented by voting your shares over the internet, by telephone or, if you have requested to receive paper copies of these materials, by completing, signing, dating and returning the enclosed proxy card in the enclosed envelope, *prior to the Annual Meeting*. If you receive our Notice of Internet Availability of Proxy Materials, then instructions regarding how you can vote are contained in that notice. If you have requested to receive a proxy card, then instructions regarding how you can vote are contained on the proxy card. If your shares are held by a bank, broker or other agent, you will receive voting instructions from such bank, broker or other agent that you must follow for your shares to be voted. If you decide to attend the Annual Meeting, you will be able to vote your shares electronically, even if you have previously submitted your proxy.

Thank you for your continued support.

Sincerely,

/s/ Anna Protopapas

Anna Protopapas
Chief Executive Officer, President and Director



MERSANA THERAPEUTICS, INC. 840 Memorial Drive Cambridge, Massachusetts 02139

NOTICE OF 2023 ANNUAL MEETING OF STOCKHOLDERS To Be Held on June 8, 2023

To Our Stockholders:

NOTICE IS HEREBY GIVEN that the 2023 Annual Meeting of Stockholders, or the Annual Meeting, of Mersana Therapeutics, Inc., a Delaware corporation, or Mersana or the Company, will be held on Thursday, June 8, 2023, at 10:00 a.m. ET. The Annual Meeting will be a completely virtual meeting and will be conducted via live webcast. Stockholders can attend the meeting via the internet at www.virtualshareholdermeeting.com/MRSN2023 and submit questions and vote shares electronically at the Annual Meeting.

The Annual Meeting is called for the following purposes:

- 1. To elect three Class III directors to serve until our 2026 annual meeting of stockholders and until their respective successors have been duly elected and qualified;
- 2. To approve, on a non-binding, advisory basis, the compensation of our named executive officers, as disclosed in our proxy statement;
- 3. To ratify the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023;
- 4. To approve an amendment to our Fifth Amended and Restated Certificate of Incorporation, as amended, to eliminate the supermajority voting requirement applicable to changes to Article IV thereof;
- 5. To approve an amendment to our Fifth Amended and Restated Certificate of Incorporation, as amended, to reflect new Delaware law provisions regarding officer exculpation; and
- 6. To transact any other business that may properly come before the Annual Meeting or any adjournment or postponement thereof.

You can find more information regarding the foregoing in the attached proxy statement.

Each outstanding share of Mersana's common stock (Nasdaq: MRSN) entitles the holder of record at the close of business on April 10, 2023, to receive notice of, and to vote at, the Annual Meeting or any adjournment or postponement of the Annual Meeting. A complete list of these stockholders will be available for examination by any stockholder during the ten days prior to the Annual Meeting for a purpose germane to the meeting at our offices at 840 Memorial Drive, Cambridge, Massachusetts 02139.

Instead of mailing a paper copy of our proxy materials to all of our stockholders, we are providing access to our proxy materials via the internet under the "notice and access" rules of the Securities and Exchange Commission. As a result, we are sending to our stockholders a Notice of Internet Availability of Proxy Materials, instead of a paper copy of this proxy statement and our annual report to stockholders for the fiscal year ended December 31, 2022, or the 2022 Annual Report. We plan to mail the Notice of Internet Availability of Proxy Materials on or about April 28, 2023, and the Notice of Internet Availability of Proxy Materials contains instructions on how to access our proxy materials over the internet and how each of our stockholders can receive a paper copy of the proxy materials, including the proxy statement, our 2022 Annual Report and a form of proxy card.

Your vote is important. Whether or not you expect to attend the virtual Annual Meeting, please vote by telephone or through the internet or, if you receive a paper proxy card by mail, by completing, signing, dating and returning the proxy card mailed to you, as promptly as possible in order to ensure your representation at the Annual Meeting. Voting instructions are provided in the Notice of Internet Availability of Proxy Materials, or, if you receive a paper proxy card by mail, the instructions are printed on your proxy card and included in the accompanying Proxy Statement. Even if you have voted by proxy, if you attend the Annual Meeting, you may still vote online during the Annual Meeting. Please note, however, that if your shares are held of record by a bank, brokerage firm or other agent and you wish to vote online during the Annual Meeting, you must obtain a proxy issued in your name from that agent in order to vote your shares that are held in such agent's name and account.

By Order of the Board of Directors

/s/ Alejandra Carvajal Alejandra Carvajal Secretary

Cambridge, Massachusetts April 28, 2023

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Mersana Therapeutics, Inc. 840 Memorial Drive Cambridge, Massachusetts 02139

PROXY STATEMENT

For the 2023 Annual Meeting of Stockholders To Be Held on Thursday, June 8, 2023 at 10:00 A.M. ET

This proxy statement, along with the accompanying Notice of 2023 Annual Meeting of Stockholders, is being furnished in connection with the solicitation of proxies by the board of directors of Mersana Therapeutics, Inc. for use at the 2023 Annual Meeting of Stockholders of Mersana Therapeutics, Inc., to be held at 10:00 a.m. ET via the internet at www.virtualshareholdermeeting.com/MRSN2023, including any postponement or adjournment thereof, which we refer to as the Annual Meeting.

In this proxy statement, we refer to Mersana Therapeutics, Inc. as "Mersana," "the Company," "we," and "us."

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to be Held on June 8, 2023:

This proxy statement and our 2022 Annual Report to Stockholders, or the 2022 Annual Report, are available for viewing, printing and downloading at www.proxyvote.com. To view these materials, please have your 16-digit control number(s) available that appears on your proxy card.

A copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, as filed with the Securities and Exchange Commission, or the SEC, except for exhibits, will be furnished without charge to any stockholder upon written request to: Mersana Therapeutics, Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139, Attention: Secretary. Exhibits, if any, will be provided upon written request and payment of an appropriate processing fee. This Proxy Statement and our 2022 Annual Report are also available on the SEC's website at http://www.sec.gov.

On or about April 28, 2023, we intend to mail a Notice of Internet Availability of Proxy Materials, or the Notice, to our stockholders (other than those who previously requested electronic or paper delivery of proxy materials), directing stockholders to a website where they can access our proxy materials, including this Proxy Statement and our 2022 Annual Report, and view instructions on how to vote online or by telephone. If you would prefer to receive a paper copy of our proxy materials, please follow the instructions included in the Notice. If you have previously elected to receive our proxy materials electronically, you will continue to receive access to those materials via e-mail unless you elect otherwise.

QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING

Q: What is the purpose of this proxy statement?

A: We are sending you this proxy statement because the Board of Directors of Mersana is inviting you to vote (by soliciting your proxy) at our 2023 Annual Meeting of Stockholders to be held at 10:00 a.m. ET on Thursday, June 8, 2023, via a live webcast at www.virtualshareholdermeeting.com/MRSN2023, including any adjournments or postponements of the meeting, which we refer to as the Annual Meeting. This proxy statement along with the accompanying Notice of 2023 Annual Meeting of Stockholders summarizes the purposes of the Annual Meeting and information that is intended to assist you in making an informed vote on the proposals described in this proxy statement.

Q: Why did I receive a one-page notice regarding the internet availability of proxy materials instead of a full set of proxy materials?

A: Pursuant to rules adopted by the SEC, we are providing access to our proxy materials over the internet, which reduces both the costs and the environmental impact of sending our proxy materials to stockholders. We intend to mail a Notice of Internet Availability of Proxy Materials to our stockholders (other than those who previously requested paper copies) on or about April 28, 2023.

The Notice contains instructions on how to:

- access and view the proxy materials over the internet;
- · vote; and
- request a paper or e-mail copy of the proxy materials.

In addition, if you received paper copies of our proxy materials and wish to receive all future proxy materials, proxy cards, and annual reports electronically, please follow the electronic delivery instructions on www.proxyvote.com. We encourage stockholders to take advantage of the availability of the proxy materials on the internet to help reduce the cost and environmental impact of the Annual Meeting.

Q: How do I attend the Annual Meeting?

A: Our Annual Meeting will be held in a virtual meeting format at www.virtualshareholdermeeting.com/MRSN2023. To participate in the Annual Meeting, you will need the 16-digit control number included in your Notice, your proxy card or on the instructions that accompanied your proxy materials. The meeting webcast will begin promptly at 10:00 a.m. ET. We encourage you to access the meeting prior to the start time. Online check-in will start 15 minutes before the meeting begins, and you should allow ample time for the check-in procedures. If your shares are held in a bank or brokerage account, instructions should also be provided on the voting instruction form provided by your bank or brokerage firm. Stockholders who wish to submit questions related to the business of the Annual Meeting may do so electronically starting at the time of check-in or during the meeting by clicking the option in the virtual meeting webcast portal. If you lose your 16-digit control number, you may join the Annual Meeting as a "Guest," but you will not be able to vote or ask questions.

Q: Who can vote at the Annual Meeting?

A: Only stockholders of record at the close of business on April 10, 2023, or the Record Date, will be entitled to vote at the Annual Meeting. On the Record Date, there were 109,069,315 shares of common stock outstanding and entitled to vote. A list of stockholders entitled to vote at the Annual Meeting will be available for examination at our offices at 840 Memorial Drive, Cambridge, Massachusetts 02139 during normal business hours by any stockholder for any purpose germane to the meeting for ten days prior to the Annual Meeting.

Stockholder of Record: Shares Registered in Your Name

If on the Record Date your shares were registered directly in your name with our transfer agent, Computershare Trust Company, N.A., then you are a stockholder of record. As a stockholder of record,

you may vote online during the Annual Meeting or vote by proxy. Whether or not you plan to attend the Annual Meeting, we urge you to vote by proxy electronically through the internet, over the telephone or by completing and returning a printed proxy card that you may request or that we may elect to deliver at a later time to ensure your vote is counted.

Beneficial Owner: Shares Registered in the Name of a Bank or Broker

If on the Record Date your shares were held not in your name but rather in an account at a bank, brokerage firm or other similar organization, then you are the beneficial owner of shares held in "street name" and the Notice is being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Annual Meeting. As a beneficial owner, you have the right to direct your bank, broker or other agent regarding how to vote the shares in your account. You are also invited to attend the Annual Meeting. However, since you are not the stockholder of record, you may not vote your shares online during the Annual Meeting unless you request and obtain a valid proxy from your bank, broker or other agent.

Q: On what matters am I voting?

A: There are five matters scheduled for a vote:

- Election of three Class III directors to serve until our 2026 annual meeting of stockholders and until their respective successors have been duly elected and qualified (Proposal 1);
- Approval, on a non-binding, advisory basis, of the compensation of our named executive officers, as disclosed in our proxy statement (commonly referred to as "Say-on-Pay") (Proposal 2);
- Ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023 (Proposal 3);
- Approval of an amendment to our Fifth Amended and Restated Certificate of Incorporation, as amended, to eliminate the supermajority voting requirement applicable to changes to Article IV thereof, or the Capitalization Supermajority Elimination Amendment (Proposal 4); and
- Approval of an amendment to our Fifth Amended and Restated Certificate of Incorporation, as amended, to reflect new Delaware law provisions regarding officer exculpation, or the Officer Exculpation Amendment (Proposal 5).

Q: What if another matter is properly brought before the Annual Meeting?

A: The Board of Directors knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment.

Q: How do I vote?

A: The procedures for voting are fairly simple:

Stockholder of Record: Shares Registered in Your Name

If you are a stockholder of record, you may vote by proxy through the internet, vote by proxy over the telephone, vote by proxy using a proxy card that you may request or that we may elect to deliver at a later time, or vote online during the Annual Meeting. Whether or not you plan to attend the Annual Meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the Annual Meeting and vote online during the meeting even if you have already voted by proxy.

• By Internet. You may vote by proxy via the internet at www.proxyvote.com up until 11:59 p.m. ET on June 7, 2023, the day before the Annual Meeting by following the instructions provided on the Notice or the proxy card. You should have your proxy card in hand when you access the website and follow the instructions to obtain your records and to create an electronic voting instruction form.

- By Telephone. If you live in the United States or Canada, you may vote by proxy by calling toll-free 1-800-690-6903 and by following the instructions provided on the proxy card. You must have the 16-digit control number that is on either the Notice or the proxy card when voting.
- By Mail. If you received a proxy card, complete and mail your proxy card in the postage prepaid envelope you receive, and return the proxy card to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717. Your proxy will be voted in accordance with your instructions. If you sign and return the enclosed proxy but do not specify how you want your shares voted, they will be voted as recommended by our Board of Directors and according to the discretion of the proxy holders named in the proxy card upon any other business that may properly be brought before the meeting and at all adjournments and postponements thereof.
- By Attending the Virtual-only Annual Meeting. You may vote your shares at www.virtualshareholdermeeting.com/MRSN2023 during the Annual Meeting. You will need the 16-digit control number that is on either the Notice or the proxy card when voting and the instructions accompanying these proxy materials.

Beneficial Owner: Shares Registered in the Name of a Bank or Broker

If you are a beneficial owner of shares registered in the name of your bank, broker or other agent, you should have received a Notice containing voting instructions from that organization rather than from us. Simply follow the voting instructions in the Notice to ensure that your vote is counted. To vote online during the Annual Meeting, you must obtain a valid proxy from your bank, broker or other agent. Follow the instructions from your bank, broker or other agent included with these proxy materials, or contact that organization to request a proxy form.

We provide internet proxy voting to allow you to vote your shares online, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. However, please be aware that you must bear any costs associated with your internet access, such as usage charges from internet access providers and telephone companies.

- Q: How many votes do I have?
- A: On each matter to be voted upon, you have one vote for each share of common stock you own as of the Record Date.
- Q: If I am a stockholder of record and I do not vote, or if I return a proxy card or otherwise vote without giving specific voting instructions, what happens?
- A: If you are a stockholder of record and do not vote by completing a proxy card, by telephone, through the internet or online during the Annual Meeting, your shares will not be voted.

If you return a signed and dated proxy card or otherwise vote without marking voting selections, your shares will be voted, as applicable, "FOR" the election of each of the three nominees for director, "FOR" the approval of the compensation of our named executive officers, "FOR" the ratification of the selection of our independent registered public accounting firm, "FOR" the Capitalization Supermajority Elimination Amendment, and "FOR" the Officer Exculpation Amendment. If any other matter is properly presented at the Annual Meeting, your proxyholder (one of the individuals named on your proxy card) will vote your shares using his or her best judgment.

- Q: If I am a beneficial owner of shares held in street name and I do not provide my bank, broker or other agent with voting instructions, what happens?
- A: If you are a beneficial owner of shares held in street name and you do not instruct your bank, broker or other agent how to vote your shares, your bank, broker or other agent may still be able to vote your shares in its discretion. In this regard, under the rules of the New York Stock Exchange, or NYSE, brokers that are subject to NYSE rules may vote your "uninstructed" shares with respect to certain matters, but not with respect to the election of directors, executive compensation matters and certain other matters. Of the matters to be voted on at the Annual Meeting, we expect the only proposal on which

your broker will have discretionary authority is Proposal 3. These NYSE rules apply to voting your shares if you are the beneficial owner of shares held in street name notwithstanding that our common stock is traded on the Nasdaq Global Select Market, or Nasdaq.

When a beneficial owner of shares held in street name does not give voting instructions to his or her bank, broker or other securities intermediary holding his or her shares as to how to vote on a particular proposal in which such bank, broker or other agent does not have discretionary authority to vote on that proposal, such bank, broker, or other agent cannot vote the shares on that particular proposal. These un-voted shares are counted as "broker non-votes."

If you a beneficial owner of shares held in street name, in order to ensure your shares are voted in the way you would prefer, you <u>must</u> provide voting instructions to your bank, broker or other agent by the deadline provided in the materials you receive from your bank, broker or other agent.

Q: Who is paying for this proxy solicitation?

A: We will pay for the entire cost of soliciting proxies. We have retained Georgeson LLC to assist us in the solicitation of proxies for an aggregate fee of approximately \$40,000. In addition to these proxy materials, our directors and employees may also solicit proxies in person, by telephone, or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks and other agents for the cost of forwarding proxy materials to beneficial owners.

Q: What does it mean if I receive more than one Notice?

A: If you receive more than one Notice, your shares may be registered in more than one name or in different accounts. Please follow the voting instructions on each of the Notices to ensure that all of your shares are voted.

Q: Can I change my vote after submitting my proxy?

A: Stockholder of Record: Shares Registered in Your Name

Yes. You can revoke your proxy at any time before the final vote at the Annual Meeting. If you are the record holder of your shares, you may revoke your proxy in any one of the following ways:

- You may submit another properly completed proxy card with a later date before the applicable deadline.
- You may grant a subsequent proxy by telephone or through the internet before the applicable deadline
- You may send a timely written notice that you are revoking your proxy to our Corporate Secretary at 840 Memorial Drive, Cambridge, Massachusetts 02139.
- You may attend the virtual Annual Meeting and vote online during the meeting.

Simply attending the Annual Meeting will not, by itself, revoke your proxy.

Your most current proxy card or telephone or internet proxy is the one that is counted.

Beneficial Owner: Shares Registered in the Name of Bank or Broker

If your shares are held by your bank, broker or other agent, you must follow the instructions provided by your bank, broker or other agent to revoke your proxy.

Q: When are stockholder proposals and director nominations due for next year's annual meeting?

A: Requirements for Stockholder Proposals to be Brought before an Annual Meeting

Our Second Amended and Restated Bylaws, or Bylaws, provide that, for stockholder director nominations or other proposals to be considered at an annual meeting of stockholders, the stockholder must give timely notice thereof in writing to our Secretary at c/o Mersana Therapeutics, Inc.,

840 Memorial Drive, Cambridge, Massachusetts 02139. To be timely for the 2024 Annual Meeting of Stockholders, a stockholder's notice must be delivered to or mailed and received by our Secretary at our principal executive offices between February 9, 2024 and March 10, 2024; provided that if the date of that annual meeting of stockholders is earlier than May 9, 2024, or later than August 7, 2024, you must give the required notice not earlier than the 120th day prior to the meeting date and not later than the 90th day prior to the meeting date, the 10th day following the day on which public disclosure of that meeting date is first made. A stockholder's notice to the Secretary must also set forth the information required by our Bylaws.

Requirements for Stockholder Proposals to be Considered for Inclusion in Our Proxy Materials

Stockholder proposals submitted pursuant to Rule 14a-8 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and intended to be presented at the 2024 annual meeting of stockholders must be received by us not later than December 30, 2023 in order to be considered for inclusion in our proxy materials for that meeting.

In addition to satisfying the advance notice provisions in our Bylaws relating to nominations of director candidates, to comply with the SEC's universal proxy rule, shareholders who intend to solicit proxies in support of director nominees other than our nominees in compliance with Rule 14a-19 under the Exchange Act must provide notice that sets forth the information required by Rule 14a-19 under the Exchange Act no later than April 9, 2024. If the date of the 2024 annual meeting changes by more than 30 calendar days from the anniversary of the date of the Annual Meeting, such notice must instead be provided by the later of 60 calendar days prior to the date of the 2024 annual meeting or the 10th calendar day following our public announcement of the date of the 2024 annual meeting.

Q: How many votes are needed to approve each proposal, and how are votes counted?

A:

Proposal 1 — Election of Directors

As this is an uncontested election of directors, each nominee must receive a greater number of shares voted FOR his or her election than shares voted AGAINST his or her election to be elected. Shares held in street name by banks, brokers or other agents who indicate on their proxies that they do not have authority to vote the shares on Proposal 1 will not be counted as votes FOR or AGAINST Proposal 1 and will be treated as broker non-votes. Broker non-votes will have no effect on the voting on Proposal 1. If you vote to ABSTAIN on Proposal 1, your shares will not be voted FOR or AGAINST Proposal 1 and will not be counted as votes cast or shares voting on Proposal 1. As a result, voting to ABSTAIN will have no effect on the voting on Proposal 1.

Proposal 2 — Approval, on a non-binding, advisory basis, of the compensation of our named executive officers

To approval Proposal 2, the affirmative vote of a majority of the votes cast is required. Shares held in street name by a banks, brokers or other agents who indicate on their proxies that they do not have authority to vote the shares on Proposal 2 will not be counted as votes FOR or AGAINST Proposal 2 and will be treated as broker non-votes. Broker non-votes will have no effect on the voting on Proposal 2. If you vote to ABSTAIN on Proposal 2, your shares will not be voted FOR or AGAINST Proposal 2 and will not be counted as votes cast or shares voting on Proposal 2. As a result, voting to ABSTAIN will have no effect on the voting on Proposal 2.

Proposal 3 — Ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2023

The approve Proposal 3, the affirmative vote of a majority of the votes cast is required. If your shares are held by your bank, broker or other agent in street name and you do not timely provide voting instructions with respect to your shares, we expect that your bank, broker or other agent will have the authority to vote your shares on Proposal 3). If you vote to ABSTAIN on Proposal 3, your shares will not

be voted FOR or AGAINST Proposal 3 and will not be counted as votes cast or shares voting on Proposal 3. As a result, voting to ABSTAIN will have no effect on the voting on Proposal 3.

Proposal 4 — Approval of an amendment to our Fifth Amended and Restated Certificate of Incorporation, as amended, to eliminate the supermajority voting requirement applicable to changes to Article IV thereof (the "Capitalization Supermajority Elimination Amendment")

To approve Proposal 4, the affirmative vote of holders of at least seventy-five percent (75%) of the voting power of the shares of our common stock outstanding on the Record Date and entitled to vote at the Annual Meeting is required. Shares held in street name by banks, brokers or other agents who indicate on their proxies that they do not have authority to vote the shares on Proposal 4 will not be counted as votes FOR or AGAINST Proposal 4 and will be treated as broker non-votes. Broker non-votes will have the same effect as a vote AGAINST Proposal 4. If you vote to ABSTAIN on Proposal 4, your shares will not be voted FOR or AGAINST Proposal 4 and will not be counted as votes cast or shares voting on Proposal 4. Voting to ABSTAIN will have the same effect as a vote AGAINST Proposal 4.

Proposal 5 — Approval of an amendment to our Fifth Amended and Restated Certificate of Incorporation, as amended, to reflect new Delaware law provisions regarding officer exculpation (the "Officer Exculpation Amendment")

To approve Proposal 5, the affirmative vote of holders of at least seventy-five percent (75%) of the voting power of the shares of our common stock outstanding on the Record Date and entitled to vote at the Annual Meeting is required. Shares held in street name by banks, brokers or other agents who indicate on their proxies that they do not have authority to vote the shares on Proposal 5 will not be counted as votes FOR or AGAINST Proposal 5 and will be treated as broker non-votes. Broker non-votes will have the same effect as a vote AGAINST Proposal 5. If you vote to ABSTAIN on Proposal 5, your shares will not be voted FOR or AGAINST Proposal 5 and will not be counted as votes cast or shares voting on Proposal 5. Voting to ABSTAIN will have the same effect as a vote AGAINST Proposal 5.

Votes will be counted by the inspector of election appointed for the Annual Meeting, who will separately count, for each proposal, votes "FOR" and "AGAINST," abstentions and, if applicable, broker non-votes.

Q: What is the quorum requirement?

A: A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if stockholders holding at least a majority in voting power of the outstanding shares entitled to vote are present at the Annual Meeting in person or represented by proxy. On the Record Date, there were 109,069,315 shares outstanding and entitled to vote. Thus, the holders of 54,534,658 shares must be present in person or represented by proxy at the Annual Meeting to have a quorum.

Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your bank, broker or other nominee) or if you vote online during the Annual Meeting. Abstentions and broker non-votes will be counted towards the quorum requirement. If there is no quorum, the chair of the meeting may adjourn the Annual Meeting to another date.

Q: How can I find out the results of the voting at the Annual Meeting?

A: Preliminary voting results will be announced at the Annual Meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file within four business days after the date of the Annual Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the Annual Meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an amended Form 8-K to publish the final results.

Q: Who should I call if I have any additional questions?

A: If you hold your shares directly, please call Alejandra Carvajal, Secretary of the Company, at (617) 498-0020. If your shares are held in street name, please contact the telephone number provided on your voting instruction form or contact your broker or nominee holder directly.

Forward-Looking Statements

Statements in this proxy statement about future expectations, plans and prospects, as well as any other statements regarding matters that are not historical facts, may constitute "forward-looking statements" within the meaning of The Private Securities Litigation Reform Act of 1995. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "will," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including those discussed in the "Risk Factors" section of Mersana's Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 28, 2023 and the risks described in other filings that Mersana may make with the Securities and Exchange Commission. Any forward-looking statements contained in this proxy statement speak only as of the date hereof, and Mersana specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

Proposal No. 1 — Election of Directors

Our Fifth Amended and Restated Certificate of Incorporation, as amended, or the Certificate of Incorporation, states that the Board of Directors shall consist of not fewer than three and not more than fifteen members, and the precise number of directors shall be fixed by a resolution of the Board of Directors. The size of our Board of Directors is currently fixed at eight directors. Each director holds office until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. Any vacancy in the Board of Directors, including a vacancy that results from an increase in the number of directors, may be filled by a vote of the majority of the directors then in office.

Our Certificate of Incorporation provides that the Board of Directors is divided into three classes, with the classes as nearly equal in number as possible. Each of our directors identified below serves in the class indicated. Subject to any earlier death, resignation or removal in accordance with the terms of our Certificate of Incorporation and Bylaws, our Class III directors, if elected at the Annual Meeting, will serve until the 2026 annual meeting of stockholders, our Class I directors will serve until the 2024 annual meeting of stockholders, and our Class II directors will serve until the 2025 annual meeting of stockholders. Any additional directorships resulting from an increase in the number of directors will be apportioned by the Board of Directors among the three classes.

Lawrence Alleva, David Mott and Anna Protopapas are the Class III directors whose terms expire at the Annual Meeting. Messrs. Alleva and Mott and Ms. Protopapas have each been nominated by the Board of Directors for and agreed to stand for election to the Board of Directors to serve as a Class III director for three years and until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal.

Our Bylaws provide for a majority voting standard for the election of directors in uncontested elections, which means that to be elected, a director nominee must receive a greater number of votes FOR his or her election than votes AGAINST from such election. The number of votes cast with respect to that director's election excludes abstentions and broker non-votes with respect to that director's election. In contested elections in which the number of director nominees exceeds the number of directors to be elected, the voting standard will be a plurality of the shares present online or by proxy and entitled to vote.

Our Nominating and Corporate Governance Committee is responsible for developing and recommending to our Board of Directors criteria for Board membership and, consistent with those criteria, recommending to the Board of Directors director candidates and nominees for the next annual meeting of stockholders. As reflected in our Corporate Governance Guidelines, it is the policy of the Board of Directors that all directors should possess the highest personal and professional ethics, integrity and values, and be committed to representing the long-term interests of our stockholders. The Nominating and Corporate Governance Committee seeks to assemble a Board of Directors that, as a whole, possesses the appropriate balance of professional and industry knowledge, financial acumen, and management experience necessary to oversee and direct Mersana's business. The Nominating and Corporate Governance Committee and the Board of Directors also seek to attain diversity among directors of race, gender, geography, thought, viewpoints, and backgrounds. To those ends, the Nominating and Corporate Governance Committee has identified and evaluated nominees in the broader context of the overall composition of the Board of Directors, with the goal of recruiting members who complement and strengthen the skills of other members through diversity. The Nominating and Corporate Governance Committee will also consider whether to nominate any person proposed by a stockholder in accordance with the provisions of our Bylaws relating to stockholder nominations as described later in this proxy statement under the heading "General Matters — Stockholder Proposals and Nominations."

The Board of Directors is currently comprised of eight members. Below is a list of the names, ages as of April 28, 2023 and classification of the individuals who currently serve as our directors.

Name	Age	Position
Willard H. Dere, M.D	69	Director (Class I)
Martin Huber, M.D.	63	Director (Class I)
Allene M. Diaz	58	Director (Class II)

Name	Age	Position
Andrew A. F. Hack, M.D., Ph.D.	49	Director (Class II)
Kristen Hege, M.D.	59	Director (Class II)
Lawrence M. Alleva	73	Director (Class III)
David Mott	57	Chair of the Board of Directors (Class III)
Anna Protopapas	58	Director (Class III); Chief Executive Officer and President

Certain individual qualifications and skills of our directors that contribute to our Board of Directors' effectiveness as a whole are described in the following paragraphs.

Nominees for Election as Class III Directors

Biographical information, including principal occupation, business experience and public company board experience during the last five years, for our nominees for election as Class III directors at the Annual Meeting is set forth below.

Lawrence M. Alleva has served as a member of our Board of Directors since September 2017. Prior to his retirement in June 2010, Mr. Alleva was employed by PricewaterhouseCoopers LLP, or PwC, a professional services firm, for 39 years, including 28 years as a partner. Mr. Alleva has served on the boards of directors of Bright Horizons Family Solutions Inc., an education and childcare company, since 2012; of Galera Therapeutics, Inc., an oncology radiation company, since June 2019; and of Adaptimmune Therapeutics plc, or Adaptimmune, a cell therapy company, since March 2015. He previously served as a director of TESARO, Inc., or TESARO, an oncology-focused company, from March 2012 until TESARO's acquisition by GlaxoSmithKline plc, or GlaxoSmithKline, in January 2019. Mr. Alleva is a Certified Public Accountant (inactive). Mr. Alleva received a B.S. in accounting from Ithaca College and attended the Columbia University Executive MBA (non-degree) Program. We believe that Mr. Alleva's extensive experience and expertise working with public companies on corporate finance and accounting matters as a Certified Public Accountant, his experience serving on other corporate boards and his experience in a senior leadership role at PwC provide him with the qualifications and skills to serve as a director.

David Mott has served as Chair of our Board of Directors since July 2012. Mr. Mott is a private investor through Mott Family Capital. From September 2008 until his retirement in February 2020, Mr. Mott served as a general partner of New Enterprise Associates, an investment firm focused on venture capital and growth equity investments, where he led the healthcare investing practice. Mr. Mott has served on the boards of directors of Adaptimmune since September 2014 and as chair thereof since January 2017; of Ardelyx, Inc., a biopharmaceutical company, since March 2009 and as chair thereof since March 2014; and of Novayax, Inc., a biotechnology company, since June 2020. He previously served as a director of Imara, Inc., a biotechnology company, from January 2016 and as chair of the board of directors from April 2016 until the reverse merger between Imara, Inc. and Enliven Therapeutics, Inc. in February 2023; of Epizyme, Inc., a biopharmaceutical company, from December 2009 and as chair of the board of directors from April 2016 until its acquisition by Ipsen Pharma SAS in August 2022; as a director of Nightstar Therapeutics plc, a gene therapy company, from August 2015 until its acquisition by Biogen Inc. in June 2019; and as a director of TESARO from May 2010 and as chair of the board of directors from July 2011 until its acquisition by GlaxoSmithKline in January 2019. Mr. Mott received a B.A. in economics and government from Dartmouth College. We believe that Mr. Mott's leadership experience in the biotechnology industry, as well as his venture capital experience, especially his experience investing in life sciences companies, and his financial experience, provide him with the qualifications and skills to serve as director.

Anna Protopapas has served as our President and Chief Executive Officer and as a member of our Board of Directors since March 2015. Ms. Protopapas has served as chair of the board of directors of Nuvalent, Inc., or Nuvalent, a biotechnology company, since March 2022. She previously served as a director of Dicerna Pharmaceuticals, Inc., a biotechnology company, from January 2019 until June 2021. Ms. Protopapas received a B.S. in science and engineering from Princeton University, an M.S. in chemical engineering practice from the Massachusetts Institute of Technology and an M.B.A. from Stanford Graduate School of Business. We believe that Ms. Protopapas is qualified to serve as a member of our Board of

Directors based on her experience in the pharmaceutical industry as well as her insight into our business as President and Chief Executive Officer of our company.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT STOCKHOLDERS VOTE "FOR" EACH OF THE NOMINEES FOR CLASS III DIRECTORS.

Any properly submitted proxy will be voted in favor of the nominees unless a contrary specification is made in the proxy. The nominees have consented to serve as directors if elected. However, if any nominee is unable to serve or for good cause will not serve as a director, the persons named in the proxy intend to vote in their discretion for one or more substitutes who will be designated by our Board of Directors.

Directors Continuing in Office

Biographical information, including principal occupation, business experience and public company board experience during the last five years, for our current directors continuing in office is set forth below.

Class I Directors (Term Expires at 2024 Annual Meeting)

Willard H. Dere, M.D., has served as a member of our Board of Directors since March 2018. Dr. Dere has served as Professor Emeritus of Internal Medicine at the University of Utah and an advisor to Angitia Biopharmaceuticals, a biopharmaceutical company, since June 2022. In June 2022, Dr. Dere retired from the Utah Health Services Center, where he had served as Professor of Internal Medicine, B. Lue and Hope S. Bettilyon Presidential Endowed Chair in Internal Medicine for Diabetes Research, Co-Director of the Utah Clinical and Translational Science Institute and Co-Director of the Center for Genomic Medicine since June 2014 and as Associate Vice President for Research since July 2019. Dr. Dere has served on the boards of directors of BioMarin Pharmaceutical Inc., a biopharmaceutical company, since July 2016 and of Seres Therapeutics, Inc., a biotechnology company, since July 2017. He previously served as a director of Radius Health, Inc., a biopharmaceutical company, from November 2014 until its acquisition by Gurnet Point Capital, LLC and Patient Square Capital in August 2022. Dr. Dere received a B.A. and an M.D. from the University of California, Davis. We believe that Dr. Dere's research, clinical and regulatory biopharmaceutical leadership experience qualify him to serve as a director.

Martin Huber, M.D., has served as a member of our Board of Directors since April 2020. Dr. Huber has served as President and Head of R&D of Xilio Therapeutics, Inc., or Xilio, a biotechnology company, since June 2022. He served as Xilio's President of R&D from August 2021 to June 2022 and as Chief Medical Officer from April 2020 to June 2022. Prior to that, he served as Senior Vice President, Chief Medical Officer at TESARO from September 2015 to January 2019, and after TESARO's acquisition by GlaxoSmithKline, he served as Senior Vice President, Clinical, from January 2019 to April 2020. Dr. Huber has served on the board of directors of Syndax Pharmaceuticals, Inc., a biotechnology company, since September 2021. Dr. Huber received a B.S. in biology from Texas Lutheran College and an M.D. from Baylor College of Medicine. We believe that Dr. Huber's medical, clinical, and regulatory experience qualifies him to serve as a director.

Class II Directors (Term Expires at 2025 Annual Meeting)

Allene M. Diaz has served as a member of our Board of Directors since March 2021. Ms. Diaz has led AMD Consulting, a new product strategy and portfolio management consulting practice, since August 2020. She held the position of Senior Vice President of R&D Portfolio Management at GlaxoSmithKline from September 2019 to June 2020. From May 2015 to September 2019, she served as the Senior Vice President of Global Commercial Development and Program Strategy and as a member of the Executive Leadership Team at TESARO. Ms. Diaz has served on the board of directors of Ionis Pharmaceuticals, Inc., a biotechnology company, since June 2021. She previously served as a director of BCLS Acquisition Corp., a special purpose acquisition company, from October 2020 until November 2022, of Allena Pharmaceuticals, Inc., or Allena, a biopharmaceutical company, from April 2019 until September 2022, and of Erytech Pharma SA, a biopharmaceutical company, from September 2016 to September 2019. Ms. Diaz received a B.S. in psychology from Florida State University. We believe that Ms. Diaz's experience in the commercial

development and program strategy for oncology assets and her executive leadership and business experience in the biotechnology sector qualifies her to serve as a member of our Board of Directors.

Andrew A. F. Hack, M.D., Ph.D., has served as a member of our Board of Directors since January 2017. Dr. Hack has served as a Managing Director of Bain Capital Life Sciences, a private equity fund that invests in biopharmaceutical, specialty pharmaceutical, medical device, diagnostics, and life science technology companies globally, since March 2019. Before joining Bain Capital, Dr. Hack was the Chief Financial Officer of Editas Medicine, Inc., a biotechnology company, from July 2015 through March 2019. Dr. Hack has served on the boards of directors of Dynavax Technologies Corp., a biopharmaceutical company, since August 2019 and of Nuvalent since April 2021. He previously served as a director of BCLS Acquisition Corp. from October 2020 until November 2022; of Allena from June 2018 to June 2021; and of Atea Pharmaceuticals, Inc., a biopharmaceutical company, from May 2020 to June 2021. Dr. Hack received an A.B. in biology with special honors, an M.D. and a Ph.D. in molecular genetics and cell biology from the University of Chicago. We believe that Dr. Hack's financial and medical background, as well as his experience in the biotechnology sector, qualify him to serve as a member of our Board of Directors.

Kristen Hege, M.D., has served as a member of our Board of Directors since August 2016. Dr. Hege recently retired as Senior Vice President, Early Clinical Development, Hematology/Oncology & Cell Therapy at Bristol Myers Squibb Company, or BMS, a global biopharmaceutical company, a position she held from November 2019, when BMS acquired Celgene Corporation, a pharmaceutical company, until March 2023. She joined Celgene Corporation in 2010 as Vice President, Translational Development. Dr. Hege has also held an active faculty position at the University of California, San Francisco Medical Center since 1996, most recently as Clinical Professor of Medicine, Hematology/Oncology, serving in that role as a volunteer since 2008. In February 2023, Dr. Hege was appointed to serve on the board of directors of Adaptimmune, effective as of November 1, 2023, and she has served on the board of directors of Graphite Bio, Inc., a biotechnology company, since April 2021. She also previously served as a director of Arcus Biosciences, Inc., a biopharmaceutical company, from October 2018 to November 2019. Dr. Hege received a B.A. in biochemistry summa cum laude from Dartmouth College and an M.D. from University of California, San Francisco. We believe that Dr. Hege's medical background and experience in the biotechnology industry qualify her to serve as a director.

INFORMATION REGARDING THE BOARD OF DIRECTORS AND CORPORATE GOVERNANCE

Director Independence

Under Nasdaq Rule 5605, a majority of a listed company's board of directors must generally be comprised of independent directors. In addition, Nasdaq rules require that, subject to specified exceptions and phase-in provisions, each member of a listed company's audit committee, compensation committee and nominating and corporate governance committee be independent and, in the case of the audit committee and compensation committee, satisfy additional independence criteria set forth in Rules 10A-3 and 10C-1, respectively, under the Securities Exchange Act of 1934, as amended, or the Exchange Act.

Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, in March 2023, the Board of Directors determined that each director, other than Ms. Protopapas, representing seven of our eight directors, or 87.5%, is "independent" as that term is defined under Nasdaq Rule 5605(a)(2). The Board of Directors also determined that each of the current members of our Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee satisfies the independence standards for such committee established by Rules 10A-3 and 10C-1 under the Exchange Act and the Nasdaq rules, as applicable. In making such determination, the Board of Directors considered the relationships that each such non-employee director has with Mersana and all other facts and circumstances deemed relevant in determining their independence.

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

Board Demographic Mix; Skills and Expertise

Our eight directors have provided the following responses on their self-identification of gender identity, demographic background, and self-identification as LGBTQ+:

Pound Diversity Matrix (as of April 29, 2022)

Board Diversity Matrix (as of April 28, 2023)			
Total Number of Directors	8		
	Female	Male	
Part I: Gender Identity			
Directors	3	5	
Part II: Demographic Background			
African American or Black			
Alaskan Native or Native American			
Asian		1	
Hispanic or Latinx	1		
Native Hawaiian or Pacific Islander			
White	2	4	
Two or More Races or Ethnicities			
LGBTQ+	1		
Did not Disclose Demographic Background			

In addition, our Board of Directors assessed the skills that each member contributes to address the specific needs of the Company, as reflected below:

Board Meetings and Attendance

The Board of Directors held five meetings during the year ended December 31, 2022. Each of the directors attended at least seventy-five percent (75%) of the meetings of the Board of Directors and the committees of the Board of Directors on which he or she served during the year ended December 31, 2022 (in each case, which were held during the period for which he or she was a director and/or a member of the applicable committee).

The non-employee directors regularly meet in executive session during regularly scheduled Board of Directors meetings, and the non-employee directors who serve on each of our standing committees regularly meet in executive session without management present during regularly scheduled meetings of such committees.

It is a policy of the Board of Directors that its members make every effort to attend our annual stockholder meetings. All of our directors attended the 2022 annual meeting of stockholders.

Board of Directors Leadership Structure

Our current Board leadership structure separates the positions of Chief Executive Officer and Chair of the Board of Directors, although we do not have a corporate policy requiring that structure. The Board of Directors believes that this separation is appropriate for Mersana at this time because it allows for a division of responsibilities and the sharing of ideas between individuals having different perspectives. Our Chief Executive Officer, who is also a member of our Board of Directors, is primarily responsible for our operations and strategic direction, while our Board Chair, who is an independent member of the Board of Directors, is primarily focused on matters pertaining to corporate governance, including management oversight and strategic guidance. The Board of Directors believes that this is the most appropriate structure at this time but, consistent with our Corporate Governance Guidelines, will make future determinations regarding whether or not to separate the roles of Chair and Chief Executive Officer based on then-current circumstances.

The Board of Directors' Role in Risk Oversight

The Board of Directors plays an important role in risk oversight at Mersana through direct decision-making authority with respect to significant matters, as well as through the oversight of management by the Board of Directors and its committees. In particular, the Board of Directors administers its risk oversight function through (1) the review and discussion of regular periodic reports by the Board of Directors and its

committees on topics relating to the risks that Mersana faces, (2) the required approval by the Board of Directors (or a committee of the Board of Directors to which the Board of Directors has delegated such responsibility) of significant transactions and other decisions, (3) the direct oversight of specific areas of our business by the Audit, Compensation and Nominating and Corporate Governance Committees and (4) regular periodic reports from the auditors and other outside consultants, including our compensation consultant, regarding various areas of potential risk, including, among others, those relating to our internal control over financial reporting and our compensation policies and practices. The Board of Directors also relies on management to bring significant matters impacting Mersana to its attention. Members of our senior management team attend meetings of our Board of Directors and its committees and are available to address any questions or concerns raised by our directors related to risk management and any other matters.

Pursuant to the Audit Committee's charter, the Audit Committee is responsible for reviewing and discussing with management and our independent registered public accounting firm our system of internal controls, its financial and critical accounting practices and its policies relating to risk assessment and management. As part of this process, the Audit Committee discusses our major financial risk exposures and steps that management has taken to monitor and control such exposures. In addition, the Audit Committee has established procedures for the receipt, retention and treatment of complaints we may receive regarding accounting, internal accounting controls or auditing matters, and the confidential, anonymous submissions by employees of concerns regarding questionable accounting or accounting matters. The Audit Committee also oversees cybersecurity matters, including with respect to the integrity of our information technology systems, processes and data, and the Audit Committee periodically reviews and assesses with management the adequacy of controls and security thereof, along with contingency plans in the event of a breakdown or security breach affecting our information technology systems. Furthermore, the Audit Committee meets privately with representatives from our independent registered public accounting firm as part of its oversight of our risk management.

Pursuant to the Compensation Committee's charter, the Compensation Committee oversees risk management activities relating to our compensation policies and practices and to succession planning for the members of our senior management. Pursuant to the Nominating and Corporate Governance Committee's charter, the Nominating and Corporate Governance Committee oversees risk management activities relating to the composition of our Board of Directors and succession planning for our Board of Directors.

The Board of Directors believes that any leadership structure that it adopts must allow it to effectively oversee the management of the risks relating to Mersana's operations. The Board of Directors acknowledges that there are different leadership structures that could allow it to effectively oversee the management of the risks relating to Mersana's operations and believes its current leadership structure enables it to effectively provide oversight with respect to such risks.

Code of Business Conduct and Ethics and Corporate Governance Guidelines

We have adopted a Code of Business Conduct and Ethics that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. A copy of our Code of Business Conduct and Ethics may be accessed free of charge by visiting our website at www.mersana.com and going to the "Corporate Governance" tab under the "Investors & Media" section, or by requesting a copy in writing from our Secretary at our Cambridge, Massachusetts office. We intend to post on our website any amendment to, or waiver under, a provision of the Code of Business Conduct and Ethics that applies to our directors and certain of our executive officers within four business days following the date of such amendment or waiver.

A copy of the Corporate Governance Guidelines may also be accessed free of charge by visiting our website at www.mersana.com and going to the "Corporate Governance" tab under the "Investors & Media" section, or by requesting a copy in writing from our Secretary at our Cambridge, Massachusetts office.

Board Committees

The Board of Directors has standing Audit, Compensation and Nominating and Corporate Governance Committees, each of which is comprised solely of independent directors and is described more fully below. Each committee operates pursuant to a written charter, and each reviews and assesses the adequacy of its

charter periodically and submits its charter to the Board of Directors for approval. The charter for each committee is available on our website (www.mersana.com) under the "Corporate Governance" tab under the "Investors & Media" section. Additionally, each standing committee periodically performs, or participates in, under the oversight of the Nominating and Corporate Governance Committee, an evaluation of such committee against the requirements of the committee's charter, the results of which are presented to the Board of Directors.

The following table describes which directors serve on each of the Board of Directors' committees.

Name	Audit Committee	Compensation Committee	Nominating and Corporate Governance Committee
Lawrence M. Alleva	$\mathbf{X}^{(1)}$		X
Willard H. Dere, M.D.	X		$\mathbf{X}^{(1)}$
Allene M. Diaz		X	
Andrew A.F. Hack, M.D., Ph.D.	X		
Kristen Hege, M.D. ⁽²⁾			
Martin H. Huber, M.D.		$X^{(3)}$	X
David Mott		$\mathbf{X}^{(1)}$	

- (1) Chair of the committee.
- (2) Dr. Hege served as a member of Compensation Committee during the year ended December 31, 2022, and from January 1, 2023 until March 31, 2023.
- (3) Dr. Huber began serving as a member of our Compensation Committee on April 1, 2023.

Audit Committee

Our Audit Committee is composed of Mr. Alleva and Drs. Dere and Hack, with Mr. Alleva serving as Chair of the committee. The Board of Directors has determined that each member of the Audit Committee meets the independence requirements of Rule 10A-3 under the Exchange Act and the applicable listing standards of Nasdaq. The Board of Directors has determined that Mr. Alleva and Dr. Hack are "audit committee financial experts" within the meaning of SEC regulations and applicable listing standards of Nasdaq.

The Audit Committee's responsibilities include:

- evaluating, determining the selection of, and, if necessary, determining the replacement or rotation of the independent auditor, the lead audit partner, and any other active audit engagement team;
- pre-approving or approving all auditing services and all permitted non-audit services by the independent auditor and pre-approving the related fees;
- ensuring the receipt of, reviewing, evaluating, and discussing formal written reports from the independent auditor regarding the auditor's independence, engaging in a dialogue with the independent auditor with respect to any disclosed relationships or services that may impact its objectivity and independence, and taking, or recommending that the Board takes, appropriate action to oversee the independence of the independent auditor;
- establishing hiring policies for employees or former employees of the independent auditors;
- (i) obtaining and reviewing a report from the independent auditor describing the firm's internal quality-control procedures and any material issues raised by the most recent quality control review, or peer review, of the firm, or by any inquiry or investigation by governmental or professional authorities, within the preceding five years, with respect to one or more independent audits carried out by the firm, and any steps taken to deal with any such issues, and (ii) assessing the auditor's independence and all relationships between the independent auditor and the Company;

- obtaining assurance from the independent auditors that, to the extent applicable, Section 10A(b) of the Exchange Act has not been implicated;
- reviewing with the independent auditor the overall scope and plans for audits and reviewing with the independent auditor any noteworthy audit problems or difficulties;
- reviewing and discussing with management and the independent auditor the scope of the Company's system of internal controls, its financial and critical accounting practices, and its policies relating to risk assessment and management;
- reviewing disclosures about any significant deficiencies or material weaknesses in the design or
 operation of the Company's system of internal controls and any fraud involving management or
 employees playing a significant role in the Company's system of internal controls;
- reviewing any special steps or remedial measures adopted in light of material control weaknesses or significant deficiencies, if any;
- reviewing, to the extent applicable, the Company's internal controls report and the independent auditor's internal controls report prior to the filing of any reports;
- reviewing with management the Company's procedures and practices designed to provide reasonable assurance that (i) the Company's books, records, accounts, and internal accounting controls are established and maintained in compliance with the Foreign Corrupt Practices Act of 1977 and similar laws and regulations to which the Company is subject, and (ii) there are adequate company-level controls in place to prevent or detect (A) any improper or illegal disbursement of corporate funds or property of value or (B) the making of any arrangement on behalf of the Company which may provide for or result in the improper or illegal disbursement of funds or property of value, in order that the Company be in compliance with such laws and regulations;
- receiving and reviewing reports of the independent auditor discussing (i) all critical accounting policies and practices used in the preparation of the Company's financial statements, (ii) all alternative treatments of financial information within generally accepted accounting principles, or GAAP, that have been discussed with management, the ramifications of the use of such alternatives and the treatment preferred by the independent auditor and (iii) other material written communications between the independent auditor and management, such as any management letter or schedule of unadjusted differences;
- discussing with management and the independent auditor changes in the Company's critical accounting principles and the effects of alternative GAAP methods, off-balance sheet structures, and regulatory and accounting initiatives;
- reviewing and discussing with management and the independent auditor the annual and quarterly financial statements and management's discussion and analysis of financial condition and results of operations of the Company prior to the filing of the Company's Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q; discussing results of the annual audit and quarterly reviews and any other matters required to be communicated to the committee by the independent auditor under generally accepted auditing standards, including Auditing Standard No. 1301; discussing with management and the independent auditor their judgment about the quality of accounting principles, the reasonableness of significant judgements and the clarity of disclosure in the financial statements, including the Company's disclosures of critical accounting policies and other disclosures in "Management's Discussion and Analysis of Financial Condition of Results of Operations" in its Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q;
- reviewing, or establishing standards for the type of information and the type of presentation of such information to be included in, earnings press releases;
- discussing with management and the independent auditors any correspondence with regulators or governmental agencies and any published reports, if any, that raise material issues regarding, or call into question the integrity of, the Company's financial statements or accounting policies;
- reviewing material pending legal proceedings and other contingent liabilities involving the Company;

- establishing procedures for the receipt, retention, and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters, and the confidential, anonymous submissions by employees of concerns regarding questionable accounting or auditing matters;
- assisting the Board of Directors in its oversight of risk;
- overseeing the integrity of the Company's information technology systems, processes, and data, and shall periodically, at its discretion, (i) review and assess with management the adequacy of controls and security for the Company's information technology systems, process and data, and (ii) the Company's contingency plans in the event of a breakdown or security breach affecting the Company's information technology systems; and
- reviewing and approving all "related party transactions" in accordance with Company policy.

During the year ended December 31, 2022, the Audit Committee met ten times. The members of the Audit Committee regularly meet in executive session with representatives of Ernst & Young LLP without management present.

Compensation Committee

Our Compensation Committee is composed of Mr. Mott, Ms. Diaz, and Dr. Huber, with Mr. Mott serving as Chair of the committee. Dr. Huber began serving as a member of the Compensation Committee on April 1, 2023. Dr. Hege served as a member of the Compensation Committee during the year ended December 31, 2022 and from January 1, 2023 until March 31, 2023. The Board of Directors has determined that each current member of our Compensation Committee, as well as Dr. Hege, is or was "independent" as defined under the applicable listing standards of Nasdaq and meets the independence criteria set forth in Rule 10C-1.

Our Compensation Committee's responsibilities include:

- reviewing and establishing the Company's overall management compensation benefits philosophy and policies;
- reviewing and approving corporate goals and objectives relevant to the compensation of the Company's Chief Executive Officer, or the CEO, evaluating the performance of the CEO in light of those goals and objectives, and either as a committee or together with the other independent directors (as directed by the Board), recommending to the Board for approval the compensation level for the CEO based on such evaluation, with the deliberations and voting on the CEO's compensation to be conducted without the CEO present;
- reviewing and approving corporate goals and objectives relevant to the compensation of the officers of the Company who report directly to the CEO and all officers (other than the CEO) who are "insiders" subject to Section 16 of the Exchange Act, or the Senior Officers, evaluating the performance of the Senior Officers in light of those goals and objectives, and, either as a committee or together with the other independent directors (as directed by the Board), determining and approving, or recommending to the Board for approval, the compensation levels for the Senior Officers;
- making recommendations to the Board about the compensation of the members of the Board;
- reviewing and administering the Company's equity-based compensation plans, management incentive compensation plans and deferred compensation plans and making recommendations to the Board about amendments to such plans and the adoption of any new compensation plans;
- recommending to the Board any ownership guidelines for the CEO, the Senior Officers, other executives and non-employee directors, and periodically assessing these guidelines and recommending revisions as appropriate;
- producing, if required, a compensation committee report on executive compensation for inclusion in the Company's Annual Report on Form 10-K and its annual proxy statement;
- reviewing and approving all employment contracts and other compensatory, severance, and change-incontrol arrangements for the CEO and the Senior Officers;

- establishing and reviewing policies and procedures with respect to perquisites;
- reviewing the Company's incentive compensation arrangements to determine whether they encourage
 excessive risk-taking; reviewing and discussing the relationship between risk management policies
 and practices and compensation, and evaluating compensation policies and practices that could
 mitigate any such risk; and
- overseeing the maintenance and presentation to the Board of Directors of management's plans for succession to senior management positions in the Company based on guidelines developed and recommended by our Compensation Committee to the Board.

Our Compensation Committee may delegate any of the responsibilities of the full committee described above to subcommittees and may delegate the determination of compensation under approved compensation programs to the CEO and/or Senior Officers, except that compensation actions affecting the CEO or Senior Officers may not be so delegated.

Additional information concerning the role of our Compensation Committee, and its processes and procedures, is set forth elsewhere in this proxy statement under "Compensation Discussion and Analysis — Executive Compensation Process." Please also see the report of our Compensation Committee set forth elsewhere in this proxy statement.

During the year ended December 31, 2022, our Compensation Committee met six times.

Nominating and Corporate Governance Committee

Our Nominating and Corporate Governance Committee is composed of Mr. Alleva and Drs. Dere and Huber, with Dr. Dere serving as Chair of the committee. The Board of Directors has determined that each member of the Nominating and Corporate Governance Committee is "independent" as defined under the applicable listing standards of Nasdaq.

The Nominating and Corporate Governance Committee's responsibilities include:

- identifying individuals qualified to become members of our Board of Directors, consistent with criteria approved by the Board, receiving nominations for such qualified individuals and reviewing recommendations put forward by the CEO, and recommending to the Board the director nominees for the next annual meeting of stockholders, taking into account each candidate's ability, judgment and experience and the overall diversity and composition of the Board;
- recommending to our Board of Directors the classes of the Board on which nominees should serve;
- establishing a policy under which stockholders of the Company may recommend a candidate for consideration for nomination as a director;
- if a vacancy on the Board of Directors or any Board committee occurs, identifying and recommending to the Board qualified candidates to fill such vacancy;
- developing and recommending to the Board of Directors a set of corporate governance guidelines applicable to the Company that address, at a minimum, the following subjects: (i) director qualification standards, (ii) director responsibilities, (iii) director access to management and, as necessary and appropriate, independent advisors, (iv) director compensation, (v) director orientation and continuing education, and (vi) annual performance evaluations of the Board of Directors;
- reviewing the corporate governance guidelines and recommending changes as necessary;
- articulating to each director what service on the Board of Directors entails;
- reviewing the Company's practices and policies with respect to directors, including retirement policies, the size of the Board, service of non-employee directors, the meeting frequency of the Board of Directors and the structure of Board meetings;
- recommending to the Board of Directors or to the appropriate committee thereof processes for annual evaluations of the performance of the Board of Directors and the appropriate committees thereof and overseeing such evaluation processes;

- reviewing the functions, duties, and composition of the committees of the Board of Directors;
- reviewing Company policies with respect to significant issues of corporate public responsibility;
- considering and reporting to the Board of Directors any questions of possible conflicts of interest of members of the Board of Directors;
- reviewing and overseeing the Company's strategies regarding the management of environmental, social and governance, or ESG, matters, including related risks and opportunities, and periodically reviewing the Company's public disclosures with respect to such matters, including in the review of these Company strategies a focus on the Company's culture and enterprise efforts relating to fostering and maintaining a diverse, inclusive and equitable environment;
- overseeing the systems and processes established by the Company to ensure compliance with the Company's Code of Business Conduct and Ethics;
- providing for new director orientation and continuing education for existing directors on a periodic basis; and
- · overseeing plans for director succession.

During the year ended December 31, 2022, the Nominating and Corporate Governance Committee met four times.

Compensation Committee Interlocks and Insider Participation

None of the members of our Compensation Committee has at any time during the prior three years been one of our officers or employees. None of our executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our Board of Directors or Compensation Committee.

Environmental, Social and Governance ("ESG") Practices

At Mersana, we all share a singular vision: To create a world where all patients triumph over cancer. We know that the actions of each and every one of us matter and that our team's success depends on our ability to work together. We are also committed to making a positive impact as it relates to the environment and the communities in which we live and work. We believe that we have a duty to our patients and other stakeholders to be good corporate citizens, and we are committed to embracing diversity while operating our business in an environmentally-friendly manner and with high integrity and transparency.

In line with this commitment, in 2022 we formed an internal ESG working group to identify potential areas in which we can improve, make recommendations to the executive team, implement new practices and track our execution across our ESG initiatives. This team is composed of a cross-functional group of employees that includes members of senior management. Additionally, pursuant to its charter, our Nominating and Corporate Governance Committee is responsible for reviewing and overseeing Mersana's strategies regarding the management of ESG matters, including related risks and opportunities, with a focus on our culture and enterprise efforts relating to fostering and maintaining a diverse, inclusive and equitable environment.

Environmental

We are committed to implementing eco-friendly programs to minimize our environmental footprint. Although our current physical footprint is limited to approximately 45,000 square feet of leased office and laboratory space at our Cambridge, Massachusetts headquarters, we believe it is our duty to be mindful of the impact we are having on our environment. Our environmentally conscious products and programs include, among other things:

- · LED lighting;
- public transportation reimbursement;
- · composting;
- battery recycling receptacles;
- · dedicated recycling streams for pipette tip boxes;
- · reusable kitchen products; and
- water machines that have helped eliminate the use of more than 160,000 plastic bottles since installation in 2018.

In 2017, a group of Mersana employees established the "Green Team," a cross-functional group of employees dedicated to limiting the impact that our daily office routines have on the planet. Since its inception, the Green Team has spearheaded initiatives to reduce office waste, clean local water sources, save energy, and promote environmental awareness and sustainability in the office. In an effort to help beautify the outdoor space adjacent to our headquarters, Mersana's Green Team organizes river cleanups to collect debris along the Charles River.

Social

Human Capital Management

As of December 31, 2022, we had 228 full-time employees, including 151 with M.D., Ph.D. or other advanced degrees. We believe that our future success largely depends upon our continued ability to attract and retain highly skilled employees. Our human capital objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and newly-hired employees, and focusing on employee well-being and workplace safety. We provide our employees with competitive salaries and bonuses, opportunity for equity ownership, development programs that enable continued learning and growth, and a robust employment package that promotes wellness across all aspects of their lives, including healthcare, retirement planning, and paid time off.

Diversity, Equity and Inclusion

As we advance our pipeline, we are also heavily focused on advancing our people. We believe that people who learn, grow and thrive together are better equipped to elevate our science. We believe that promoting diversity, equity, inclusion and sustainability is key to fostering our collaborative work environment in which employees are motivated by the common goal of discovering, developing and delivering potential new therapies for patients with cancer.

We strive to build a workforce representative of the communities in which we live and work and the patients we serve and to nurture an inclusive culture where all voices are welcomed, heard, and respected. Our organization is composed of individuals with a broad range of backgrounds and experiences, providing us with a spectrum of perspectives that we can draw upon as Mersana continues to evolve. Of our executive team, which includes the Senior Officers other than our Vice President, Controller, who serves as our Chief Accounting Officer, 33% self-identified as female, and 56% self-identified as belonging to at least one racially or ethnically diverse group. Of our employees as of December 31, 2022, who chose to indicate their gender and ethnic identities, 57% self-identified as female and 38% self-identified as belonging to at least one racially or ethnically diverse group.

Governance

Corporate Citizenship

We believe it is our responsibility to be good corporate neighbors. We encourage employees to take an active role in caring for the surrounding communities in which we live and work, and we regularly sponsor events, lead fundraising drives and promote opportunities to get involved with local and national charitable organizations.

Ethics & Accountability

Our Board of Directors and our Senior Officers are committed to setting a tone of integrity from the top. Mersana's Code of Business Conduct and Ethics requires all Mersana directors, officers and employees to adhere to the highest standards of honest and ethical conduct. Our Code of Business Conduct and Ethics covers a variety of topics, including (i) complying with laws, rules, regulations and ethics, (ii) bribery and corruption, and (iii) conflicts of interest. In addition to our Code of Business Conduct and Ethics, our other policies are clearly defined and include guidance on topics including, but not limited to, our Corporate Governance Guidelines and our Insider Trading Policy. We provide all of our employees with initial training and reference materials and periodic refresh materials to reinforce this commitment to integrity and ethics in our business.

Our Board of Directors, along with the Audit, Compensation and Nomination and Corporate Governance Committees, conducts an annual governance review, which includes review, benchmarking and revision of our significant corporate policies discussed above. Our Compensation Committee also conducts an annual review of our compensation practices. Additionally, each standing committee of the Board of Directors periodically performs, or participates in, under the oversight of the Nominating and Corporate Governance Committee, an evaluation of such committee against the requirements of the committee's charter, the results of which are presented to the Board of Directors.

NON-EMPLOYEE DIRECTOR COMPENSATION

We maintain a non-employee director compensation policy, which provides that each of our non-employee directors (that being, each of our directors other than Ms. Protopapas) will receive the following compensation for service on our Board:

- an annual cash retainer of \$40,000 (\$70,000 for the Chair of our Board of Directors);
- an additional annual cash retainer of \$5,000 for each non-employee director who is a member of our Compensation Committee (\$10,000 for the Chair of our Compensation Committee);
- an additional annual cash retainer of \$4,000 for each non-employee director who is a member of our Nominating and Corporate Governance Committee (\$8,000 for the Chair of our Nominating and Corporate Governance Committee);
- an additional annual cash retainer of \$7,500 for each non-employee director who is a member of our Audit Committee (\$15,000 for the Chair of our Audit Committee);
- for any non-employee director who is first elected or appointed to our Board of Directors, an initial equity award; and
- on an annual basis, for each non-employee director (other than a director who is first elected to our Board of Directors during the calendar year of such annual meeting of stockholders (including, for the avoidance of doubt, at the time of the annual meeting of stockholders)), an annual equity award.

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

Any outstanding initial equity awards and annual equity awards granted to our non-employee directors automatically accelerate and become fully vested and exercisable upon the non-employee director's death or termination of service due to disability or upon a change in control.

2022 Non-Employee Director Compensation

For the year ended December 31, 2022, the initial equity award for which any new non-employee director would have been eligible would have been a stock option granted under our 2017 Stock Incentive Plan to purchase the lesser of (a) 90,000 shares of our common stock, or (b) a number of shares that would result in the stock option having a grant date fair value approximately equal to \$500,000, with the number of shares of common stock determined in accordance with ASC Topic 718 (or any successor provision) based on the closing price of a share of common stock on the date of such non-employee director's initial election. The stock options granted to non-employee directors upon the non-employee director's initial election or appointment to our Board of Directors vest in equal quarterly installments over a three-year period following the date of grant, generally subject to such director's continued service on each vesting date.

For 2022, each of our non-employee directors, all of whom continued in office, was eligible to receive an annual equity award in the form of a stock option granted under our 2017 Stock Incentive Plan to purchase the lesser of (a) 45,000 shares of our common stock, or (b) a number of shares that would result in the stock option having a grant date fair value approximately equal to \$250,000, with the number of shares of common stock determined in accordance with ASC Topic 718 (or any successor provision) based on the closing price of a share of common stock on the date of the annual meeting of stockholders. All of our non-employee directors then serving on the Board of Directors, all of whom are still serving on our Board of Directors, were granted an option to purchase 45,000 shares of our common stock on June 9, 2022, the date of our 2022 annual meeting. The stock options granted to our non-employee directors on an annual basis vest in full upon the earlier of the first anniversary of the date of grant or the date of the following annual meeting of stockholders, generally subject to the director's continued service on each vesting date.

Additionally, in 2022, each of our non-employee directors had the right under our non-employee director compensation policy to elect to receive all or a portion of his or her annual cash retainer for service on our Board of Directors in 2022, including any retainer for committee service, in the form of options to purchase shares of our common stock having a grant date fair value approximately equal to such annual cash

retainer (or portion thereof). Any such election must have been made before January 1, 2022, and the number of shares of our common stock subject to any such stock option was determined in accordance with ASC Topic 718 based on the closing price of a share of our common stock on the last business day of 2021. Any such stock options granted in lieu of a cash retainer vested in equal quarterly installments over a one-year period, generally subject to the director's continued service on each vesting date. For 2022, all of our non-employee directors elected to receive his or her annual Board of Directors and committee retainers in the form of a stock option grant, which was made on January 3, 2022. Accordingly, none of our non-employee directors received cash compensation in the year ended December 31, 2022.

The following table sets forth a summary of the compensation we paid to our non-employee directors during 2022. Ms. Protopapas, our President and Chief Executive Officer, received no compensation for her services as a director in 2022 and, as a result, is not included in the table below. The compensation received by Ms. Protopapas for her services as an employee is described in the "Executive Compensation — Summary Compensation Table" below and the accompanying narrative description.

Name ⁽¹⁾	Fees Earned or Paid in Cash (\$) ⁽²⁾	Option Awards (\$) ⁽³⁾	Total (\$)
Lawrence M. Alleva	59,000	119,192	178,192
Willard Dere, M.D.	55,500	119,192	174,692
Allene M. Diaz	45,000	119,192	164,192
Andrew A. F. Hack, M.D., Ph.D.	47,500	119,192	166,692
Kristen Hege, M.D.	45,000	119,192	164,192
Martin Huber, M.D.	44,000	119,192	163,192
David Mott	80,000	119,192	199,192

⁽¹⁾ The aggregate number of shares of our common stock underlying stock options outstanding as of December 31, 2022, for non-employee members of the Board of Directors were: Mr. Alleva: 179,689; Dr. Dere: 165,121; Ms. Diaz: 94,691; Dr. Hack: 180,438; Dr. Hege: 194,259; Dr. Huber: 130,821 and Mr. Mott: 188,912.

⁽²⁾ Amounts represent cash fees earned or paid to non-employee directors for 2022, including cash fees Messrs. Alleva and Mott, Ms. Diaz and Drs. Dere, Hack, Hege and Huber elected to receive in the form of a stock option grant, which were granted on January 3, 2022, as set forth in the table below.

Name	Cash Fees paid in the form of Stock Options (\$)	Shares Subject to Stock Options Granted in respect of Cash Fees (#)
Lawrence M. Alleva	59,000	13,657
Willard Dere, Ph.D.	55,500	12,847
Allene M. Diaz	45,000	10,416
Andrew A. F. Hack, M.D., Ph.D.	47,500	10,995
Kristen Hege, M.D.	45,000	10,416
Martin Huber, M.D	44,000	10,185
David Mott	80,000	18,518

For such directors, amounts represent the aggregate grant date fair value of stock option awards granted pursuant to such non-employee director's election to receive their annual retainer fees in the form of a stock option, computed in accordance with ASC Topic 718 and excluding the effect of estimated forfeitures. The assumptions used in the valuation of these option awards are set forth in Note 10 to our financial statements included in our 2022 Annual Report.

(3) Amounts represent the aggregate grant date fair value of stock option awards granted to our non-employee directors in 2022, computed in accordance with ASC Topic 718 and excluding the effect of estimated forfeitures. The assumptions used in the valuation of these option awards are set forth in Note 10 to our financial statements included in our 2022 Annual Report. Pursuant to SEC rules, the value of stock options granted to Messrs. Alleva and Mott, Ms. Diaz and Drs. Dere, Hack, Hege and Huber in connection with their election to receive their annual retainer fees in the form of stock options has not been included in this column and instead the amount of such retainers is included under "Fees Earned or Paid in Cash."

Amended and Restated Non-Employee Director Compensation Policy

On December 1, 2022, upon the recommendation of the Compensation Committee, our Board of Directors approved the amendment and restatement of our non-employee director compensation policy, or the A&R Compensation Policy. Under the A&R Compensation Policy, the cash retainer fees payable to our non-employee directors for service on our Board of Directors in 2023 did not change. However, under the A&R Compensation Policy, the initial equity award for which any newly elected or appointed nonemployee director is eligible will take the form of both (a) a stock option to purchase the lesser of (i) 45,000 shares of our common stock or (ii) a number of shares of our common stock having a grant date fair value equal to \$250,000, with the number of shares of common stock determined in accordance with ASC Topic 718, rounded down to the nearest whole share and (b) restricted stock units, or RSUs, representing the lesser of (i) 45,000 shares of common stock or (ii) a number of shares of common stock equal to (a) \$250,000 divided by (b) the closing sales price per share of our common stock on Nasdaq on the date of the non-employee director's initial election or appointment to the Board of Directors (or, if such date is not a market trading day, on the first market trading day thereafter), rounded down to the nearest whole share. The shares subject to each initial equity award that is a stock option will vest annually in equal quarterly installments over a three-year period, subject to the non-employee director's continuous service as a director on each vesting date. The shares subject to each initial equity award that is an RSU will vest annually over a three-year period, subject to the non-employee director's continuous service as a director on each vesting date. Additionally, under the A&R Compensation Policy, the annual equity award to be granted to each non-employee director who continues to serve as a non-employee director following each annual meeting of stockholders will take the form of both (a) a stock option to purchase the lesser of (i) 22,500 shares of common stock or (ii) a number of shares of common stock having a grant date fair value equal to \$125,000, with the number of shares of common stock determined in accordance with ASC Topic 718, rounded down to the nearest whole share and (b) RSUs representing the lesser of (i) 22,500 shares of common stock or (ii) a number of shares of common stock equal to (a) \$125,000 divided by (b) the closing sales price per share of our common stock on Nasdaq on the grant date, rounded down to the nearest whole share. The shares subject to each annual equity award will vest in full upon the earlier of the first anniversary of the date of grant or the date of the following annual meeting of stockholders of the Company, subject to the nonemployee director's continuous service as a director on each vesting date.

Furthermore, pursuant to the A&R Compensation Policy, each non-employee director may elect to convert all of his or her cash compensation for each calendar quarter in a year into either shares of common stock, or a Stock Retainer Grant, or a stock option to purchase shares of common stock, or an Option Retainer Grant. Any such election to convert cash compensation is referred to as a Retainer Grant Election. Each Retainer Grant Election must be submitted to our Chief Financial Officer in writing by no later than December 31 preceding each calendar year to which such Retainer Grant Election shall apply. A non-employee director may only make a Retainer Grant Election during a period in which Mersana is not in a quarterly or special blackout period under its insider trading policy and the non-employee director is not aware of any material non-public information. Once a Retainer Grant Election is properly submitted, it will be in effect for the full calendar year covered by the Retainer Grant Election. If a non-employee director timely makes a Retainer Grant Election, then on the first business day following the end of each calendar quarter, any nonemployee director electing to receive a Stock Retainer Grant will be granted a number of shares of our common stock equal to (a) the aggregate amount of cash compensation otherwise payable to such nonemployee director for the calendar quarter divided by (b) the closing sales price per share of our common stock on Nasdaq on the last day of such calendar quarter (or, if such date is not a market trading day, on the first market trading day thereafter), rounded down to the nearest whole share, and any non-employee

director electing an Option Retainer Grant will be granted a stock option to purchase a number of shares of common stock having a grant date fair value equal to the aggregate amount of cash compensation otherwise payable to such non-employee director for such calendar quarter, with the number of shares of common stock determined in accordance with ASC Topic 718, rounded down to the nearest whole share. Each Stock Retainer Grant and Option Retainer Grant will be fully vested on the applicable grant date.

All stock options granted to our non-employee directors pursuant to the A&R Compensation Policy will be nonstatutory stock options granted pursuant to our 2017 Stock Incentive Plan, with an exercise price per share equal to the closing price of our common stock on Nasdaq on the date of grant, and a term of 10 years from the date of grant (subject to earlier termination in connection with a termination of service).

A non-employee director may decline all or any portion of his or her compensation under the A&R Compensation Policy by giving notice to us prior to the date such cash is earned or such equity awards are to be granted, as the case may be.

EXECUTIVE OFFICERS

Below is a list of the names, ages, positions, and a brief account of the business experience of the individuals who serve as our executive officers.

Name	Age	Position
Anna Protopapas	58	Chief Executive Officer and President; Director (Class III)
Alejandra Carvajal	49	Senior Vice President, Chief Legal Officer
Brian DeSchuytner	45	Senior Vice President, Chief Financial Officer
Timothy B. Lowinger, Ph.D.	59	Senior Vice President, Chief Science and Technology Officer
Tushar Misra, Ph.D.	63	Senior Vice President, Chief Manufacturing Officer
Arvin Yang, M.D., Ph.D.	47	Senior Vice President, Chief Medical Officer

Executive Officer Biographies

Biographical information, including business experience and public company board experience during the last five years, for our current executive officers, is set forth below. Biographical information for Anna Protopapas, our Chief Executive Officer and President, is included herein under "Proposal No. 1 — Election of Directors — Nominees for Election as Class III Directors."

Alejandra Carvajal has served as our Senior Vice President, Chief Legal Officer since April 2021. Prior to joining Mersana, Ms. Carvajal served as the Chief Legal Officer and General Counsel of Momenta Pharmaceuticals, Inc., or Momenta, a biotechnology company, from October 2018 to March 2021. From June 2017 to October 2018, she served as the Vice President, Deputy General Counsel of Momenta. Ms. Carvajal received a B.A. *cum laude* from Harvard University and a J.D. *cum laude* from The Georgetown University Law Center.

Brian DeSchuytner has served as our Senior Vice President, Chief Financial Officer since October 2021 and prior to that served as our Senior Vice President, Finance and Product Strategy, from June 2019 until October 2021. Prior to joining Mersana, he served as Vice President, ZEJULA Commercial at TESARO from January 2017 to June 2019. Mr. DeSchuytner received a B.A. in biophysical chemistry from Dartmouth College and an M.B.A., concentrating in finance and health care management, from the Wharton School of the University of Pennsylvania.

Timothy B. Lowinger, Ph.D., has served as our Chief Science and Technology Officer since August 2019, and prior to that served as our Chief Scientific Officer since February 2008. Dr. Lowinger received a B.Sc. (Hons.) in chemistry and a Ph.D. in synthetic organic chemistry from the University of British Columbia.

Tushar Misra, Ph.D., has served as our Chief Manufacturing Officer since August 2021. Prior to joining Mersana, Dr. Misra served as Executive Vice President, Head of Technical Development & Manufacturing at Laronde, a biotechnology company, from March 2020 to August 2021. From November 2018 to January 2020, he served as Senior Vice President, Technical Operations at Wave Life Sciences Ltd., a genetic medicines company. Prior to that, from July 2012 to October 2018, Dr. Misra worked at Takeda Pharmaceutical Company, a pharmaceutical company, in several positions of increasing seniority, most recently as Vice President & Head, Global Oncology and Biologics Operations. Dr. Misra received a B.Sc. with honors from the National Institute of Technology, Rourkela, India, and M.S. and Ph.D. degrees in chemical engineering from the University of Rhode Island.

Arvin Yang, M.D., Ph.D., has served as our Chief Medical Officer since November 2020. Prior to joining Mersana, Dr. Yang worked at Bristol Myers Squibb, a pharmaceutical company, from August 2010 to November 2020 in various roles of increasing responsibility, most recently as Vice President and Head of Clinical Hematology. Dr. Yang received a B.A. from Rutgers College and M.D. and Ph.D. degrees from Rutgers Robert Wood Johnson Medical School.

Proposal No. 2 — Advisory Vote on Executive Compensation

We are providing our stockholders the opportunity to vote to approve, on an advisory, non-binding basis, the compensation of our named executive officers as disclosed in this Proxy Statement in accordance with the SEC's rules. This proposal, which is commonly referred to as "say-on-pay," is required by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank Act, which added Section 14A to the Exchange Act. Our executive compensation program is designed to attract and retain qualified and talented executives, motivate such executives to achieve our business goals and reward them for short- and long-term performance with a simple and clear compensation structure. Under this program, our named executive officers are rewarded for the achievement of our short- and long-term performance, which we believe serves to enhance short- and long-term value creation for our stockholders. The program contains elements of cash and equity-based compensation and are designed to align the interests of our executives with those of our stockholders and paying for performance.

The section of this Proxy Statement titled "Executive Compensation," including "— Compensation Discussion and Analysis," describes in detail our executive compensation program and the decisions made by the Compensation Committee. As we describe in greater detail in the "— Compensation Discussion and Analysis" section, our executive compensation program rewards value creation for stockholders and progress towards achieving our business goals and that promotes company performance. At the same time, we believe our program does not encourage excessive risk-taking by management. While we do not have a formal or informal policy for allocating between long-term and short-term compensation, between cash and non-cash compensation or among different forms of non-cash compensation, we generally strive to provide our named executive officers with a mix of short-term and long-term performance-based incentives to encourage consistently strong performance, and our Board of Directors believes that this link between compensation and the achievement of our near- and long-term business goals has helped drive our performance over time.

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

RESOLVED, that the compensation paid to the Company's named executive officers, as disclosed pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the compensation discussion and analysis, the compensation tables and any related material disclosed in the Proxy Statement, is hereby approved.

As an advisory vote, this proposal is not binding. The outcome of this advisory vote does not overrule any decision by us or our Board of Directors (or any committee thereof), create or imply any change to the fiduciary duties of the company or our Board of Directors (or any committee thereof), or create or imply any additional fiduciary duties for the company or our Board of Directors (or any committee thereof). However, the Compensation Committee and Board of Directors value the opinions expressed by our stockholders in their vote on this proposal and intend to consider carefully the outcome of the vote when making future compensation decisions for named executive officers. In 2021, our Board of Directors recommended, our stockholders agreed and our Board of Directors thereafter concluded that our stockholders cast an advisory vote annually on the executive compensation of our named executive officers. The next stockholder advisory "say-on-frequency" vote will occur at our 2027 annual meeting of stockholders.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT STOCKHOLDERS VOTE TO APPROVE THE COMPENSATION PAID TO OUR NAMED EXECUTIVE OFFICERS BY VOTING "FOR" THIS PROPOSAL.

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

This Compensation Discussion and Analysis, or CD&A, describes our compensation philosophy, the material elements and objectives of our compensation programs for our named executive officers and the factors, rationale and processes used to determine compensation for our named executive officers in 2022.

Our named executive officers for the year ended December 31, 2022 are as follows:

Named Executive Officer	Position
Anna Protopapas	Chief Executive Officer and President; Director (Class III)
Brian DeSchuytner	Senior Vice President, Chief Financial Officer
Alejandra Carvajal	Senior Vice President, Chief Legal Officer
Timothy B. Lowinger, Ph.D.	Senior Vice President, Chief Science and Technology Officer
Arvin Yang, M.D.	Senior Vice President, Chief Medical Officer

Executive Summary

Business Overview

We are a clinical-stage biopharmaceutical company focused on developing antibody-drug conjugates, or ADCs, that offer a clinically meaningful benefit for cancer patients with significant unmet need. We have leveraged over 20 years of industry learning in the ADC field to develop three proprietary and differentiated technology platforms that enable us to develop ADCs designed to have improved efficacy, safety and tolerability relative to existing ADCs and other therapies. We believe that our innovative platforms and our proprietary payloads together enable a robust discovery pipeline for us and our collaborators. Our investments in our novel and proprietary auristatin DolaLock payload, as well as our novel and proprietary STING (stimulator of interferon genes) agonist ImmunoLock payload, together with the good manufacturing practices supply chain established for our Dolaflexin, Dolasynthen and Immunosynthen platforms, enable our ability to apply these platforms to new and different targets and antibodies to create new product candidates. We call this our product engine. Our ADCs in preclinical studies and clinical trials include first-in-class molecules that target multiple tumor types with high unmet medical need.

Our goal is to become a leading oncology company by leveraging the potential of our innovative and differentiated ADC platforms and the experience and competencies of our management team to discover and develop promising ADC product candidates and to commercialize cancer therapeutics that address unmet medical needs or provide significant benefit to patients. We believe that executing against the following strategic objectives will help us achieve our goal:

- Build UpRi (upifitamab rilsodotin) into a Foundational Medicine in Ovarian Cancer. Our lead product candidate, upifitamab rilsodotin, which we refer to as UpRi, is a first-in-class Dolaflexin ADC targeting NaPi2b, an antigen broadly expressed in ovarian cancer and other cancers. We are currently evaluating UpRi in patients with platinum-resistant ovarian cancer in a single-arm registrational trial, which we refer to as UPLIFT. We are also continuing to enroll patients in UPNEXT, our Phase 3 clinical trial of UpRi as monotherapy maintenance treatment following treatment with platinum doublets in recurrent platinum-sensitive ovarian cancer. Additionally, we are conducting a Phase 1 combination trial, which we refer to as UPGRADE-A, exploring the combination of UpRi with carboplatin, a standard platinum chemotherapy broadly used in the treatment of platinum-sensitive ovarian cancer. The European Commission granted orphan medicinal product designation to UpRi for the treatment of ovarian cancer in December 2022.
- Build Out Our Pipeline of Highly Impactful Cancer Medicines. We are investigating an additional ADC product candidate, XMT-1660, in a Phase 1 clinical trial. XMT-1660 is a B7-H4-directed Dolasynthen ADC designed with a precise, target-optimized drug-to-antibody ratio, or DAR, of 6 and our DolaLock microtubule inhibitor payload with controlled bystander effect. We are currently enrolling patients in our multicenter Phase 1 trial investigating the safety, tolerability and anti-tumor

activity of XMT-1660 in patients with breast, endometrial and ovarian cancers. The United States Food and Drug Administration, or the FDA, has granted Fast Track designation to XMT-1660 for the treatment of adult patients with advanced or metastatic triple-negative breast cancer. We are also developing XMT-2056, a systemically administered Immunosynthen STING agonist ADC (DAR 8) that is designed to target a novel epitope of human epidermal growth factor receptor 2, or HER2, distinct from that targeted by either trastuzumab or pertuzumab, and to locally activate STING signaling in both tumor-resident immune cells and in tumor cells, providing the potential to treat patients with HER2-high or -low tumors as monotherapy and in combination with standard-of-care agents. The FDA granted orphan drug designation to XMT-2056 for the treatment of gastric cancer in May 2022.

- Build Innovation and Scientific Leadership in ADCs. We believe we are establishing a leading position in the field of ADCs by leveraging our existing platforms, Dolaflexin, Dolasynthen and Immunosynthen, and continuing to advance new innovations. Additionally, we are discovering new product candidates for ourselves and for collaborators that we believe hold the potential to be first- and best-in-class medicines for patients with cancer in areas of high unmet medical need. XMT-2068 and XMT-2175 are among our preclinical candidates that leverage our Immunosynthen platform.
- Build Relationships with Strategic Collaborators. We aim to leverage our technical expertise and experience with respect to our innovative and diversified platforms, to attract and cultivate strategic collaborations that facilitate our ability to bring differentiated product candidates to patients. We have established strategic research and development collaborations with Janssen Biotech, Inc., or Janssen, and Merck KGaA, Darmstadt, Germany, or Merck KGaA, and its affiliate Ares Trading S.A., or MRKDG, for the development and commercialization of additional ADC product candidates leveraging our proprietary Dolasynthen, Dolaflexin and Immunosynthen platform technologies against a limited number of targets selected by our collaborators. We have also granted GlaxoSmithKline Intellectual Property (No. 4) Limited, or GSK, an exclusive option for an exclusive global license to co-develop and commercialize XMT-2056. We believe the potential of our ADC technologies, supported by our scientific and technical expertise and enabled by our intellectual property strategy, all support our independent and collaborative efforts to discover and develop lifechanging ADCs for patients fighting cancer.
- Build Mersana with Top Talent. We aim to attract and retain talented team members with deep experience in drug discovery, development, manufacturing, and commercialization as well as in general business and administration. Our team is driven by a shared passion to advance therapies that can make a significant difference in the lives of cancer patients. We will continue to cultivate the collaborative and passionate workplace culture and diverse workforce that has allowed us to advance this mission.

2022 and Early 2023 Financial and Business Highlights

We have continued to grow and to make substantial progress with our product candidates and pipeline. During 2022 and early 2023, we:

- completed enrollment of approximately 270 patients in our UPLIFT clinical trial;
- initiated screening of patients in our UP-NEXT clinical trial and continued to advance enrollment and dosing;
- completed the dose escalation portion of our UPGRADE-A clinical trial and initiated the dose expansion portion of UPGRADE-A;
- began dosing patients in our Phase 1 clinical trial of XMT-1660;
- entered into a collaboration with Janssen pursuant to which we granted Janssen an exclusive license to use our proprietary Dolasynthen platform and other technology to develop, manufacture and commercialize ADCs directed to up to three targets selected by Janssen, in exchange for \$40 million in an upfront payment with the potential for more than \$1 billion in total milestone payments and midsingle-digit to low double-digit percentage royalties on future net sales;

- granted GSK an exclusive option for an exclusive global license to co-develop and commercialize XMT-2056, in consideration for which we received an upfront option purchase fee of \$100 million and eligibility to receive up to \$1.36 billion in the form of an option exercise payment and development, regulatory and commercial milestone payments if GSK exercises its option, as well as tiered royalties on net sales and our own options to profit-share and to co-promote in the United States;
- entered into a research collaboration and commercial license agreement with MRKDG to discover novel Immunosynthen ADCs directed against up to two targets, which provided us with an upfront fee of \$30 million and eligibility to receive up to \$800 million in potential regulatory, development and commercial milestone payments, and tiered royalties up to the low double-digit percentages on worldwide net sales of any approved ADCs developed under the agreement;
- continued to strengthen our organization to support advancement of our product candidate pipeline; and
- ended 2022 with \$280.7 million in cash, cash equivalents and marketable securities as of December 31, 2022 and subsequently received the \$30 million upfront payment under the MRKDG collaboration agreement.

Compensation Governance Highlights

Our Compensation Committee regularly reviews our executive compensation programs and practices and those of other companies in our industry and our executive compensation peer group, as well as evolving trends in executive compensation, to ensure that our programs and practices continue to reflect our philosophy and remain competitive to encourage high performance, the execution of our strategy and the advancement of our preclinical and clinical programs. We believe that our compensation programs are grounded in sound practices and processes that align with industry best practices. Listed below are some of the compensation practices we employ in our executive compensation program that reinforce or are reflective of our philosophy.

	What We Do		What We Don't Do
√	Maintain an industry- and size-appropriate peer group for benchmarking compensation	×	No employment arrangements that guarantee a certain compensation level or employment term
✓	Tie cash-based incentives to achievement of	×	No guaranteed salary increases or bonuses

✓ Provide a majority of compensation in long-term equity incentives with multi-year vesting schedules

Company objectives

- ✓ Provide a competitive mix of fixed (e.g., base salary) and variable (e.g., bonus) compensation
- Evaluate the risk profile of our pay programs
- Set robust executive officer and non-employee director stock ownership guidelines
- Maintain a comprehensive compensation recoupment (clawback) policy applicable to both cash and equity incentive compensation
- Consult with an independent compensation advisor

- term
- No single-trigger vesting in connection with a change-in-control for equity awards
- No special perquisites or personal benefits for executives
- No retirement plans other than our 401(k) and × no special health or welfare benefits for executives
- No hedging or pledging or speculative × transactions in our securities
- No tax gross-up provisions

Say-on-Pay Vote Results & Stockholder Outreach

At our 2022 annual meeting of stockholders, or the 2022 Annual Meeting, we conducted a non-binding advisory vote on the compensation of our named executive officers, commonly referred to as a "say-on-pay" vote, in accordance with the Dodd-Frank Act. Approximately 55% of the votes cast by stockholders on

this proposal, excluding broker non-votes and abstaining votes, were cast against the compensation paid to our named executive officers in the year ended December 31, 2021.

We engage in regular outreach with our stockholders throughout each year, including in advance of our annual meetings of stockholders. In light of the vote against the compensation paid to our named executive officers in the year ended December 31, 2021, following the 2022 Annual Meeting, we engaged in additional focused stockholder outreach to obtain feedback on our compensation practices and to understand the factors that led certain investors to vote against the 2021 compensation of our named executive officers. As part of these stockholder engagement efforts, we reached out to stockholders representing approximately 64% of our outstanding common stock and held discussions with all of those stockholders who expressed an interest, which stockholders held shares representing approximately 19% of our outstanding shares of common stock.

The conversations we had with certain of these stockholders revealed that they were particularly concerned with the total compensation paid to our Chief Executive Officer in 2021 relative to 2020. The primary cause of the increase in our Chief Executive Officer's compensation in 2021 was the higher grant date fair value of the equity awards granted to her in January 2021 compared to the grant date fair value of the equity awards granted to her in January 2020, in each case, determined in accordance with ASC Topic 718. This increase in fair value was driven by a significant increase in our stock price of approximately 250% between January 2020 and January 2021. The grant date fair value of the equity awards granted to our Chief Executive Officer in January 2022 was approximately 75% less as compared to the grant date fair value of the equity awards granted to our Chief Executive Officer in January 2021.

Our Compensation Committee's historical approach when making the equity grants comprising a component of executive compensation, including for our Chief Executive Officer, has been to size such grants on an option-equivalent, percentage-of-shares outstanding basis compared to peer group and market data compiled by our compensation consultant, generally targeting awards at approximately the median of our peer group. Our Compensation Committee does not believe that the grant date fair value as determined for financial reporting purposes should be the primary determinant of award size because of the history of stock price volatility in our stock and in our peer group, which can result in inconsistent award sizes on a year-to-year basis. Our Compensation Committee followed this approach with respect to equity awards granted to our Chief Executive Officer and our other executive officers in January 2020, January 2021 and January 2022.

The results of the say-on-pay vote at our 2022 Annual Meeting, and the valuable feedback we received in the subsequent stockholder discussions, helped inform our Compensation Committee's and our Board of Directors' discussions of our executive compensation programs, policies and practices in late 2022 and early 2023 as well as compensation decisions in early 2023. Following these stockholder discussions, and after taking into consideration the say-on-pay vote at our 2022 Annual Meeting and our peer group benchmarking data, in 2023 our Compensation Committee, with advice from our compensation consultant, decided to maintain our general approach that equity grants comprising a component of executive compensation be based on an option equivalent, percentage-of-shares outstanding basis. In determining the individual awards granted to our executive officers, our Compensation Committee considered peer group and market data compiled by our compensation consultant, targeting awards at the median of our peer group.

With respect to equity awards made in January 2023, our Compensation Committee continued to believe that it is appropriate to determine the size of annual equity awards for our executive officers based on this approach to remain within peer benchmarks and, when retrospectively considered with value in mind, determined that the equity awards reasonably aligned with value-based market data. Our Compensation Committee is committed to evaluating this approach on an annual basis to ensure alignment of our executive compensation with the potential to build stockholder value.

Additionally, while our 2022 corporate goals and the weighting thereof applicable to annual performance-based cash compensation had already been set well in advance of our 2022 Annual Meeting, our Compensation Committee changed our approach with respect to the weighting of our 2023 corporate goals based in part on feedback from stockholders following our 2022 Annual Meeting. As discussed more fully below under "Elements of Our Executive Compensation Program — Annual Performance-Based Cash Compensation," for 2022, the total number of points, if all specified goals were achieved, not including the stretch goals, added

to 120 points, which would yield a payout of 120% of the portion of each named executive officer's target annual bonus based on corporate performance. For purposes of 2023 annual performance-based cash compensation, which we will disclose in connection with our annual meeting of stockholders to be held in 2024, the total number of points, if all specified goals, exclusive of any stretch goals, were achieved, added to 100 points, which would yield a payout of 100% of the portion of each named executive officer's target annual bonus based on corporate performance.

Following the results of the say-on-pay vote at the 2022 Annual Meeting, and in part in response to feedback from our stockholders and others, in September 2022, our Board adopted a Clawback Policy, discussed below under "Other Compensation Policies/Assessments — Clawback Policy," applicable to our executive officers and others, as well as stock ownership guidelines, discussed below under "Other Compensation Policies/Assessments — Stock Ownership Guidelines," applicable to our executive officers and directors.

Our Compensation Committee and Board of Directors will continue to consider stockholder input and monitor our executive compensation program to ensure it aligns the interests of our named executive officers with the interests of our stockholders and adequately addresses any stockholder concerns that may be expressed in future votes. Consistent with the recommendation of our Board of Directors and the preference of our stockholders as reflected in the non-binding advisory vote on the frequency of future "say-on-pay" votes conducted at our 2021 annual meeting of stockholders, our stockholders will continue to have an opportunity annually to cast an advisory vote in connection with compensation for our named executive officers.

Executive Compensation Philosophy and Objectives

Our executive compensation program is designed to attract, retain and reward talented executives, to incentivize them based on the achievement of key performance goals, and to align their interests with the interests of our stockholders. We operate in a highly competitive and rapidly evolving industry and in a principal geography — the greater Boston, Massachusetts area — in which competition for the highly-skilled personnel capable of enabling us to achieve our mission and execute on our corporate strategy is particularly fierce. In order to help us achieve our short- and long-term financial and operational goals, we intend for total compensation, which we define as base salary, incentive cash compensation, equity compensation and benefits, to be competitive in the biopharmaceutical marketplace in which we compete for talent.

The Compensation Committee retains the authority and flexibility to vary the compensation of any individual named executive officer from the targeted pay framework, based on the unique responsibilities and requirements of his or her position, his or her experience and qualifications, internal parity relative to similar positions within our company, and individual or Company performance relative to our performance goals and to our selected peer group to ensure appropriate pay-for-performance alignment. While we do not have a formal or informal policy for allocating between long-term and short-term compensation, between cash and non-cash compensation or among different forms of non-cash compensation, historically, a majority of the compensation for our named executive officers is long-term compensation, balanced with sufficient short-term incentives to encourage consistently strong performance.

Executive Compensation Process

Role of the Compensation Committee

Pursuant to its charter and in accordance with applicable Nasdaq listing standards, our Compensation Committee is responsible for assisting our Board of Directors in fulfilling its responsibilities relating to oversight of the compensation and benefits of our executive officers, employees, and directors and administering our compensation, benefit and equity-based plans. This responsibility includes oversight of the philosophy and policies that govern our overall management compensation and benefits and of the goals and objectives relevant to compensating our executive officers. Our Compensation Committee also oversees the preparation of our CD&A and our compliance with rules regarding our stockholder advisory say-on-pay votes and our stockholder advisory vote to determine the frequency with which we hold say-on-pay votes. Our Compensation Committee also reviews and establishes the compensation of our

executive officers, other than our Chief Executive Officer, and makes recommendations to our Board of Directors with respect to our Chief Executive Officer's compensation.

Our Compensation Committee periodically reviews and evaluates the components and effectiveness of our executive compensation program to ensure that our executive compensation program is consistent with our goals and aligned with our executive compensation peer group and the marketplace in which we compete for executive talent. In conducting these reviews and evaluations, our Compensation Committee utilizes the services of an independent compensation consultant, Pearl Meyer & Partners, LLC, or Pearl Meyer, to provide advice regarding executive compensation, including with respect to the composition of our peer group, to gather peer group and other relevant executive compensation information and trends, and to analyze this information.

Our Compensation Committee generally reviews and approves the base salary, annual cash bonus and annual long-term equity incentive awards for our executive officers at the beginning of each calendar year.

Role of Management

Our Compensation Committee works with and receives information and analyses from our Chief Executive Officer and other members of our management team, including within our Human Resources, Finance and Legal departments, and considers such information and analyses in determining the structure and amount of compensation to be paid to our executive officers. Our Chief Executive Officer makes recommendations to our Compensation Committee regarding the base salaries, annual cash bonuses and equity incentive awards for our executive officers other than herself. Our management team provides information to our Compensation Committee regarding executive officer performance, market and peer group data and information, and management's recommendations and proposals regarding executive officer compensation programs and decisions affecting base salaries, cash bonuses, long-term equity incentive compensation and other compensation-related matters, including the specific performance goals to be used in our annual cash bonus program. Our Human Resources department periodically purchases third-party compensation benchmark surveys and related industry information and, in cooperation with Pearl Meyer, prepares and provides analyses to assist our Compensation Committee's evaluation and comparison of each element of executive compensation.

Our Compensation Committee may take into account these recommendations and information provided by our independent compensation consultant but is ultimately responsible for determining (or recommending, in the case of our Chief Executive Officer) the compensation of our executive officers.

Members of management, including certain of our executive officers, attend portions of our Compensation Committee's meetings; however, executive officers, including our Chief Executive Officer, are not present during discussions and decisions regarding their respective performance and compensation.

Role of Compensation Consultant

Our Compensation Committee has the sole authority and right to engage, at our expense, one or more independent compensation consultants and advisors to assist the Compensation Committee in performing its responsibilities, including to obtain information, analysis and advice regarding our executive compensation program and decision-making. For 2022 and 2023, our Compensation Committee has engaged Pearl Meyer to assist it in this regard and sets the compensation for and oversees the work of Pearl Meyer. Pearl Meyer has not been retained by management to perform any work for our company other than projects that are performed at the direction of or with the approval of the Compensation Committee and that are intended to support discussions with and decisions by the Compensation Committee.

During 2022, Pearl Meyer attended meetings of and provided the following services to our Compensation Committee, including with respect to evaluations and decisions regarding 2022 and 2023 executive officer compensation:

- reviewing and recommending revisions to the executive compensation peer group we used in 2022 and the peer group we are using in 2023;
- providing compensation information for our peer group companies and competitive data for our executive officers, directors and our employees generally;

- reviewing and recommending the base salaries, annual cash incentive award opportunities and long-term equity incentive compensation opportunities of our executive officers;
- providing guidance on the structure of executive officer equity compensation, including whether to use a percentage of shares outstanding or value-based approach;
- evaluating how our executive compensation compares to our performance and to the executive compensation of the companies in our peer group:
- providing guidance on trends in executive officer compensation, corporate governance and regulatory issues and developments;
- providing analysis of our equity plan utilization and related metrics;
- · reviewing our peer group and market equity compensation practices; and
- reviewing the "Compensation Discussion and Analysis" section of our proxy statement.

In determining to engage Pearl Meyer, our Compensation Committee considered Pearl Meyer's independence, taking into consideration relevant factors, including the absence of other services provided to Mersana by Pearl Meyer, the amount of fees Mersana paid to Pearl Meyer as a percentage of its total revenue, Pearl Meyer's policies and procedures that are designed to prevent conflicts of interest, any business or personal relationships Pearl Meyer's individual compensation advisors have with any executive officer of the Company or with any member of our Compensation Committee and any stock of the Company owned by Pearl Meyer and its individual compensation advisors. Our Compensation Committee determined, based on its analysis in light of all relevant factors, including the factors listed above, that the work of Pearl Meyer and its individual compensation advisors as compensation consultants to our Compensation Committee has not created any conflicts of interest, and that Pearl Meyer is independent pursuant to the independence standards set forth in the Nasdaq listing standards promulgated pursuant to Section 10C of the Exchange Act.

Peer Group Selection and Benchmarking

To inform executive compensation decisions and ensure the competitiveness of our executive compensation programs, our Compensation Committee benchmarks our executive compensation against the executive compensation of a peer group of publicly traded national and regional companies in the biopharmaceutical and biotechnology industries. Our Compensation Committee, with the assistance of Pearl Meyer, selects companies to include in our executive compensation peer group that on balance generally meet the following criteria at the time of selection:

- companies whose market capitalization, stage of product development and clinical advancement, and operating size (e.g., number of employees and annual research and development expense) are similar to ours;
- companies with a similar therapeutic focus (oncology) to us; and
- companies that are headquartered in the Boston, Massachusetts area or another significant biotechnology market (e.g., San Francisco, California).

Our Compensation Committee strives to identify a peer group of companies that generally reflects Mersana's profile. Our market capitalization, employee headcount and annual research and development related expenses may change year over year, and the companies within our peer group may undergo similar changes, be acquired or, in some instances, reach a different stage of overall development or change therapeutic focus. Accordingly, with the assistance of Pearl Meyer and our management, our Compensation Committee annually reviews and, as appropriate, revises our peer group composition to ensure it continues to represent our overall profile on these metrics.

For purposes of executive compensation for 2022, our Compensation Committee worked with Pearl Meyer to evaluate our peer group in September 2021. During their review, our Compensation Committee and Pearl Meyer considered how, following their prior evaluation of our peer group in September 2020, our market capitalization had meaningfully declined relative to many companies included in our peer group

for 2021, or the 2021 Peer Group. As a result, as of September 2021, Arvinas, Inc., Editas Medicine, Inc., Fate Therapeutics, Inc., SpringWorks Therapeutics, Inc. and Turning Point Therapeutics, Inc. no longer met our market capitalization criterion. Additionally, Constellation Pharmaceuticals, Inc. and Principia Biopharma Inc. were no longer publicly traded independent companies. In consultation with Pearl Meyer and management, in September 2021, our Compensation Committee modified our peer group to include companies with a market capitalization more similar to ours and selected the companies listed below as our executive compensation peers, or our 2022 Peer Group, to make executive compensation decisions following September 2021:

2022 Peer Group

Arcus Biosciences, Inc.

Codiak BioSciences, Inc.*

Cue Biopharma, Inc.

Forma Therapeutics Holdings, Inc.*

Pieris Pharmaceuticals, Inc.*

Relay Therapeutics, Inc.*

Replimune Group, Inc.

Rubius Therapeutics, Inc.*

IGM Biosciences, Inc. Scholar Rock Holding Corporation*

ImmunoGen, Inc.Syros Pharmaceuticals, Inc.Inovio Pharmaceuticals, Inc.TCR2 Therapeutics Inc.Jounce Therapeutics, Inc.*ZIOPHARM Oncology, Inc.

Kura Oncology, Inc. Zymeworks Inc.

For purposes of executive compensation for 2023, our Compensation Committee again worked with Pearl Meyer to re-evaluate our peer group in September 2022. During their review, our Compensation Committee and Pearl Meyer considered how, following their prior evaluation of our peer group in September 2021, the market capitalization of each of Codiak BioSciences, Inc., Rubius Therapeutics, Inc. and Syros Pharmaceuticals, Inc. had fallen significantly, below both our market capitalization and \$100 million as of August 2022, and therefore no longer met our market capitalization criterion. In consultation with Pearl Meyer and management, in September 2022, our Compensation Committee modified our peer group to include three new oncology-focused companies, each headquartered in Massachusetts, that have a market capitalization, stage of development and stage of clinical advancement more similar to ours. The Compensation Committee selected the companies listed below as our executive compensation peers, or our 2023 Peer Group, to make executive compensation decisions following September 2022:

2023 Peer Group

Alaunos Therapeutics, Inc. Jounce Therapeutics, Inc.

Arcus Biosciences, Inc. Kura Oncology, Inc.

Cogent Biosciences, Inc.* Pieris Pharmaceuticals, Inc. Inc.

Cue Biopharma, Inc. Relay Therapeutics, Foghorn Therapeutics, Inc.* Replimune Group, Inc.

Forma Therapeutics Holdings, Inc. Scholar Rock Holding Corporation

IGM Biosciences, Inc.

Seres Therapeutics, Inc.*

ImmunoGen, Inc.

TCR2 Therapeutics Inc.

Inovio Pharmaceuticals, Inc. Zymeworks, Inc.

^{*} The companies marked with an asterisk were added to our 2022 Peer Group. The following companies from our 2021 Peer Group were removed from our 2022 Peer Group for the reasons described above: Arvinas, Inc.; Constellation Pharmaceuticals, Inc.; Editas Medicine, Inc.; Fate Therapeutics, Inc.; Principia Biopharma, Inc.; SpringWorks Therapeutics, Inc.; and Turning Point Therapeutics, Inc.

^{*} The companies marked with an asterisk were added to our 2023 Peer Group. Alaunos Therapeutics, Inc. is the successor of ZIOPHARM Oncology, Inc. The following companies from our 2022 Peer Group

were removed from our 2023 Peer Group for the reason described above: Codiak BioSciences, Inc.; Rubius Therapeutics, Inc. and Syros Pharmaceuticals, Inc.

When setting executive pay levels, our Compensation Committee generally references competitive ranges of our peer group for cash compensation (base salary and annual performance-based cash bonuses) and equity incentive compensation. While we do not have a stated policy or principle for the allocation of compensation, we generally emphasize equity incentive compensation versus cash to retain our executives, align their interests with those of our stockholders and emphasize our pay-for-performance philosophy. Our Compensation Committee may adjust actual compensation levels with respect to our executives to reflect experience, performance levels and market factors as deemed appropriate by our Compensation Committee or the Board of Directors.

In addition to reviewing the executive compensation programs and practices of our peer group, because we compete for executive talent with many companies throughout the biopharmaceutical and biotechnology industries, our Compensation Committee also reviews and considers the executive compensation practices of companies in the broader biopharmaceutical and biotechnology sector as reported by Pearl Meyer or by comparable third parties through industry surveys and research.

Elements of Our Executive Compensation Program

There are three primary components of our executive compensation program:

- · base salary;
- annual cash bonuses based on individual and corporate performance; and
- equity incentive awards, in the form of stock options and restricted stock units, or RSUs.

In addition to these primary elements of executive compensation, we also offer our executive officers broad-based health and welfare benefits and 401(k) plan benefits consistent with the benefits we provide to our other full-time, salaried employees. Our Compensation Committee believes that each primary component of executive compensation must be evaluated and determined with reference to our peer group and other competitive market data, individual and corporate performance, our recruiting and retention goals, internal equity and consistency, and other factors and information it deems relevant. We strive to provide our executive officers with a balance of short-term and long-term equity incentives to encourage and reward consistently strong performance. Ultimately, the objective in setting the balance between long-term and short-term compensation is to ensure adequate base and short-term incentive compensation to attract and retain talent, while providing incentives to maximize long-term value for our Company and our stockholders.

These primary components of our executive compensation program are described in more detail below.

Base Salary

The purpose of base salary compensation is to attract and reward each executive with a competitive level of fixed cash compensation that is paid regularly throughout the year. Base salary is the only element of compensation that is fixed; the remainder and majority of each executive officer's potential compensation is composed of variable compensation that is designed to incentivize shorter-term (annual) or longer-term performance of the Company.

In assessing what the market would pay as base salary for a given executive officer position, our Compensation Committee (and, in the case of our Chief Executive Officer, our Board of Directors) relies on compensation information from our executive compensation peer group, as well as compensation benchmark surveys we purchase (see the section titled "*Peer Group Selection and Benchmarking*" above). Our Compensation Committee targets the 50th percentile of our peer group for executive officer base salary compensation. An individual executive officer's base salary, however, may vary from the 50th percentile peer group-level for the officer's position based on the officer's experience, knowledge, skills, education, performance and contributions to the Company. For example, for an executive officer that the Compensation Committee believes has extensive experience and greater knowledge and skills for the relevant position or

has significantly contributed to our performance may have a base salary that is greater than the 50th percentile of our peer group for a comparable position. We do not provide any automatic base salary increases to our executive officers.

Our Compensation Committee, with input from our Chief Executive Officer as to executive officers other than herself, reviews and evaluates each executive officer's base salary during the fourth quarter of each year, and our Board of Directors, based on the recommendation of our Compensation Committee, reviews and evaluates our Chief Executive Officer's base salary at the same time; final decisions regarding any changes to such base salary are typically finalized in the first quarter of the following year, retroactive to January 1. In connection with this review and evaluation, our Compensation Committee (or, in the case of our Chief Executive Officer, our Board of Directors) may adjust an executive officer's base salary, if appropriate, based on the officer's individual performance and contributions during the preceding year, changes or expected changes in the scope of the officer's responsibilities, including as a result of a promotion, changes in the base salary range of compensation at our peer group companies, the growth of or changes in our operations and the expected ease or difficulty of replacing the executive with a well-qualified replacement. Our Compensation Committee and Board of Directors also take into consideration general compensation trends within the biotechnology and biopharmaceutical industries, including trends with respect to companies that are headquartered in the Boston, Massachusetts area or another significant biotechnology market.

2022 Base Salaries

In January 2022, our Compensation Committee (or our Board of Directors, in the case of our Chief Executive Officer) reviewed and evaluated the base salaries of our executive officers as compared to benchmarking data for our 2022 Peer Group and in light of individual performance and approved the annual base salary for each of our named executive officers shown in the below table.

Name	2021 Annual Base Salary	2022 Annual Base Salary	% Increase from 2021
Anna Protopapas	\$569,250	\$605,000	6.30%
Brian DeSchuytner	\$405,099	\$421,303	4.00%
Alejandra Carvajal	\$400,000	\$414,000	3.50%
Timothy B. Lowinger, Ph.D.	\$423,563	\$450,036	6.25%
Arvin Yang, M.D	\$510,000	\$527,850	3.50%

Annual Performance-Based Cash Compensation

The purpose of our annual cash incentive program is to provide short-term variable cash compensation to incentivize and reward our executive officers to achieve or exceed our annual corporate goals as well as each officer's annual personal goals. This element of compensation reinforces our pay-for-performance philosophy and incentivizes shorter-term (annual) performance. Each executive officer is eligible for a target bonus determined as a percentage of his or her annual base salary. Our Compensation Committee (or our Board of Directors, in the case of our Chief Executive Officer) determines these target bonus percentages for each executive officer position primarily based on the range of target bonus percentages for similar positions at companies in the peer group. Our Compensation Committee (or our Board of Directors, in the case of our Chief Executive Officer) annually reviews and evaluates each executive officer's target bonus percentage. Because target bonus percentages by position tend not to be as dynamic as base salary compensation, changes to an executive officer's target bonus percentage tend to occur less frequently than changes in base salary. The target bonus percentage for each of our named executive officers other than our Chief Executive Officer for 2022 was 40%, and the target bonus percentage for our Chief Executive Officer for 2022 was 60%. The change to our Chief Executive Officer's target bonus percentage for 2022 was based on benchmarking data from our 2022 Peer Group.

In June 2017, our Board of Directors adopted our 2017 Cash Bonus Plan, or the Bonus Plan. The Bonus Plan governs the determination and payment of annual bonus amounts to certain of our executive

officers and key employees. Under the Bonus Plan, each eligible employee is eligible to receive an annual bonus based on the achievement of certain performance criteria established by the Compensation Committee at the beginning of the year.

For annual incentive bonus determinations pursuant to the Bonus Plan, we vary the weighting of personal and corporate goal performance by level within the Company, with greater emphasis placed on corporate performance for our more senior employees. Even among our executive officers, a greater emphasis is placed on corporate performance for our Chief Executive Officer than for our other executive officers, with 100% of the weight attributed to corporate goal performance for our Chief Executive Officer, as compared to 75% of the weight attributed to corporate goal performance and 25% of the weight attributed to individual performance, as subjectively determined by our Compensation Committee in consultation with our Chief Executive Officer, for our other executive officers. We believe this policy aligns our Chief Executive Officer's performance with that of the Company as a whole and aligns our other executive officers' performance with the Company as a whole while still incentivizing personal performance, which is generally more aligned with the performance of the functional area that each executive officer leads. In addition, our executive officers have a greater opportunity to significantly impact our corporate goal performance given their positions and responsibilities. With respect to the individual performance weighting for each executive officer other than our Chief Executive Officer, each such executive officer can achieve up to 115% of such portion of his or her target bonus based on the individual performance ranking achieved in such year. The formula utilized to calculate each executive officer's, other than our Chief Executive Officer's, annual incentive bonus is as follows:

At the end of the year or early in the following calendar year, our Compensation Committee reviews our performance and the individual performance of each of our executive officers, including our named executive officers, to determine the amount of annual bonus payments to be paid for the year. It is at our Compensation Committee's discretion to grant individual awards at, below, or above target based on corporate performance and individual performance. In January 2023, our Board of Directors approved the 2022 annual bonus payment to the Chief Executive Officer based on our Compensation Committee's recommendation, and our Compensation Committee approved the 2022 annual bonus payments to the other executive officers.

2022 Corporate Performance Goals

In January 2022, our Compensation Committee approved the corporate performance goals and weighting for calendar year 2022 as set forth under "Potential Base Points" in the table below.

The total number of points, if all specified goals were achieved, added to 120 points, which would yield a payout of 120% of the portion of each named executive officer's target annual bonus based on corporate performance. We purposely set our goals at challenging levels and believe that achieving a corporate performance percentage exceeding 100% would be based on the Compensation Committee's determination of exceptional corporate performance. Additionally, our Compensation Committee approved several stretch goals for 2022, which, if achieved, would have contributed up to 15 additional points, yielding a maximum potential corporate performance level of 135%. In light of these potential corporate goal achievement levels and the weighting of corporate and personal goals under our Bonus Plan, in 2022, our Chief Executive Officer was eligible to receive a maximum of 135% of her target bonus, and each of our other executive officers was eligible to receive a maximum of 128.75% of his or her target bonus.

In January 2023, our Compensation Committee evaluated our achievement of the 2022 corporate objectives. The Compensation Committee considered whether we had achieved specific objectives underlying each of the foregoing corporate performance goals; whether we had achieved the specified stretch goals, where applicable; management's self-assessment; and our overall corporate performance in 2022. Based on these considerations, the Compensation Committee determined that we had achieved most of our clinical and pipeline objectives and overachieved with respect to one of our business operation and growth objectives.

As a result, the Compensation Committee approved an overall 120% achievement of our 2022 corporate objectives, based in particular on the following determinations and in light of the accomplishments described earlier in this Compensation Discussion and Analysis section under "Executive Summary — 2022 and Early 2023 Financial and Business Highlights":

Goal	Potential Base Points	Actual Base Points	Actual Stretch Points
UpRi			
• Advance UpRi development in preparation for potential future submission of a Biologics License Application, or BLA	25	25	
• Execute stage-appropriate preparations for potential commercialization of UpRi, assuming approval of BLA	5	5	
• Achieve site and cohort initiation and enrollment objectives for our UPGRADE-A clinical trial and disclose data in connection therewith	15	10	
Initiate our UP-NEXT Phase 3 clinical trial	15	10	
Pipeline & Continued Innovation			
• Determine whether to continue development of XMT-1592	2	2	
• Establish a secure supply chain to support our Dolasynthen platform	3	3	
Advance XMT-1660 into the clinic	10	10	
Advance XMT-2056 into the clinic	10	10	
• Continue research and development work related to our pre-clinical product candidate pipeline and platforms, including with respect to our strategic collaborations	15	15	
Corporate			
• Maintain a strong balance sheet and execute new business development transactions that meet our strategic objectives for our platforms and	1.5	1.5	10
 Product candidates	15 5	15 5	10
· iviaintain a strong organization	3	3	
Total	120	110	10

Our Compensation Committee determined that we had not achieved our objectives with respect to each of our UPGRADE-A and UP-NEXT clinical trials due to delays that caused us to miss our original timing objectives for the initiation of patient dosing for those trials, including with respect to the dose expansion cohort of the UPGRADE-A trial. Additionally, our Compensation Committee determined that we had significantly overachieved with respect to our balance sheet and business development goal in light of our \$280.7 million in cash, cash equivalents and marketable securities as of December 31, 2022 and the three significant business development transactions we entered into with Janssen, GSK and MRKDG in 2022.

2022 Individual Performance

The performance for the 2022 fiscal year of each of our named executive officers, other than our Chief Executive Officer, was reviewed by our Compensation Committee in consultation with our Chief Executive Officer, and each executive's performance was then subjectively assessed. Our Compensation Committee, after consulting with our Chief Executive Officer, assigned an achievement percentage for each such executive. For 2022, the target annual bonus for each named executive officer, the corporate and individual goal weighting and achievement, and the amount paid to those individuals is as set forth in the table below.

Based on the above, the Compensation Committee (or, in the case of our Chief Executive Officer, our Board of Directors) awarded 2022 bonuses, paid in cash during the first quarter of 2023, to our named executive officers as follows:

Name and Position	Target Bonus (% of Base Salary)	Corporate Goal Achievement	Weight of Corporate Goal Achievement	Individual Performance Achievement		Bonus Amount Paid (\$)	Bonus Amount Paid (% of Target Bonus)
Anna Protopapas, President and Chief Executive Officer	60%	120%	100%	_	_	435,600	120.00%
Brian DeSchuytner, Senior Vice President, Chief Financial Officer	40%	120%	75%	110%	25%	198,012	117.50%
Alejandra Carvajal, Senior Vice President, Chief Legal Officer	40%	120%	75%	105%	25%	192,510	116.25%
Timothy B. Lowinger, Ph.D., Senior Vice President, Chief Science & Technology Officer	40%	120%	75%	105%	25%	209,267	116.25%
Arvin Yang, M.D., Senior Vice President, Chief Medical Officer	40%	120%	75%	105%	25%	245,450	116.25%

Long-Term Equity Incentive Compensation

Long-term equity incentive compensation is the largest portion of each executive's overall compensation and is variable and at-risk. Because the drug development process is lengthy, generally taking many years and requiring long-term investments that have a substantial risk of failure, we believe it is appropriate that this element of compensation represents the largest potential portion of each executive's overall compensation to focus our executive officers on long-term success. This element of compensation is comprised of equity awards that we grant in connection with the start of each executive officer's employment and annual grants of long-term equity incentive equity awards. These equity awards generally vest over several years to focus our executives on our success over a multi-year period and promote the retention of our executive officers.

We also design our long-term equity awards to remain competitive in the recruitment and retention of executive officers and other employees. We generally target both our annual awards and new hire awards of long-term equity incentive compensation to be at approximately the median of our peer group, when considering the size of awards on an option-equivalent, percentage-of-shares-outstanding basis. Like short-term incentive compensation, no executive officer is guaranteed to receive any equity awards or awards of a certain value.

Since 2020, we have used a combination of stock options and RSUs as the primary equity award instruments for long-term equity incentive compensation. This practice is consistent with the long-term equity incentive compensation practices of our peer group. Stock option awards provide our executive officers with the right to purchase shares of our common stock at a fixed exercise price equal to the closing price of our common stock on the date of grant. Each RSU represents a contingent right to receive one share of our common stock. Stock options and RSUs typically vest over four years subject to the executive's continued service with us; awards to newly hired executive officers typically have a one-year cliff, while annual awards do not. We believe these features provide an appropriate long-term equity incentive and reward the option holder only to the extent that our stock price increases and stockholder value increases. As a company that relies heavily on the use of stock options and RSUs to align the interests of employees, including our named executive officers, with the interests of stockholders, we do not believe that the accounting grant date fair value should be the primary determinant of award size. Stock prices of non-commercial drug development companies are highly volatile and influenced by factors outside of our control. As a result, valuebased determinations can be difficult because employees may be rewarded with more shares due to decreases in our stock price or penalized with fewer shares due to increases in our stock price even over short time periods.

As with the other elements of compensation, our Compensation Committee, with the assistance of Pearl Meyer, reviews preliminary market-based recommendations for annual equity awards and awards made in connection with an executive's hire or promotion based on our peer group and survey data. Our Compensation Committee then considers recommendations from our Chief Executive Officer for equity

awards for executive officers (other than herself) and approves equity awards for all of our executive officers, with the exception of our Chief Executive Officer, whose grant is approved by our Board of Directors upon the recommendation of our Compensation Committee. In evaluating the target size of equity grant awards for executive officers, our Compensation Committee takes into consideration market and peer group data regarding long-term incentive compensation to ensure our grants are competitive. We balance this with a consideration of the aggregate number of share-based awards we expect to grant during the calendar year as compared to the total number of shares outstanding, which is referred to as our burn rate, and the number of share-based incentive awards outstanding as compared to the total number of shares outstanding, which is referred to as our overhang. Our Compensation Committee also takes into consideration each executive officer's performance and contributions to the company, the recommendations of our Chief Executive Officer (except with respect to herself) and the amount of the executive officer's owned, vested and unvested equity holdings.

For our executives in 2022, our Compensation Committee determined it was again appropriate to target approximately 75% of the value of long-term equity incentive compensation in the form of stock options and the remaining approximately 25% of the value in the form of RSUs. The Compensation Committee believed that this equity mix helps to ensure that wealth creation remains tied to stock performance (through stock options) and to promote retention (via RSUs that vest over time to deliver comparable value to stock options as of the grant date while using fewer authorized shares).

After considering the factors described above, in January 2022, our Compensation Committee approved annual grants to our named executive officers (other than our Chief Executive Officer) of the stock options and RSUs shown in the table below, and our Board of Directors approved the annual grant show below to our Chief Executive Officer.

Name	Stock Options (#) ⁽¹⁾	RSUs (#) ⁽²⁾
Anna Protopapas	301,450	67,000
Brian DeSchuytner	112,500	25,000
Alejandra Carvajal ⁽³⁾	45,000	10,000
Timothy B. Lowinger, Ph.D.	86,250	19,167
Arvin Yang, M.D.	127,500	28,333

- (1) Each of these stock option awards has an exercise price of \$6.28 and vests in equal quarterly installments over the first four years after the vesting commencement date, January 14, 2022, subject to continued employment through the applicable vesting date.
- (2) These RSUs vest over four years in four equal annual installments beginning on the first anniversary of the grant date, subject to continued employment through the applicable vesting date.
- (3) Ms. Carvajal joined the Company in April 2021. As such, Ms. Carvajal received a prorated equity award in connection with the Company's annual equity grants in 2022 to reflect her partial-year service in 2021.

Benefits Programs and Perquisites

Our executive officers, including our named executive officers, are eligible to participate in all of our employee benefit plans, including our medical, dental, vision, group life and disability insurance plans, on the same basis as our other salaried employees. We pay the premiums for term life insurance and disability insurance for all of our employees, including our named executive officers. We do not maintain any defined benefit pension or non-qualified deferred compensation plans.

All of our full-time employees in the United States, including our named executive officers, are eligible to participate in our 401(k) plan, which is a retirement savings defined contribution plan established in accordance with Section 401(a) of the Internal Revenue Code of 1986, as amended (the "Code"). Pursuant to our 401(k) plan, employees may elect to defer their eligible compensation on a pre-tax basis, up to the statutorily prescribed annual limits and to have the amount of this deferral contributed to our 401(k) plan.

The 401(k) plan also permits us to make discretionary employer contributions and matching contributions, subject to IRS limits. For 2022, we matched one hundred percent (100%) of the first four percent (4%) of the eligible compensation contributed by participating employees, up to seven thousand dollars (\$7,000), which matching contributions are fully vested after one year of employment.

We do not provide any other perquisites or personal benefits to our named executive officers, and we do not provide any tax gross-up payments to our named executive officers.

Other Features of our Executive Compensation Program

Executive Employment Agreements

Each of our named executive officers is party to a letter agreement with us that sets forth the terms and conditions of the executive's employment with us. Each letter agreement provides for at-will employment with us. Each letter agreement sets forth the executive's base salary, which is eligible for potential discretionary merit increases, and target annual bonus (expressed as a percentage of base salary). Each of our named executive officers is also party to our standard nondisclosure, noncompetition and assignment of intellectual property agreement. Pursuant to their letter agreements, each of the named executive officers is also entitled to certain compensation and benefits upon termination of his or her employment in certain circumstances, including following a change in control. We believe that these severance benefits are an important element of our executive compensation and retention program, particularly in the context of a corporate transaction where provision of such benefits eliminates, or at least reduces, the potential reluctance of our executive officers to diligently consider and pursue potential transactions that may be in the best interests of our stockholders. We also believe that our severance arrangements with our named executive officers are consistent with compensation arrangements provided in a competitive market for executive talent and that the events triggering payment represent appropriate hurdles for the severance benefits. The severance benefits provided under these letter agreements are described under "— Payments on Termination of Employment or Change in Control Benefits" below.

Other Compensation Policies/Assessments

Risk Assessment

Our Compensation Committee recognizes that providing certain types of compensation incentives may inadvertently motivate individuals to act in ways that could be detrimental to the Company in order to maximize personal compensation. To minimize such risk, our Compensation Committee reviews at least annually the overall structure and components of our compensation program and, with respect to our executive officers, the levels of compensation under such program. Our Compensation Committee has reviewed our compensation program and has determined that it does not encourage inappropriate actions or risk taking and is not reasonably likely to have a material adverse effect on our business. In addition, we do not believe that the mix and design of the components of our executive compensation program encourage our executive officers to assume excessive risks. We believe that our compensation programs, current business process and planning cycle foster the behaviors and controls that would mitigate the potential for adverse risk, including the following:

- base salaries that are consistent with our executive officers' responsibilities and market data and that are established to ensure that our executive officers would not be motivated to take excessive risks to achieve a reasonable level of financial security;
- corporate objectives for our annual bonus program for our executive officers that are consistent with our annual operating and strategic plans, that are designed to achieve the proper risk/reward balance, and that should not require excessive risk taking to achieve;
- the mix between fixed and variable, annual and long-term and cash and equity compensation is designed to encourage strategies and actions that balance our short-term and long-term best interests; and
- stock option and RSU awards vest over a period of time, which we believe encourages executives to take a long-term view of our business.

Clawback Policy

As a public company, if we are required to restate our financial results due to our material noncompliance with any financial reporting requirements under the federal securities laws as a result of misconduct, the Chief Executive Officer and Chief Financial Officer may be legally required, in accordance with the provisions of Section 304 of the Sarbanes-Oxley Act of 2002, to reimburse Mersana for any bonus or other incentive-based or equity-based compensation they received.

In addition, in September 2022, in part in response to feedback from our stockholders and others, we adopted a Clawback Policy applicable to our executive officers, our principal accounting officer and such other employees or classes of employees as our Board of Directors may determine from time to time, or the Covered Persons. The Clawback Policy covers cash and equity incentive-based compensation paid to such Covered Persons and provides that if (i) we are required to prepare an accounting restatement for periods that end after the effective date of the policy, (ii) a current or former Covered Person received incentive-based compensation based on erroneous data, and (iii) the Board of Directors determines that such Covered Person's acts or omission caused or partially caused the circumstances requiring the restatement, and such Covered Person's actions involved either intentional misconduct or an intentional violation of our rules or any applicable legal or regulatory requirement or fraud in the course of such Covered Person's employment or other engagement with us, we will use reasonable efforts to recover from such Covered Person all or a portion of any incentive-based compensation during the three-year period preceding the date on which we are required to prepare the restatement. Additionally, the Clawback Policy provides that if (i) we are required to prepare an accounting restatement for periods that end after the effective date of the policy and (ii) a current or former Covered Person received incentive-based compensation based on erroneous data in excess of what would have been paid to such officer under the restated financial statements, our Board of Directors may seek to recover from any current or former Covered Person all or a portion of the excess incentivebased compensation received by such Covered Person during the three-year period preceding the date on which we are required to prepare the restatement.

Once Nasdaq's proposed listing standards, pursuant to SEC rules and the Dodd-Frank Wall Street Reform and Consumer Protection Act, become effective, we intend to adopt a revised Clawback Policy consistent with the new requirements.

Stock Ownership Guidelines

In September 2022, in part in response to feedback from our stockholders and others, we adopted stock ownership guidelines applicable to our non-employee directors and our executive officers intended to further align the interests of our leadership with those of our stockholders. The stock ownership guidelines require that our Chief Executive Officer must hold equity worth at least three times his or her base salary, that each of our other executive officers must hold equity worth at least one times his or her base salary, and each of our non-employee directors must hold equity worth at least three times of the cash portion of the base annual retainer for regular service on the Board of Directors. The following forms of equity will count toward the ownership guidelines: shares owned outright, vested and unvested restricted stock units and any other vested grants or account balances under share-based company compensation plans. Unexercised, vested stock options and unvested stock options will not count toward the ownership guidelines. Compliance with the guidelines will be determined as of June 30 each year, and newly promoted, appointed or elected persons have five years to achieve compliance with the guidelines. Our current executive officers and non-employee directors are expected to accumulate the applicable stock ownership level by June 30, 2028, which also reflects a five-year period to achieve compliance with the guidelines.

Insider Trading Policy & Hedging and Pledging Restrictions

Our insider trading policy prohibits our employees, including our named executive officers, as well as our directors and certain family members and controlled entities of our employees and our directors, from engaging in short sales, transactions in put or call options, hedging transactions or other inherently speculative transactions with respect to our securities at any time. We may also determine that other persons should be subject to the policy, such as contractors or consultants who have access to material nonpublic information about Mersana. In addition, persons subject to the policy are prohibited from holding Mersana securities in a margin account or otherwise pledging our securities as collateral for a loan. Our window period policy

provides that certain of our employees, including our executive officers, and our non-employee directors are required to limit their transactions in the Company's stock to defined time periods following public dissemination of quarterly and annual financial results and to seek pre-clearance from our Chief Legal Officer or her designee prior to engaging in transactions in the Company's stock.

Accounting and Tax Considerations

Under ASC 718, the Company is required to estimate and record an expense for each award of equity compensation over the vesting period of the award. We record share-based compensation expense on an ongoing basis according to ASC 718.

Report of the Compensation Committee of the Board of Directors

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with our management. Based on this review and discussion, the Compensation Committee recommended to our Board of Directors that the Compensation Discussion and Analysis be included in this Proxy Statement.

This report of the Compensation Committee is not "soliciting material," shall not be deemed "filed" with the Securities and Exchange Commission and shall not be incorporated by reference by any general statement incorporating by reference this Proxy Statement into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing, except to the extent that we specifically incorporate this information by reference, and shall not otherwise be deemed filed under such acts.

The foregoing report has been furnished by the Compensation Committee.

Members of the Compensation Committee of Mersana Therapeutics, Inc.

David Mott, Chair Allene M. Diaz Martin Huber, M.D.

2022 Summary Compensation Table

The following table sets forth the compensation awarded to, earned by, or paid to our named executive officers in respect of their service to the Company for the fiscal years ended December 31, 2022, and, if applicable, December 31, 2021 and December 31, 2020.

Name and Principal Position	Year	Salary (\$)	Stock Awards (\$) ⁽¹⁾	Option Awards (\$) ⁽²⁾	Non-Equity Incentive Plan Compensation (\$) ⁽³⁾	All Other Compensation (\$) ⁽⁴⁾	Total (\$)
Anna Protopapas	2022	605,000	420,760	1,377,747	435,600	7,000	2,846,107
President and Chief Executive	2021	569,250	1,792,650	5,632,504	276,086	7,000	8,277,490
Officer	2020	550,000	436,331	1,220,079	324,500	7,000	2,537,911
Brian DeSchuytner	2022	421,303	157,000	514,170	198,012	7,000	1,297,485
Senior Vice President, Chief	2021	405,099	527,250	1,656,619	158,394	7,000	2,754,362
Financial Officer	2020	391,400	97,531	272,724	181,610	7,000	950,265
Alejandra Carvajal ⁽⁵⁾	2022	414,000	62,800	205,668	192,510	_	874,978
Senior Vice President, Chief Legal Officer	2021	274,359	449,970	1,346,209	107,712	_	2,178,250
Timothy B. Lowinger, Ph.D	2022	450,036	120,369	394,197	209,267	7,000	1,180,869
Chief Science and Technology	2021	423,563	615,132	1,932,722	167,731	7,000	3,146,148
Officer	2020	409,240	195,069	545,447	189,887	7,000	1,346,643
Arvin Yang, M.D. ⁽⁶⁾	2022	527,850	177,931	582,726	245,450	7,000	1,540,957
Senior Vice President, Chief Medical Officer	2021	510,000	_	_	201,960	$157,000^{(7)}$	868,960
	2020	44,462	942,760	3,523,840	_	_	4,511,062

- (1) Amounts represent the aggregate grant date fair value of RSU awards granted to our named executive officers in 2020, 2021 and 2022, as applicable, computed in accordance ASC Topic 718, and excluding the effect of estimated forfeitures related to service-based vesting conditions. The assumptions used in the valuation of these RSU awards are set forth in Note 10 to our financial statements included in our 2022 Annual Report.
- (2) Amounts represent the aggregate grant date fair value of stock option awards granted to our named executive officers in 2020, 2021 and 2022, as applicable, computed in accordance with ASC Topic 718 and excluding the effect of estimated forfeitures related to service-based vesting conditions. The assumptions used in the valuation of these option awards are set forth in Note 10 to our financial statements included in our 2022 Annual Report.
- (3) Unless otherwise stated, amounts represent the annual cash bonuses paid to our named executive officers for 2020, 2021 and 2022, as applicable, in accordance with our Bonus Plan.
- (4) Unless otherwise stated, amounts represent 401(k) matching contributions for 2020, 2021 and 2022, as applicable.
- (5) Ms. Carvajal's employment with us began on April 26, 2021. The 2021 salary and bonus amounts reported in the table represent the amounts actually earned by her for 2021 after commencing employment with us.
- (6) Dr. Yang's employment with us began on November 30, 2020. The 2020 salary amount reported in the table represent the amount actually earned by him after commencing employment with us. Dr. Yang was not eligible to receive an annual cash bonus in accordance with our Bonus Plan for 2020 or an annual equity award in 2021.
- (7) Includes \$150,000 paid to Dr. Yang in connection with his relocation to the Boston metropolitan area following his commencement of employment by us in November 2020.

Pay Ratio Disclosure

As required by Section 953(b) of the Dodd-Frank Act and Item 402(u) of Regulation S-K, we are required to disclose the ratio of the annual total compensation of the individual identified as our paid median employee to the annual total compensation of our principal executive officer, our Chief Executive Officer. The paragraphs that follow describe our methodology and the resulting pay ratio.

We identified our median employee using our employee population as of December 31, 2022 by (i) aggregating for each applicable employee (A) annual base salary for salaried employees (or hourly rate multiplied by expected annual work schedule, for hourly employees), (B) actual bonus for 2022 and (C) the grant date fair value of any annual or new hire equity awards granted during the fiscal year ended December 31, 2022 and (ii) ranking this aggregated compensation measure for our employees (excluding our Chief Executive Officer) from highest to lowest. Salaries or wages for those employees hired during 2022 were annualized. Once the median employee was identified, we calculated the median employee's annual total compensation in accordance with the rules applicable to the Summary Compensation Table.

The total compensation for 2022 for our median employee, identified as discussed above, was \$243,051. Our chief executive officer's compensation as reported in the Summary Compensation Table was \$2,846,107. Therefore, our pay ratio is approximately 12 to 1.

The pay ratio reported above is a reasonable estimate calculated in a manner consistent with SEC rules based on our internal records and the methodology described above. The SEC rules for identifying the median compensated employee and calculating the pay ratio based on that employee's annual total compensation allow companies to adopt a variety of methodologies, to apply certain exclusions, and to make reasonable estimates and assumptions that reflect their employee populations and compensation practices. Therefore, the pay ratio reported by other companies may not be comparable to the pay ratio reported above, as other companies have different employee populations and compensation practices and may utilize different methodologies, exclusions, estimates and assumptions in calculating their own pay ratios.

Pay Versus Performance

In accordance with rules adopted by the SEC pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, we provide the following tables and related disclosures regarding (i) the "total compensation" of our principal executive officer, or the PEO, and our other named executive officers, or the Non-PEO NEOs, (ii) the "Compensation Actually Paid," or CAP, to our PEO and non-PEO NEOs, (iii) certain performance measures for the fiscal years listed below and (iv) the relationship of CAP to those performance measures. The section entitled "Compensation Discussion & Analysis" above describes the compensation setting process for our executive officers, which is done independently from the disclosure requirements.

Pay Versus Performance Table

The following table provides the information required for our PEO and non-PEO NEOs for each of the fiscal years ended December 31, 2022, December 31, 2021, and December 31, 2020, along with the required financial information required for each fiscal year. We are a pre-commercial biotechnology company and as such, we did not derive any revenue from the sales of any products during the periods presented and have not reached the stage of profitability. Consequently, we have not historically focused on net income (loss) as a performance measure for our executive compensation program. Additionally, our Compensation Committee does not utilize total stockholder return, or TSR, in our executive compensation program. However, we do utilize several other operational corporate performance measures to align executive compensation with our performance. As described in more detail above in the section entitled "Compensation Discussion and Analysis — Elements of Our Executive Compensation Program — 2022 Corporate Performance Goals," part of the compensation our PEO and Non-PEO NEOs are eligible to receive consists of annual performance-based cash bonuses that are designed to provide appropriate short-term incentives to our executives to achieve defined annual corporate goals, as well as equity awards designed to provide long-term incentives to our executives to maximize long-term value for our stockholders and to encourage our executive officers to continue in our employment for the long-term.

			Average Summary	Average Compensation	Value of Initial Fixed \$100 Invested Based on:		
Year	Summary Compensation Table Total for the PEO ⁽¹⁾	Compensation Actually Paid to the PEO ⁽¹⁾⁽²⁾⁽³⁾ \$	Compensation Table Total for Non-PEO NEOs ⁽⁴⁾ \$	Actually Paid to Non-PEO NEOs ⁽²⁾⁽³⁾⁽⁴⁾ \$	Total Shareholder Return \$	Peer Group Total Shareholder Return ⁽⁵⁾ \$	Net Loss (in millions)
2022	2,846,107	2,407,215	1,223,572	1,080,049	102.27	113.65	(204.2)
2021	8,277,490	(6,779,147)	2,409,043	(1,359,951)	108.55	126.45	(170.1)
2020	2,537,911	16,408,286	2,005,448	6,137,843	464.40	126.42	(88.0)

⁽¹⁾ The PEO for all three fiscal years is Anna Protopapas.

⁽²⁾ The following tables describe deductions from, and additions to, total compensation in the Summary Compensation Table by year to calculate CAP. The Summary Compensation Table Amounts and CAP to not reflect the actual amount of compensation earned by or paid to our executives during the applicables years but rather are amounts determined in accordance with Item 402 of Regulation S-K under the Exchange Act.

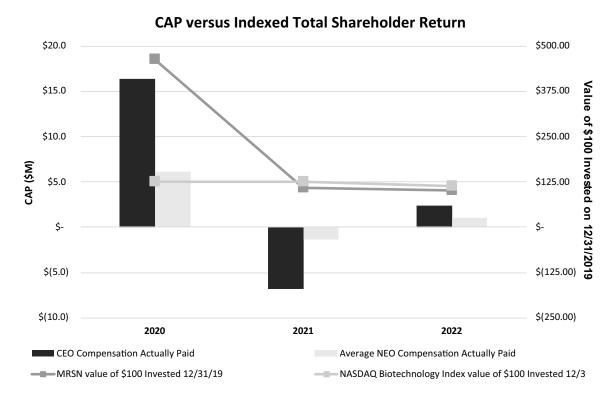
	2022				2021				2020						
	PEG)	No	Average on-PEO NEOs		PEO			Average Non-PEO NEOs		PEO		No	verage on-PEO NEOs	
Total Compensation from Summary Compensation Table	\$ 2,846	5,107	\$1,	223,572	\$	8,277,	,490	\$ 2	2,409,04	3 \$	5 2,537,91	1 5	\$ 2,	,005,448	
Adjustments for Equity Awards															
Adjustment for grant date values in the Summary Compensation Table	\$(1,798	3,507)	\$ (553,715) \$	(7,425,	,154)	\$(1,981,41	9) \$	6 (1,656,41	1) 5	\$(1,	,550,241))
Year-end fair value of unvested awards granted in the current year	\$ 1,441	,736	\$	443,872	\$	1,538,	,348	\$	430,62	1 \$	5 7,965,820	0 5	\$ 3,	,341,447	
Year-over-year difference of year-end fair values for unvested awards granted in prior years	\$ (196	5,633)	\$	(58,515) \$	(6,105,	,508)	\$(1,108,78	6) \$	5 5,655,17	5 \$	\$ 1,	,717,828	
Fair values at vest date for awards granted and vested in current year	\$ 226	5,105	\$	69,615	\$	567,	,422	\$	146,67	5 \$	822,26	0 5	\$	215,235	
Difference in fair values between prior year-end fair values and vest date fair values for awards granted in prior years	\$ (111	,593)	\$	(44,780) \$	(3,631,	,746)	\$	(661,38	7) \$	5 1,083,533	2 \$	\$	408,127	
Forfeitures during current year equal to prior year-end fair value	\$	_	\$	_	\$			\$	(594,699	9) \$	S –	_ 5	\$	_	
Total Adjustments for Equity Awards															
Compensation Actually Paid (as calculated)	\$ 2,407	,215	<u>\$1,</u>	080,049	\$	(6,779,	<u>,147</u>)	\$ (:	1,359,95	1) \$	516,408,28	6 5	\$ 6,	,137,843	

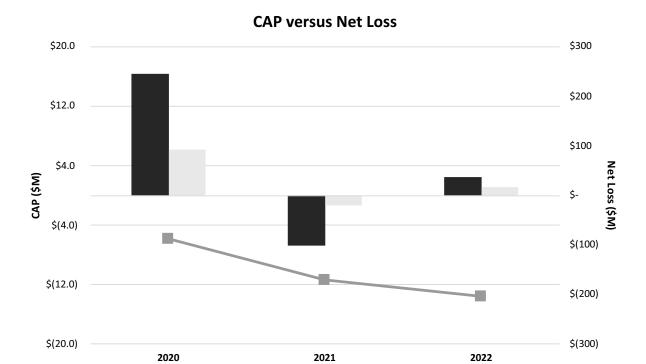
(3) Valuation assumptions used to calculate fair values as of vesting dates and fiscal year end did not materially differ from those used to calculate fair values at the time of grant as reflected in the Summary Compensation Table amounts, except that the volatility assumptions used to calculate fair values at date of vesting and fiscal year end are based solely on available volatility data for our common stock. Due to a lack of historical volatility data for our common stock, the expected volatility utilized for the purposes of calculating the grant date fair value was determined based on a blended rate of the historical volatility of our common stock combined with the historical volatility of comparable publicly traded companies. The other assumptions used in the valuation of equity awards are set forth in Note 10 to our financial statements included in our 2022 Annual Report.

- (4) Non-PEO NEOs reflect the average Summary Compensation Table total compensation and average CAP for the following executives by year:
 - 2022: Alejandra Carvajal, Brian DeSchuytner, Timothy B. Lowinger, Ph.D. and Arvin Yang, M.D.
 - 2021: Alejandra Carvajal, Brian DeSchuytner, Michael Kaufman, Ph.D., Timothy B. Lowinger, Ph.D. and Tushar Misra, Ph.D.
 - 2020: Brian DeSchuytner, Michael Kaufman, Ph.D., Timothy B. Lowinger, Ph.D. and Arvin Yang, M.D.
- (5) The Peer Group Total Shareholder Return set forth in this table utilizes the NASDAQ Biotechnology Index, which we also utilize in the stock performance graph required by Item 201(e) of Regulation S-K included in our 2022 Annual Report. The comparison assumes \$100 was invested for the period starting December 31, 2019, through the end of the listed year in the company and in the NASDAQ Biotechnology Index, respectively. Historical stock performance is not necessarily indicative of future stock performance.

Relationships Between Compensation Actually Paid to our NEOs and Performance Measures

The following charts show the relationships over the past three years of the CAP for our PEO and Non-PEO NEOs as compared to our cumulative TSR and the cumulative NASDAQ Biotechnology Index TSR and as compared to our net loss, as well as the relationship between our cumulative TSR and the cumulative NASDAQ Biotechnology Index TSR.





Average NEO Compensation Actually Paid

CEO Compensation Actually Paid

Grants of Plan-Based Awards

The following table shows information regarding grants of plan-based awards during the fiscal year ended December 31, 2022 to our named executive officers.

Estimated future payouts under non-equity incentive plan awards

Name	Grant date	Threshold (\$)	Target (\$)	Maximum (\$)	All other stock awards: Number of shares of stock or units (#)	All other option awards: Number of securities underlying options (#)	Exercise or base price of option awards (\$/share)	Grant date fair value of stock and option awards (\$)^{(4)}
Anna Protopapas	(1)		363,000	490,050				
	1/14/2022 ⁽²⁾		_	_	67,000	_	_	420,760
	1/14/2022 ⁽³⁾		_	_	_	301,450	6.28	1,377,747
Brian DeSchuytner	(1)		168,521	219,078	_	_		_
	1/14/2022 ⁽²⁾		_	_	25,000	_		157,000
	1/14/2022 ⁽³⁾		_	_	_	112,500	6.28	514,170
Alejandra Carvajal	(1)		165,600	215,280	_	_	_	_
	1/14/2022 ⁽²⁾		_	_	10,000	_	_	62,800
	1/14/2022 ⁽³⁾		_		_	45,000	6.28	205,668
Timothy B. Lowinger, Ph.D	(1)		180,014	234,019	_	_	_	_
	1/14/2022 ⁽²⁾		_	_	19,167	_		120,369
	1/14/2022 ⁽³⁾	_	_	_	_	86,250	6.28	394,197
Arvin Yang, M.D	(1)	_	211,140	274,482	_	_	_	_
	1/14/2022 ⁽²⁾	_	_	_	28,333	_	_	177,931
	1/14/2022 ⁽³⁾	_	_	_	_	127,500	6.289	582,726

⁽¹⁾ Amounts represent the threshold, target and maximum annual cash bonus opportunities for our named executive officers for 2022 under our Bonus Plan. The amount reported in the threshold column represents the minimum award value that could be received, which is zero. The amount listed in the target column represents each named executive officer's target annual bonus for 2022. The amount listed in the maximum column represents each named executive officer's maximum annual cash bonus opportunity for 2022, computed assuming 135% of the portion of the annual cash bonus payable based on corporate performance and 115% of the portion of the annual cash bonus payable based on individual performance is paid. The actual cash bonus that was paid to each of our named executive officers in respect of 2022 performance is reported in the Summary Compensation Table above in the "Non-equity Incentive Plan Compensation" column.

⁽²⁾ Represents RSU awards granted to our named executive officers in 2022. The RSUs vest over four years in four equal annual installments beginning on the first anniversary of the grant date, subject to continued employment through the applicable vesting date.

⁽³⁾ Represents stock options granted to our named executive officers in 2022. The stock options vest in equal quarterly installments over the first four years after the grant date, subject to continued employment through the applicable vesting date.

⁽⁴⁾ Amounts represent the aggregate grant date fair value of RSU and stock option awards granted to our named executive officers, computed in accordance with ASC Topic 718 and excluding the effect of estimated forfeitures related to service-based vesting conditions. The assumptions used in the valuation of these awards are set forth in Note 10 to our financial statements included in our 2022 Annual Report.

Outstanding Equity Awards at Fiscal Year-End Table

The following table sets forth information concerning the outstanding equity awards held by each of our named executive officers as of December 31, 2022.

		Option Awards			Stock Awards		
Name	Number of securities underlying unexercised options exercisable (#)	Number of securities underlying unexercised options unexercisable (#)	Option exercise price (\$/share)	Option expiration date	Number of Shares or Units of Stock that Have Not Vested (#)	Market Value of Shares or Units of Stock Tha Have Not Vested ⁽¹⁾ (\$)	
Anna Protopapas	748,366		1.53	5/7/2025			
	158,958	_	4.10	8/29/2026			
	66,666	_	6.98	3/13/2027			
	200,000	_	14.23	2/1/2028			
	203,905	$13,595^{(2)}$	3.51	1/22/2029			
	219,140	$99,610^{(3)}$	6.16	1/14/2030			
	167,343	215,157 ⁽⁴⁾	21.09	1/14/2031			
	56,521	244,929 ⁽⁵⁾	6.28	1/13/2032			
					35,416 ⁽⁶⁾	207,538	
					$63,750^{(7)}$	373,575	
					$67,000^{(8)}$	392,620	
Brian DeSchuytner	195,000	$45,000^{(9)}$	3.99	7/9/2029			
	48,984	$22,266^{(3)}$	6.16	1/14/2030			
	49,218	63,282 ⁽⁴⁾	21.09	1/14/2031			
	21,093	91,407 ⁽⁵⁾	6.28	1/13/2032			
					$7,916^{(6)}$	46,388	
					$18,750^{(7)}$	109,875	
					$25,000^{(8)}$	146,500	
Alejandra Carvajal	42,188	$70,312^{(10)}$	16.98	4/25/2031			
	8,438	$36,562^{(5)}$	6.28	1/13/2032			
					$13,250^{(11)}$	77,645	
					$10,000^{(8)}$	58,600	
Timothy B. Lowinger, Ph.D	103,868	_	1.53	6/11/2025			
	45,854	_	4.10	8/29/2026			
	56,884	_	14.23	2/1/2028			
	24,378	$3,750^{(2)}$	3.51	1/22/2029			
	55,666	44,532 ⁽³⁾	6.16	1/14/2030			
	57,421	73,829 ⁽⁴⁾	21.09	1/14/2031			
	16,171	$70,079^{(5)}$	6.28	1/13/2032			
					15,833 ⁽⁶⁾	92,781	
					21,875 ⁽⁷⁾	128,188	
					$19,167^{(8)}$	112,319	
Arvin Yang, M.D	100,000	$100,000^{(12)}$	25.48	11/29/2030			
	23,906	$103,594^{(5)}$	6.28	1/13/2032			
					$28,333^{(8)}$	166,031	

- (1) The market value of the RSU awards is based on the closing price of our common stock as reported on the Nasdaq Global Select Market on December 30, 2022, which was \$5.86.
- (2) Represents an option to purchase shares of our common stock granted on January 23, 2019, which vests in equal quarterly installments through January 23, 2023, subject to the named executive officer's continued employment through each applicable vesting date.
- (3) Represents an option to purchase shares of our common stock granted on January 15, 2020, which vests in equal quarterly installments through January 15, 2024, subject to the named executive officer's continued employment through each applicable vesting date.
- (4) Represents an option to purchase shares of our common stock granted on January 15, 2021, which vests in equal quarterly installments through January 15, 2025, subject to the named executive officer's continued employment through each applicable vesting date.
- (5) Represents an option to purchase shares of our common stock granted on January 14, 2022, which vests in equal quarterly installments through January 14, 2026, subject to the named executive officer's continued employment through each applicable vesting date.
- (6) Represents an award of RSUs granted on January 15, 2020, which vests in equal annual installments through January 15, 2024, subject to the named executive officer's continued employment through each applicable vesting date.
- (7) Represents an award of RSUs granted on January 15, 2021, which vests in equal annual installments through January 15, 2025, subject to the named executive officer's continued employment through each applicable vesting date.
- (8) Represents an award of RSUs granted on January 14, 2022, which vests in equal annual installments through January 14, 2026, subject to the named executive officer's continued employment through each applicable vesting date.
- (9) Represents an option to purchase shares of our common stock granted on July 10, 2019, which vested as to 25% of the shares on July 10, 2020, and vests as to the remainder of the shares in quarterly installments thereafter through July 10, 2023, subject to Mr. DeSchuytner's continued employment through each applicable vesting date.
- (10) Represents an option to purchase shares of our common stock granted on April 26, 2021, which vested as to 25% of the shares on April 26, 2022, and vests as to the remainder of the shares in quarterly installments thereafter through April 26, 2025, subject to Ms. Carvajal's continued employment through each applicable vesting date. This was an inducement award granted pursuant to the inducement grant exception under Nasdaq Stock Market Rule 5635(c), which inducement award was not granted under our 2017 Stock Incentive Plan.
- (11) Represents an award of RSUs granted on April 26, 2021, which vested as to 50% of the shares on April 26, 2022, and vests as to 50% of the shares on April 26, 2023, subject to Ms. Carvajal's continued employment through each applicable vesting date.
- (12) Represents an option to purchase shares of our common stock granted on November 30, 2020, which vested as to 25% of the shares on November 30, 2021, and vests as to the remainder of the shares in quarterly installments thereafter through November 30, 2024, subject to Dr. Yang's continued employment through each applicable vesting date. This was an inducement award granted pursuant to the inducement grant exception under Nasdaq Stock Market Rule 5635(c), which inducement award was not granted under our 2017 Stock Incentive Plan.

Option Exercises and Stock Vested

The following table sets forth the value received by our named executive officers upon the exercise of stock options and/or the vesting of stock awards, in each case, during 2022.

	Option	Awards	Stock Awards		
Name	Number of shares acquired on exercise (#)	Value realized on exercise ⁽¹⁾ (\$)	Number of shares acquired on vesting (#)	Value realized on vesting ⁽²⁾ (\$)	
Anna Protopapas	_	_	38,958	244,656	
Brian DeSchuytner	_	_	10,208	64,106	
Alejandra Carvajal	_	_	13,250	49,158	
Timothy B. Lowinger, Ph.D.	35,361	199,820	15,209	95,513	
Arvin Yang, M.D.	_	_	18,500	123,210	

⁽¹⁾ Amount represents the excess of the weighted average price of our common stock on the date of exercise over the exercise price, multiplied by the number of shares of common stock acquired on exercise.

Employment Arrangements

Each of our named executive officers is party to a letter agreement with us that sets forth the terms and conditions of the executive's employment with us. Each letter agreement provides for at-will employment with us. Each letter agreement sets forth the executive's base salary, which is eligible for potential discretionary merit increases, and target annual bonus (expressed as a percentage of base salary). Each of our named executive officers is also party to our standard nondisclosure, noncompetition and assignment of intellectual property agreement. Pursuant to their letter agreements, each of the named executive officers is also entitled to certain compensation and benefits upon termination of his or her employment in certain circumstances, including following a change in control. The severance benefits provided under these letter agreements are described under "— Payments on Termination of Employment or Change in Control Benefits" below.

Pension Benefits

Other than with respect to tax-qualified defined contribution plans such as our 401(k) plan, our named executive officers do not participate in any plan that provides for retirement payments and benefits, or payments and benefits that will be provided primarily following retirement.

Nonqualified Deferred Compensation

None of our named executive officers participate in or have account balances in qualified or nonqualified defined benefit plans sponsored by us that provide for the deferral of compensation on a basis that is not tax-qualified. Our Compensation Committee may elect to adopt qualified or nonqualified defined benefit plans in the future if it determines that doing so is in our best interests.

Payments on Termination of Employment or Change in Control Benefits

Pursuant to their letter agreements, each of our named executive officers is entitled to severance payment and benefits upon terminations of their employment in certain circumstances, including following a Change in Control, as summarized below. The terms "Disqualifying Conduct," "Cause," "Good Reason" and "Change in Control" referred to below are defined in the applicable letter agreement and are summarized below.

⁽²⁾ Amount represents the closing price of our common stock on the applicable vesting date multiplied by the number of RSUs vesting on such date.

Termination of Employment without Cause or other than for Disqualifying Conduct or for Good Reason. If the executive's employment is terminated by us: (a) without Cause, for Ms. Protopapas, Mr. DeSchuytner, and Dr. Lowinger, or (b) other than for Disqualifying Conduct, for Ms. Carvajal and Dr. Yang, or by the executive for Good Reason, the executive will be entitled to receive continued payment of his or her base salary for twelve months, for Ms. Protopapas, or nine months, for Mr. DeSchuytner, Ms. Carvajal and Drs. Lowinger and Yang, following such termination of employment. In addition, if the executive elects to continue coverage in our group health plans, we will pay a portion of the COBRA or state law premiums equal to the excess of the cost of such premiums over the amount the executive would have paid for coverage for the executive, his or her spouse and dependents had the executive remained employed by the Company, for twelve months, for Ms. Protopapas, or nine months, for Mr. DeSchuytner, Ms. Carvajal and Drs. Lowinger and Yang.

Termination of Employment without Cause or other than for Disqualifying Conduct or for Good Reason following a Change in Control. If the executive's employment is terminated by us: (a) without Cause, for Ms. Protopapas, Mr. DeSchuytner, and Dr. Lowinger, or (b) other than for Disqualifying Conduct, for Ms. Carvajal and Dr. Yang, or by the executive for Good Reason, in any case within twelve months following a change in control, the executive will be entitled to receive a lump sum payment equal to the sum of (i) eighteen months' of base salary, for Ms. Protopapas, or twelve months' of base salary, for Mr. DeSchuytner, Ms. Carvajal and Drs. Lowinger and Yang, and (ii) the executive's target annual bonus, multiplied by 1.5, for Ms. Protopapas, or one, for Mr. DeSchuytner, Ms. Carvajal and Drs. Lowinger and Yang. If the executive elects to continue coverage in our group health plans, we will pay a portion of the COBRA or state law premiums equal to the excess of the cost of such premiums over the amount the executive would have paid for coverage for the executive, his or her spouse and dependents had the executive remained employed by the Company, for eighteen months, for Ms. Protopapas, or twelve months, for Mr. DeSchuytner, Ms. Carvajal and Drs. Lowinger and Yang. In addition, any stock options or other equity-based awards held by the executive, to the extent outstanding immediately prior to such termination of employment, will vest in full as of immediately prior to such termination.

Severance Subject to Release of Claims and Continued Compliance with Restrictive Covenants. Our obligation to provide an executive with severance payments and other benefits under the executive's letter agreement is conditioned on the executive signing (and not subsequently revoking) an effective release of claims in favor of the company and the executive's continued compliance with his or her nondisclosure, noncompetition and assignment of intellectual property agreement, the noncompetition and non-solicitation provisions of which generally survive for twelve months following the termination of employment and the nondisclosure provisions of which generally survive indefinitely.

Section 280G. In the event that all or any portion of the payments or benefits provided under an executive's letter agreement would constitute an "excess parachute payment" within the meaning of Section 280G of the Code, the executive will be entitled to receive an amount equal to the greater of (i) the amount of such payments or benefits reduced so that no portion of the payments and benefits would fail to be deductible under Section 280G of the Code, or (ii) the amount otherwise payable reduced by all taxes, including the excise tax imposed under Section 4999 of the Code.

For the purposes of the letter agreements:

- "Cause" generally means: (i) willful misconduct or gross negligence as to a material matter in connection with the executive's duties; (ii) any act constituting material dishonesty or fraud with respect to the Company; (iii) the indictment for, conviction of, or a plea of guilty or *nolo contendere* to, a felony under applicable law; (iv) material violation of a material term of any written Company policy; (v) failure to attempt in good faith to (A) perform the executive's duties in all material respects or (B) follow a clear, lawful, and reasonable directive of the Board; or (vi) material breach of a fiduciary duty owed to the Company that has caused or could reasonably be expected to cause a material injury to the business.
- "Disqualifying Conduct" generally means: (i) willful misconduct or gross negligence as to a material matter in connection with the executive's duties; (ii) any act constituting material dishonesty or fraud with respect to the Company; (iii) the indictment for, conviction of, or a plea of guilty or *nolo contendere* to, a felony under applicable law; (iv) material violation of a material term of any written

Company policy; (v) failure to attempt in good faith to (A) perform the executive's duties in all material respects or (B) follow a clear, lawful, and reasonable directive of the Board; or (vi) material breach of a fiduciary duty owed to the Company that has caused or could reasonably be expected to cause a material injury to the business.

- "Good Reason" generally means, without the executive's consent: (i) a material decrease in the executive's base salary; (ii) a material diminution in the executive's authorities, duties, or responsibilities; or (iii) the relocation of the executive's principal work location to a location more than fifty (50) miles from its current location.
- "Change in Control" generally means a "change in control event" as that term is defined in the regulations under Section 409A of the Code.

Potential Payments Upon Termination or Change of Control

The following table sets forth information regarding potential payments that would have been made to our named executive officers on various termination or change in control events assuming such events occurred as of December 31, 2022.

The following table sets forth information regarding potential payments that would have been made to our named executive officers in connection with a qualifying termination of employment, including in connection with a change in control, assuming such termination of employment and change in control occurred on December 31, 2022. None of our named executive officers are entitled to any "single-trigger" change in control payments or benefits, and none of our named executive officers are entitled to any severance payments in connection with a termination of their employment under any circumstances other than as noted in the table below.

Name	Cash Severance Benefits ⁽¹⁾ (\$)	COBRA Premiums ⁽²⁾ (\$)	Value of Accelerated Equity ⁽³⁾ (\$)	Total ⁽⁴⁾ (\$)
Anna Protopapas				
Termination without Cause or resignation for Good Reason	605,000	23,242	_	628,242
Termination without Cause or resignation for Good Reason on or within 12 months following Change in Control	1,452,000	34,864	4,333,218	5,820,082
Brian DeSchuytner				
Termination without Cause or resignation for Good Reason	315,977	6,094	_	322,071
Termination without Cause or resignation for Good Reason on or within 12 months following Change in Control	589,824	8,125	1,603,419	2,201,368
Alejandra Carvajal				
Termination other than for Disqualifying Conduct or resignation for Good Reason	310,500	17,432	_	327,932
Termination other than for Disqualifying Conduct or resignation for Good Reason on or within 12 months following Change in Control	579,600	23,242	762,527	1,365,369
Timothy B. Lowinger, Ph.D.				
Termination without Cause or resignation for Good Reason	337,527	17,432	_	354,959
Reason on or within 12 months following Change in Control	630,050	23,242	1,459,521	2,112,814

Name	Cash Severance Benefits ⁽¹⁾ (\$)	COBRA Premiums ⁽²⁾ (\$)	Value of Accelerated Equity ⁽³⁾ (\$)	Total ⁽⁴⁾ (\$)
Arvin Yang, M.D.				
Termination other than for Disqualifying Conduct or resignation for Good Reason	395,888	17,432	_	413,320
Termination other than for Disqualifying Conduct or resignation for Good Reason on or within 12 months				
following Change in Control	738,990	23,242	1,359,092	2,121,325

⁽¹⁾ Amounts represent the cash severance benefits payable to our named executive officers under their letter agreements, based on the named executive officer's base salary and target annual bonus as in effect on December 31, 2022.

⁽²⁾ Amounts represent the estimated cost of Company-paid portion of COBRA premiums based on the estimated cost of such coverage as of December 31, 2022.

⁽³⁾ Amounts represent the value of unvested stock options and RSUs held by the named executive officer on December 31, 2022 for which vesting will accelerated, based on the closing price of a share of our common stock as reported on the Nasdaq Global Select Market on December 30, 2022, which was \$5.86.

⁽⁴⁾ The amounts reported in this table do not include any potential reduction in payments or benefits that may be made as a result of Sections 280G or 4999 of the Code.

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

The following table provides information about the securities authorized for issuance under our equity compensation plans as of December 31, 2022. As of December 31, 2022, we had four equity compensation plans. Three of these plans, our 2007 Stock Incentive Plan, our 2017 Stock Incentive Plan and our 2017 Employee Stock Purchase Plan, or 2017 ESPP, were approved by our stockholders. On February 24, 2022, our Board of Directors adopted, upon recommendation of the Compensation Committee, our 2022 Inducement Stock Incentive Plan, or the Inducement Plan, which became effective immediately. The Inducement Plan provides for the grant of nonstatutory stock options, stock appreciation rights, restricted stock, RSUs, and other stock-based awards with respect to an aggregate of 2,000,000 shares of our common stock (subject to adjustment as provided in the Inducement Plan). Awards under the Inducement Plan may only be granted to persons who (a) were not previously our employee or director or (b) are commencing employment with us following a bona fide period of non-employment, in either case as an inducement material to the individual's entering into employment with us and in accordance with the requirements of Nasdaq Stock Market Rule 5635(c)(4).

Equity Compensation Plan Information

Plan Category	Number of securities to be issued upon exercise of outstanding options and rights (a)	Weighted average exercise price of outstanding options and rights (b) ⁽¹⁾	Number of securities remaining available or future issuance under equity compensation plans (excluding securities reflected in column (a)) (c) ⁽²⁾
Equity compensation plans approved by security holders	8,938,958 ⁽³⁾	\$ 9.35	1,797,620
Equity compensation plans not approved by security holders	1,112,325 ⁽⁴⁾	\$13.73	1,342,175
Total	10,051,283	\$ 9.84	$\overline{3,139,795}^{(5)}$

- (1) Determined without taking into account RSUs, which do not have an exercise price.
- (2) As of December 31, 2022, (i) 1,501,829 shares remained available for future issuance under our 2017 Stock Incentive Plan and (ii) 295,791 shares remained available for future issuance under our 2017 ESPP. No shares remained available for future issuance under our 2007 Stock Incentive Plan as of December 31, 2022, but in the event of any forfeitures or cancellations of awards under the 2007 Stock Incentive Plan, up to 1,357,367 shares thereunder may become available for future issuance under our 2017 Stock Incentive Plan.
- (3) Includes shares subject to options to purchase shares of our common stock and awards of RSUs.
- (4) Represents inducement stock option awards granted to certain employees of the Company in accordance with Nasdaq Listing Rule 5635(c)(4) and inducement stock option awards and awards of RSUs granted pursuant to our Inducement Plan.
- (5) Our 2017 Stock Incentive Plan has an evergreen provision that provides for an annual increase in the number of shares available for issuance thereunder to be added on the first day of each fiscal year in an amount equal to 4% of the number of shares of our common stock outstanding on the immediately preceding December 31 or such lesser amount determined by our Board of Directors. Our 2017 ESPP has an evergreen provision that allows for an annual increase in the number of shares available for issuance thereunder to be added on the first day of each fiscal year in an amount equal to the least of (i) 450,000 shares of common stock, (ii) 1% of the total number of shares of our common stock outstanding on the immediately preceding December 31 or (iii) such lesser amount determined by our Board of Directors (but in no event may more than 4,725,000 shares become available for issuance under our 2017 ESPP). In January 2023, the number of shares available for issuance under our 2017 Stock Incentive Plan and our 2017 ESPP increased by 4,205,794 and 450,000 shares, respectively.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information as of April 10, 2023 (unless otherwise specified), with respect to the beneficial ownership of our common stock by each person who is known to own beneficially more than 5% of the outstanding shares of common stock, each person currently serving as a director, each nominee for director, each named executive officer (as set forth in the 2022 Summary Compensation Table above) and all directors and executive officers as a group. The number of shares beneficially owned by each entity or person is determined in accordance with the rules of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares over which the individual has sole or shared voting power or investment power as well as any shares that the individual has the right to acquire within 60 days of April 10, 2023 through the exercise of any stock options, warrants or other rights or upon the vesting of any RSUs. Except as otherwise indicated, and subject to applicable common property laws, the persons in the table have sole voting and investment power with respect to all shares of common stock held by that person.

Shares of common stock subject to options, warrants or other rights that are now exercisable or are exercisable within 60 days after April 10, 2023 are considered outstanding for purposes of computing the percentage ownership of the persons holding these options, warrants or other rights but are not to be considered outstanding for the purpose of computing the percentage ownership of any other person. As of April 10, 2023, there were 109,069,315 shares of common stock outstanding. Unless otherwise indicated, the address for each beneficial owner is c/o Mersana Therapeutics, Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139.

Name and address of beneficial owner	Number of shares beneficially owned	Percentage of shares beneficially owned
5% or greater stockholders:		
Entities Affiliated with OrbiMed Advisors LLC ⁽¹⁾	9,011,437	8.3%
Entities Affiliated with Bain Capital Life Sciences ⁽²⁾	8,663,673	7.9%
Entities Affiliated with Avoro Capital Advisors LLC ⁽³⁾	7,550,000	6.9%
Blackrock, Inc. ⁽⁴⁾	7,491,929	6.9%
State Street Corporation ⁽⁵⁾	5,856,061	5.4%
Directors and named executive officers:		
Lawrence M. Alleva ⁽⁶⁾	186,334	*
Willard H. Dere, M.D. ⁽⁷⁾	168,496	*
Allene M. Diaz ⁽⁸⁾	84,872	*
Andrew A. F. Hack, M.D., Ph.D. ⁽⁹⁾	8,844,111	8.1%
Kristen Hege, M.D. ⁽⁸⁾	197,710	*
Martin Huber, M.D. ⁽⁸⁾	134,196	*
David Mott ⁽¹⁰⁾	741,972	*
Anna Protopapas ⁽¹¹⁾	2,356,229	2.1%
Brian DeSchuytner ⁽¹²⁾	425,358	*
Alejandra Carvajal ⁽¹³⁾	104,661	*
Timothy B. Lowinger, Ph.D. (14)	599,904	*
Arvin Yang, M.D. ⁽¹⁵⁾	209,258	*
All executive officers and directors as a group (13 persons) ⁽¹⁶⁾	14,124,421	12.5%

^{*} Represents beneficial ownership of less than one percent of our outstanding common stock.

⁽¹⁾ As reported on a Schedule 13G filed with the SEC on February 14, 2023 by OrbiMed Capital LLC and OrbiMed Advisors LLC (collectively, the "OrbiMed Entities"). According to the Schedule 13G, OrbiMed Capital LLC has sole voting and dispositive power with respect to 7,082,837 shares and

- OrbiMed Advisors LLC has shared voting and dispositive power with respect to 1,928,600 shares. The principal business address of the OrbiMed Entities is 601 Lexington Avenue, 54th Floor, New York, NY 10022.
- (2) Based in part on a Schedule 13D/A filed with the SEC on May 11, 2022 by Bain Capital Life Sciences Fund II, L.P. ("BCLS II"), BCIP Life Sciences Associates, LP ("BCIPLS") and BCLS II Investco, LP ("BCLS II Investco" and, together with BCLS II and BCIPLS, the "Bain Capital Life Sciences Entities") and in part on Forms 4 filed with the SEC on May 18, 2022; May 23, 2022; May 26, 2022 and June 2, 2022 (collectively, the "Hack Forms 4") by Dr. Hack, According to the Schedule 13D/A, BCLS II holds 3,294,423 shares, BCIPLS holds 401,244 shares, and BCLS II Investco holds 4,041,733 shares, over which shares each applicable Bain Capital Life Sciences Entity has shared voting and dispositive control. According to the Hack Forms 4, the Bain Capital Life Sciences Entities acquired an aggregate of 926,273 additional shares subsequent to the date of the Schedule 13D/A. Bain Capital Life Sciences Investors, LLC ("BCLSI") (i) is the manager of Bain Capital Life Sciences Investors II, LLC, which is the general partner of BCLS II, and (ii) governs the investment strategy and decision-making process with respect to investments held by BCIPLS. BCLS II is the manager of BCLS II Investco (GP), LLC, which is the general partner of BCLS II Investco. As a result, BCLSI may be deemed to share voting and dispositive power with respect to the securities held by the Bain Capital Life Sciences Entities. Dr. Hack is a Managing Director of BCLSI. As a result, Dr. Hack may be deemed to share voting and dispositive power with respect to the shares held by the Bain Capital Life Sciences Entities. Dr. Hack disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein. The principal business address of each of the Bain Capital Life Sciences Entities is c/o Bain Capital Life Sciences, LP, 200 Clarendon Street, Boston, MA 02116.
- (3) As reported on a Schedule 13G/A filed with the SEC on February 14, 2023 by Avoro Capital Advisors LLC ("Avoro Capital") and Behzad Aghazadeh. According to the Schedule 13G/A, each of Avoro Capital and Dr. Aghazadeh has sole voting power and sole dispositive power with regard to 7,550,000 shares. Avoro Capital provides investment advisory and management services and has acquired the securities solely for investment purposes on behalf of Avoro Life Sciences Fund LLC, a Delaware limited liability company, and certain managed accounts, and Dr. Aghazadeh serves as the portfolio manager and controlling person of Avoro Capital. The principal business address of each of Avoro Capital and Dr. Aghazadeh is 110 Greene Street, Suite 800, New York, NY 10012.
- (4) As reported on a Schedule 13G/A filed with the SEC on January 31, 2023 by BlackRock, Inc. According to the Schedule 13G/A, BlackRock has sole voting power with respect to 7,296,856 shares and sole dispositive power with respect to 7,491,929 shares. The principal business address of BlackRock Inc. is 55 East 52nd Street, New York, NY 10055.
- (5) As reported on a Schedule 13G/A filed with the SEC on February 3, 2023 by State Street Corporation. According to the Schedule 13G/A, State Street Corporation has shared voting power with respect to 5,711,915 shares and shared dispositive power with respect to 5,856,061 shares held in the aggregate by certain direct or indirect subsidiaries of State Street Corporation. The principal business address of State Street Corporation is State Street Financial Center, One Lincoln Street, Boston, MA 02111.
- (6) Consists of (a) 2,120 shares held by the Lawrence M. Alleva Revocable Trust and (b) options to purchase 184,214 shares of common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date.
- (7) Includes 165,121 options to purchase common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date.
- (8) Consists of options to purchase common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date.
- (9) Consists of (a) options to purchase 180,438 shares of common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date and (b) the shares of common stock held by the Bain Capital Life Sciences Entities described in footnote (2) above. Dr. Hack is a Managing Director of BCLSI. As a result, by virtue of the relationships described in footnote (2) above, Dr. Hack may be deemed to share beneficial ownership of the shares of common stock held by the Bain Capital Life Sciences Entities. Dr. Hack disclaims beneficial ownership of the shares held by the Bain Capital Life Sciences Entities except to the extent of his pecuniary interest therein. Dr. Hack's business address is c/o Bain Capital Life Sciences, LP, 200 Clarendon Street, Boston, MA 02116.

- (10) Consists of (a) 543,465shares held by Mr. Mott, (b) 9,595 shares held by the David Mott Declaration of Trust dated May 31, 2001, as amended, and (c) options to purchase 188,912 shares of common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date.
- (11) Consists of (a) 48,733 shares held by Ms. Protopapas, (b) 72,263 shares held by the Kinney/ Protopapas Irrevocable Trust, (c) 240,244 shares held by the Anna Protopapas Irrevocable Trust and (d) options to purchase 1,994,989 shares common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date.
- (12) Includes options to purchase 392,577 shares of common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date.
- (13) Includes (a) 13,250 shares of common stock underlying restricted stock units that will vest within 60 days of April 10, 2023 and (b) options to purchase 80,391 shares of common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date.
- (14) Includes options to purchase 419,541 shares of common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date.
- (15) Includes options to purchase 178,437 shares of common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date.
- (16) Includes (a) options to purchase 4,266,788 shares of common stock that were exercisable as of April 10, 2023 or will become exercisable within 60 days after such date and (b) 13,250 shares of common stock underlying restricted stock units that will vest within 60 days of April 10, 2023.

PROPOSAL No. 3 — RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2023

Our stockholders are being asked to ratify the appointment by the Audit Committee of the Board of Directors of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023. Ernst & Young has served as our independent registered public accounting firm since 2013.

The Audit Committee is solely responsible for selecting our independent registered public accounting firm for the fiscal year ending December 31, 2023. Stockholder approval is not required to appoint Ernst & Young LLP as our independent registered public accounting firm. However, our Board of Directors believes that submitting the appointment of Ernst & Young LLP to the stockholders for ratification is good corporate governance. If the stockholders do not ratify this appointment, the Audit Committee will reconsider whether to retain Ernst & Young LLP. If the selection of Ernst & Young LLP is ratified, the Audit Committee, in its discretion, may direct the appointment of a different independent registered public accounting firm at any time it decides that such a change would be in the best interest of our Company and our stockholders.

A representative of Ernst & Young LLP is expected to attend the virtual Annual Meeting and will have an opportunity to make a statement if he or she desires to do so and to respond to appropriate questions from our stockholders.

Principal Accountant Fees and Services

We regularly review the services and fees of our independent registered public accounting firm. These services and fees are also reviewed by the Audit Committee on an annual basis. The aggregate fees billed for the fiscal years ended December 31, 2022 and 2021 for each of the following categories of services are as follows (in thousands):

Fee Category		2022		2021
Audit Fees ⁽¹⁾	\$	976,680	\$	989,855
Audit-Related Fees ⁽²⁾	\$	57,040	\$	38,280
Tax Fees ⁽³⁾	\$	43,351	\$	45,600
All Other Fees	\$		\$	_
Total Fees	\$1	1,077,071	\$1	,073,735

⁽¹⁾ Audit fees in 2022 and 2021 include fees related to the annual audit of the Company's financial statements, the review of the interim financial statements included in our quarterly reports on Form 10-Q, and comfort letters, consents and assistance with and review of documents filed with the SEC. Audit fees in 2021 also includes fees related to internal control attestation.

- (2) Audit-related fees are related to accounting consultations.
- (3) Tax fees are related to tax compliance, tax advice and tax planning services, including the review and preparation of our federal and state income tax returns.

The Audit Committee pre-approved all services described above in accordance with the pre-approval policies and procedures described below.

Audit Committee Pre-Approval Policy and Procedures

The Audit Committee pre-approves all auditing services, internal control related services and permitted non-audit services (including the fees and terms thereof) to be performed by Ernst & Young, subject to the *de minimis* exception for non-audit services that are approved by the Audit Committee prior to the completion of an audit. The Audit Committee may delegate pre-approval authority to one or more members of the Audit Committee consistent with applicable law and listing standards, provided that the decisions of such Audit Committee member or members must be communicated to the Audit Committee at its next scheduled meeting.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT STOCKHOLDERS 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, 2023.

AUDIT COMMITTEE REPORT

The Audit Committee has reviewed our audited financial statements for the year ended December 31, 2022 and discussed them with our management and our independent registered public accounting firm, Ernst &Young LLP.

The Audit Committee has also received from, and discussed with, Ernst & Young LLP various communications that Ernst & Young LLP is required to provide to the Audit Committee, including the matters required to be discussed by the applicable requirements of the Public Company Accounting Oversight Board and the SEC.

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

Based on the review and discussions referred to above, the Audit Committee recommended to our Board of Directors that our financial statements audited by Ernst & Young LLP be included in our Annual Report on Form 10-K for the year ended December 31, 2022.

Members of the Audit Committee of Mersana Therapeutics, Inc. Lawrence M. Alleva, Chair Willard H. Dere Andrew A. F. Hack

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions since January 1, 2021 to which we have been a party, and in which any of our directors, executive officers and holders of 5% or more of our voting securities and affiliates of these persons had or will have a direct or indirect material interest. We believe that all of the transactions described below were made on terms no less favorable to us than could have been obtained from unaffiliated third parties.

Bain Capital Life Sciences At-the-Market Purchases

In the year ended December 31, 2021, entities affiliated with Bain Capital Life Sciences Investors, LLC, of which Dr. Hack is a managing director, purchased an aggregate of 1,690,000 shares of our common stock in two transactions through our at-the-market offering, or ATM, program, for which Cowen & Company served as Sales Agent and for which we received gross proceeds of approximately \$10.0 million. In the year ended December 31, 2022, entities affiliated with Bain Capital Life Sciences Investors, LLC, purchased an aggregate of 2,351,733 shares of our common stock in three transactions through our at-the-market offering, or ATM, program, for which Cowen & Company served as Sales Agent and for which we received gross proceeds of approximately \$10.0 million. The purchase of all such shares of common stock made by the affiliates of Bain Capital Life Sciences Investors, LLC through our ATM program were made at market prices in sales deemed to be an "at the market" offering under Rule 415 of the Securities Act of 1933, as amended, and were approved by our Audit Committee pursuant to the Related Party Transactions Policy described below.

Indemnification Agreements and Directors' and Officers' Liability Insurance

We have entered into indemnification agreements with each of our directors and executive officers. We also maintain a general liability insurance policy, which covers certain liabilities of directors and officers of the Company arising out of claims based on acts or omissions in their capacities as directors or officers.

Employment Agreements

See the "Executive Compensation — Employment, Severance, Change in Control Arrangements, and Separation Arrangements" and "Director Compensation" sections of this Proxy Statement for a further discussion of these arrangements.

Related Party Transactions Policy

We have adopted a written related party transactions policy that governs the review and approval of related party transactions. Pursuant to this policy, if we want to enter into a transaction with a related party or an affiliate of a related party, the Audit Committee will review the proposed transaction to determine, based on applicable Nasdaq and SEC rules, if such transaction requires pre-approval by the Audit Committee and/or the Board of Directors. If pre-approval is required, such matters will be reviewed at the next regular or special Audit Committee and/or Board of Directors meeting. We may not enter into a related party transaction unless our Audit Committee has specifically confirmed in writing that either no further reviews are necessary or that all requisite corporate reviews have been obtained.

Proposal No. 4 — Approval of Amendment to Fifth Amended and Restated Certificate of Incorporation, as Amended, to Eliminate the Supermajority Voting Requirement Applicable to Changes to Article IV Thereof

Our Board of Directors has adopted, subject to stockholder approval, a proposed amendment to our Certificate of Incorporation, in the form attached as <u>Appendix A</u> to this proxy statement to eliminate the requirement that the holders of at least seventy-five percent (75%) of the voting power of Mersana's outstanding shares of common stock entitled to vote generally in the election of directors, voting together as a single class, approve any amendments of Article IV of our Certificate of Incorporation. Article IV of our Certificate of Amendment sets forth the authorized shares of capital stock of our Company, as well as certain provisions related to the rights of the authorized classes of shares, Common Stock and Preferred Stock. We refer to this amendment as the "Capitalization Supermajority Elimination Amendment."

If stockholders approve the proposed Capitalization Supermajority Elimination Amendment, paragraph (b) of Article VIII of our Certificate of Incorporation will be amended as reflected below (which is marked to show deletions from the existing provision):

"(b) Amendments to the Certificate of Incorporation. The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Fifth Amended and Restated Certificate of Incorporation in the manner now or hereafter prescribed by the DGCL, and all rights conferred upon stockholders herein are granted subject to this reservation. Notwithstanding anything to the contrary contained in this Fifth Amended and Restated Certificate of Incorporation, and notwithstanding that a lesser percentage may be permitted from time to time by applicable law, no provision of Article IV, Article V, Article VI, paragraphs (a) and (b) of Article VII and Article VIII may be altered, amended or repealed in any respect, nor may any provision or bylaw inconsistent therewith be adopted, unless, in addition to any other vote required by this Fifth Amended and Restated Certificate of Incorporation or otherwise required by law, such alteration, amendment, repeal or adoption is approved by the affirmative vote of the holders of at least seventy-five percent (75%) of the voting power of the outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, at a meeting of the stockholders called for that purpose."

The proposed Capitalization Supermajority Elimination Amendment, if approved by our stockholders, would become effective upon the filing of the Capitalization Supermajority Elimination Amendment to our Certificate of Incorporation with the Secretary of State of the State of Delaware, in the form of Appendix A hereto, or at the later time set forth in such Capitalization Supermajority Elimination Amendment. The Board of Directors reserves the right, notwithstanding stockholder approval and without further action by stockholders, to elect not to proceed with the proposed Capitalization Supermajority Elimination Amendment if the Board of Directors determines that the proposed Capitalization Supermajority Elimination Amendment is no longer in our best interests and the best interests of our stockholders.

If our stockholders approve the proposed Capitalization Supermajority Elimination Amendment, subject to the discretion of the Board of Directors, we intend to file the Capitalization Supermajority Elimination Amendment to our Certificate of Incorporation with the Secretary of State of the State of Delaware as soon as practicable after the Annual Meeting.

If the proposed Capitalization Supermajority Elimination Amendment is approved by our stockholders and becomes effective, under the terms of our Certificate of Amendment, as amended by the Capitalization Supermajority Elimination Amendment, and Delaware law, future amendments to Article IV of our Certificate of Amendment would require the affirmative vote of stockholders holding a majority of the outstanding shares of our common stock entitled to vote.

Reasons for the Proposed Capitalization Supermajority Elimination Amendment

Delaware law permits companies to adopt supermajority voting requirements, and a number of publicly traded companies have adopted these provisions to preserve and maximize long-term value for all stockholders. Supermajority voting requirements on fundamental corporate matters are intended to enhance the independence of directors from special interests and protect stockholders against self-interested and

potentially abusive actions proposed by one or a few large stockholders with significant voting power, who may seek to advance their interests over the interests of the majority of the company's stockholders. Supermajority voting requirements are typically limited to a small number of provisions of a company's certificate of incorporation that address significant matters, such as the structure of the Board of Directors, and amendments of the charter and bylaws.

At the 2022 annual meeting of stockholders, we submitted to our stockholders and they approved an amendment to our Certificate of Incorporation that amended section (a) of Article IV to increase to increase the number of authorized shares of common stock from 175,000,000 to 350,000,000 shares. The Board of Directors approved that amendment because it believes that the availability of additional authorized shares of our common stock affords us needed flexibility in acting upon financing transactions to strengthen our financial position and/or engaging in strategic activities without using cash. Although the 2022 amendment was approved by approximately 76.4% of the outstanding shares of common stock entitled to vote at the 2022 annual meeting, the 75% voting threshold presented a significant hurdle for approval of the share increase. In fact, it was not clear until the evening before the 2022 annual meeting that the threshold would be met, even though we retained Georgeson LLC to assist us in the solicitation of proxies.

Our Board of Directors and our Nominating and Corporate Governance Committee regularly review our corporate governance practices to consider whether such practices remain in the best interests of the Company and its stockholders. In early 2023, our Nominating and Corporate Governance Committee and our Board of Directors conducted a benchmarking review of peer group and industry information related to supermajority provisions in certificates or incorporation, or charters. In addition, our Nominating and Corporate Governance Committee discussed the difficulty of obtaining the requisite votes at the 2022 meeting and the potential consequences had we been unable to get in excess of 75% of the outstanding shares voted in favor of the 2022 amendment. As part of the 2023 assessment, we reviewed the governance provisions of the companies in our peer group, and only one of 18, or only 5.5%, had a supermajority vote applicable to the capitalization section of its certificate of incorporation, even though the vast majority, over 83%, had supermajority votes applicable to other provisions of the certificate of incorporation.

Our Board of Directors believes that requiring the affirmative vote of the holders of at least seventy-five percent (75%) of the voting power of Mersana's outstanding shares of common stock to approve changes to Article IV of our Certificate of Incorporation increases the burden placed on the Company to solicit proxies and encourage stockholder voting participation when a change in our capitalization is approved by our Board of Directors and recommended to our stockholders for approval.

The removal of the Capitalization Supermajority Voting Requirement is primarily intended to enable us to increase the number of authorized shares of common stock in the future with the affirmative vote of the holders of a majority of outstanding common stock entitled to vote. While we believe that we have sufficient authorized shares of our common stock at this time, over the past several years, we have used shares of our common stock to, among other things, engage in financings, including our ongoing ATM program through Cowen & Company, and incentivize and compensate employees. We anticipate that we may issue additional shares of common stock in the future, which could lead to us to seek to amend section (a) of Article IV to attain additional flexibility in acting upon financing transactions to strengthen our financial position and/or engaging in strategic activities without using cash. We do not currently have any specific plans, proposals or arrangements, written or oral, to amend Article IV of our Certificate of Incorporation.

Although our Board of Directors concluded that the Capitalization Supermajority Elimination Amendment was advisable, neither our Nominating and Corporate Governance Committee nor our Board of Directors believes that elimination of all supermajority provisions in our Certificate of Incorporation is advisable, and, therefore, we are not seeking approval of the elimination of all supermajority vote provisions. Our Board of Directors believes that the limited supermajority voting thresholds in our Certificate of Incorporation related to the size of our Board of Directors and vacancies thereon, classes of directors and director removal (Article V), indemnification of directors (Article VI), stockholder action by written consent and special meetings of stockholders (paragraphs (a) and (b) of Article VII), and amendments to the Certificate of Incorporation and Bylaws (Article VIII) are generally protective of stockholders and appropriate given our size and stage of development and are consistent with our peer group governance profile.

Based on the above, our Board of Directors determined that it is in the best interests of the Company and our stockholders to amend our Certificate of Incorporation as described in this proposal.

Effectiveness of Amendment

If the proposed Capitalization Supermajority Elimination Amendment is adopted, it will become effective upon the filing of a Certificate of Amendment to our Certificate of Incorporation with the Secretary of State of the State of Delaware.

Vote Required

The affirmative vote of holders of at least seventy-five percent (75%) of the voting power of the shares of our common stock outstanding on the Record Date and entitled to vote at the Annual Meeting is required to approve the Capitalization Supermajority Elimination Amendment.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT STOCKHOLDERS VOTE "FOR" THE APPROVAL OF THE AMENDMENT TO OUR CERTIFICATE OF INCORPORATION TO ELIMINATE THE SUPERMAJORITY VOTING REQUIREMENT APPLICABLE TO CHANGES TO ARTICLE IV THEREOF.

Proposal No. 5 — Approval of Amendment to Our Fifth Amended and Restated Certificate of Incorporation, As Amended, to Reflect New Delaware Law Provisions Regarding Officer Exculpation

Background

We are asking our stockholders to approve an amendment to our Certificate of Incorporation to update our existing director exculpation provision to include certain of our senior corporate officers. Article VI of our Certificate of Incorporation currently permits the limitation or elimination of liability, or exculpation, of directors to the fullest extent permitted by Section 102(b)(7) of the Delaware General Corporation Law, or the DGCL. Effective August 1, 2022, that provision of the DGCL was amended to permit eliminating or limiting monetary liability for certain senior corporate officers in limited circumstances. On March 31, 2023, our Board of Directors approved, subject to stockholder approval, an amendment to our Certificate of Incorporation to update the exculpation provision, or the Officer Exculpation Amendment, as described below.

Consistent with Delaware law, the officer exculpation provision under the proposed Officer Exculpation Amendment is more limited in scope than the existing director exculpation provision and only permits exculpation of officers for certain direct claims. Further, the proposed amendment does <u>not</u> permit officers to be exculpated for liability arising out of:

- claims brought by Mersana itself;
- claims brought by stockholders in the name of Mersana (derivative claims);
- breaches of the duty of loyalty to the Company or its stockholders;
- acts or omissions not in good faith;
- acts or omissions that involve intentional misconduct;
- acts or omissions that involve a knowing violation of law; or
- any transaction in which the officer derived an improper personal benefit.

In accordance with the recent amendment to Delaware law, the officers who will be covered by the expanded exculpation provision include our president; chief executive officer; chief operating officer; chief financial officer; chief legal officer; controller; treasurer; or chief accounting officer; any officer who is or was identified in the our public filings with the Securities and Exchange Commission as one of the most highly compensated executive officers; and any officers who consent to being identified as an officer for purposes of service of process, at any time during the course of conduct alleged in the action or proceeding to be wrongful.

A copy of the proposed Officer Exculpation Amendment to our Certificate of Incorporation is attached as <u>Appendix B</u> to this proxy statement. The proposed Officer Exculpation Amendment provides that Article VI of our Certificate of Incorporation be deleted in its entirety and replaced by the following (which is marked to show changes from the current director exculpation provision):

"Article VI — Limitation of Officer and Director Liability

To the fullest extent permitted by that the DGCL or any other law of the State of Delaware (as they exist on the date hereof or as they may hereafter be amended) permits the limitation or climination of the liability of directors, no director or officer of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director or officer. No amendment, to, or modification or repeal of, or elimination of this Article VI shall adversely affect any right or protection of a director of the Corporation existing hereunder with respect to any state of facts existing or act or omission occurring, or any cause of action, suit or claim that, but for this Article VI, would accrue or arise, prior to apply to or have any effect on its application with respect to any act or omission of a director or officer occurring before such amendment, modification or repeal, or elimination. If, after this Fifth Amended and Restated Certificate of Incorporation is filed with the Secretary of State of the State of Delaware, the DGCL or such other law is amended to authorize

eorporate action further eliminating or limiting permit further elimination or limitation of the personal liability of directors or officers to the Corporation or its stockholders, then the liability of a director or officer of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL or such other law, as so amended."

The proposed Officer Exculpation Amendment, if approved by our stockholders, would become effective upon the filing of the Officer Exculpation Amendment to our Certificate of Incorporation with the Secretary of State of the State of Delaware, in the form of Appendix B hereto, or at the later time set forth in such Officer Exculpation Amendment. The Board of Directors reserves the right, notwithstanding stockholder approval and without further action by stockholders, to elect not to proceed with the proposed Officer Exculpation Amendment if the Board of Directors determines that the proposed Officer Exculpation Amendment is no longer in our best interests and the best interests of our stockholders.

If our stockholders approve the proposed Officer Exculpation Amendment, subject to the discretion of the Board of Directors, we intend to file the Officer Exculpation Amendment to our Certificate of Incorporation with the Secretary of State of the State of Delaware as soon as practicable after the Annual Meeting.

Reasons for the Proposed Amendment

The State of Delaware, which is Mersana's state of incorporation, enacted legislation in August 2022 that authorizes Delaware corporations to limit the liability of certain of their officers in the limited circumstances described above. As a result of this development, we propose expanding our existing director exculpation provision to cover officers to the extent now permitted by Delaware law.

Our Board of Directors' rationale for recommending this amendment is to balance stockholders' interest in accountability with their interest in Mersana being able to attract and retain the highest quality officers and avoiding litigation abuse resulting from the current disparity that exists in the treatment of directors, who oversee and are ultimately accountable for corporate actions, and the officers who execute those actions on behalf of the Board of Directors.

Our Board of Directors considered that the role of directors and officers requires them to make decisions on crucial matters in response to time-sensitive opportunities and challenges, which can create substantial risk of investigations, claims, actions, suits or proceedings seeking to impose liability on the basis of hindsight, especially in the current litigious environment and regardless of the absence of any underlying merit. The Officer Exculpation Amendment will better align the protections available to our officers with those currently available to our directors and avoid an emerging practice among plaintiffs' lawyers of adding officers to direct claims relating to the duty of care in merger and acquisition-related and other litigation so that claims against the officers continue even when identical claims against directors are dismissed. Our Board of Directors believes that limiting concern about personal liability will empower officers to best exercise their business judgment in furtherance of stockholder interests without the distraction of potentially being subject to claims following actions taken in good faith.

In addition, we expect other companies with which we compete for employees to adopt exculpation clauses that limit the personal liability of officers as now permitted by the DGCL. Our Board of Directors believes that failing to adopt the proposed amendment will impact the recruitment and retention of exceptional officer candidates who conclude that the potential exposure to liabilities, costs of defense and other risks of proceedings exceeds the benefits of serving as an officer of Mersana as compared to serving as an officer at another company that does exculpate officers.

Further, our Board of Directors noted that the proposed provision would not eliminate stockholders' right to pursue derivative claims relating to alleged breaches of the duty of care or limit the ability of Mersana itself to bring claims against officers. Therefore, taking into account the narrow class and type of claims for which officers' liability would be exculpated, our Board of Directors believes the proposed amendment would enhance the ability to attract and retain talented officers, potentially reduce litigation costs associated with frivolous lawsuits and more generally align the protections available to our officers with those currently available to our directors.

Based on the above, our Board of Directors determined that it is in the best interests of the Company and our stockholders to amend our Certificate of Incorporation as described in this proposal.

Effectiveness of Amendment

If the proposed Officer Exculpation Amendment is adopted, it will become effective upon the filing of a Certificate of Amendment to our Certificate of Incorporation with the Secretary of State of the State of Delaware.

Vote Required

The affirmative vote of holders of at least seventy-five percent (75%) of the voting power of the shares of our common stock outstanding on the Record Date and entitled to vote at the Annual Meeting is required to approve the Officer Exculpation Amendment.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT STOCKHOLDERS VOTE "FOR" THE APPROVAL OF THE AMENDMENT TO OUR CERTIFICATE OF INCORPORATION TO REFLECT NEW DELAWARE LAW PROVISIONS REGARDING OFFICER EXCULPATION.

GENERAL MATTERS

Availability of Certain Documents

A copy of our 2022 Annual Report has been posted on the Company's website (www.mersana.com) along with this proxy statement. Upon written request, we will mail, without charge, a copy of our 2022 Annual Report, excluding exhibits. Please send a written request to our Secretary at:

Mersana Therapeutics, Inc. 840 Memorial Drive Cambridge, Massachusetts 02139 Attention: Secretary

Phone: (617) 498-0020

SEC rules concerning the delivery of annual disclosure documents allow us or your broker to send a single notice or, if applicable, a single set of our proxy materials to any household at which two or more of our stockholders reside, if we or your broker believe that the stockholders are members of the same family, unless we have received contrary instructions from one or more of the stockholders. This practice, referred to as "householding," reduces the volume of duplicate information received at your household and helps to reduce our expenses. The rule applies to our notices, annual reports, proxy statements and information statements.

We will undertake to deliver promptly, upon written or oral request, a separate copy to a stockholder at a shared address to which a single copy of the notice or proxy materials was delivered. You may make a written or oral request by sending a notification to our Secretary at the address or telephone number above, providing your name, your shared address, and the address to which we should direct the additional copy of the notice or proxy materials. Multiple stockholders sharing an address who have received one copy of a mailing and would prefer us to mail each stockholder a separate copy of future mailings should contact us at our principal executive offices. Additionally, if current stockholders with a shared address received multiple copies of a mailing and would prefer us to mail one copy of future mailings to stockholders at the shared address, notification of that request may also be made through our principal executive offices. Stockholders who participate in householding will continue to have access to and utilize separate proxy voting instructions.

Stockholder Proposals and Nominations

Requirements for Stockholder Proposals or Director Nominations to be Brought Before an Annual Meeting. Our Bylaws provide that, for stockholder nominations to the Board of Directors or other proposals to be considered at an annual meeting, the stockholder must have given timely notice thereof in writing to the Secretary at Mersana Therapeutics, Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139. The Nominating and Corporate Governance Committee does not have a written policy regarding stockholder nominations but has determined that it is the practice of such Committee to consider candidates proposed by stockholders if made in accordance with our Bylaws. The specific requirements for the information that is required to be provided for such recommendations to be considered are specified in our Bylaws.

To be timely for the 2024 annual meeting, although not included in the proxy statement, the stockholder's notice must be delivered to or mailed and received by us not earlier than the close of business on the 120th day nor later than the close of business on the 90th day prior to the anniversary date of the prior year's annual meeting, except that if the annual meeting is advanced by more than 30 days or delayed by more than 60 days from the first anniversary of the preceding year's annual meeting, we must receive the notice not earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (b) the tenth day following the day on which we first provide public disclosure of the date of the meeting. Assuming the date of our 2024 annual meeting is not so advanced or delayed, stockholders who wish to make a proposal at the 2024 annual meeting must notify us no earlier than February 9, 2024 and no later than March 10, 2024. Such notice must provide the information required by our Bylaws with respect to each matter the stockholder proposes to bring before the 2024 annual meeting. Stockholders are advised to review our Bylaws, which specify requirements as to the form and content of

a stockholders' notice, including the information required by Rule 14a-19 under the Exchange Act. Assuming that biographical and background material has been provided on a timely basis, any recommendations received from stockholders for nominations for directors will be evaluated in the same manner as potential nominees proposed by the Nominating and Corporate Governance Committee. If our Board determines to nominate a stockholder-recommended candidate and recommends his or her election, then his or her name will be included on our proxy card for the next annual meeting.

Requirements for Stockholder Proposals to be Considered for Inclusion in our Proxy Materials. To be considered for inclusion in next year's proxy statement, stockholder proposals pursuant to Rule 14a-8 under the Exchange Act must be received by our Secretary at our principal executive offices no later than the close of business on December 30, 2023, which is 120 days prior to the date that is one year from this year's mailing date of April 28, 2023.

Contacting the Board of Directors

Stockholders wishing to communicate with the Board of Directors may do so by writing to the Board of Directors, the non-employee members of the Board as a group or to any individual director, at:

Mersana Therapeutics, Inc. 840 Memorial Drive Cambridge, Massachusetts 02139 Attention: Secretary

The communication must prominently display the legend "BOARD COMMUNICATION" in order to indicate to the Secretary that it is a communication for the Board of Directors. Upon receiving such a communication, the Secretary will promptly forward the communication to the relevant individual or group to which it is addressed. Certain items that are unrelated to the Board of Directors' duties and responsibilities may be excluded. The Secretary will not forward any communication determined in her good faith belief to be frivolous, unduly hostile, threatening, illegal or similarly unsuitable.

Other Matters

As of the date of this proxy statement, the Board of Directors does not intend to present any matters other than those described herein at the Annual Meeting and is unaware of any matters to be presented by other parties. If other matters are properly brought before the meeting for action by the stockholders, proxies will be voted in accordance with the recommendation of the Board of Directors or, in the absence of such a recommendation, in accordance with the judgment of the proxy holder.

CERTIFICATE OF AMENDMENT

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FIFTH AMENDED AND RESTATED CERTIFICATE OF INCORPORATION, AS AMENDED OF

MERSANA THERAPEUTICS, INC.

Pursuant to Section 242 of the General Corporation Law of the State of Delaware

Mersana Therapeutics, Inc. (hereinafter called the "Corporation"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, does hereby certify as follows:

FIRST: A resolution was duly adopted by the Board of Directors of the Corporation pursuant to Section 242 of the General Corporation Law of the State of Delaware setting forth an amendment to the Fifth Amended and Restated Certificate of Incorporation, as amended, of the Corporation and declaring said amendment to be advisable. The stockholders of the Corporation duly approved and adopted said proposed amendment at a meeting of stockholders in accordance with Section 242 of the General Corporation Law of the State of Delaware. The resolution setting forth the amendment is as follows:

RESOLVED: That section (b) of Article VIII of the Fifth Amended and Restated Certificate of Incorporation, as amended, of the Corporation be and hereby is deleted in its entirety and the following is inserted in lieu thereof:

"(b) Amendments to the Certificate of Incorporation. The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Fifth Amended and Restated Certificate of Incorporation in the manner now or hereafter prescribed by the DGCL, and all rights conferred upon stockholders herein are granted subject to this reservation. Notwithstanding anything to the contrary contained in this Fifth Amended and Restated Certificate of Incorporation, and notwithstanding that a lesser percentage may be permitted from time to time by applicable law, no provision of Article V, Article VI, paragraphs (a) and (b) of Article VII and Article VIII may be altered, amended or repealed in any respect, nor may any provision or bylaw inconsistent therewith be adopted, unless, in addition to any other vote required by this Fifth Amended and Restated Certificate of Incorporation or otherwise required by law, such alteration, amendment, repeal or adoption is approved by the affirmative vote of the holders of at least seventy-five percent (75%) of the voting power of the outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, at a meeting of the stockholders called for that purpose."

IN WITNESS WHEREOF, this Certificate of Amendment has been executed by a duly authorized officer of the Corporation on this $\,$ day of $\,$, 2023.

MERSANA THERAPEUTICS, INC.

By:				
	Name:			
	Title:			

CERTIFICATE OF AMENDMENT TO

FIFTH AMENDED AND RESTATED CERTIFICATE OF INCORPORATION, AS AMENDED OF

MERSANA THERAPEUTICS, INC.

Pursuant to Section 242 of the General Corporation Law of the State of Delaware

Mersana Therapeutics, Inc. (hereinafter called the "Corporation"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, does hereby certify as follows:

FIRST: A resolution was duly adopted by the Board of Directors of the Corporation pursuant to Section 242 of the General Corporation Law of the State of Delaware setting forth an amendment to the Fifth Amended and Restated Certificate of Incorporation, as amended, of the Corporation and declaring said amendment to be advisable. The stockholders of the Corporation duly approved and adopted said proposed amendment at a meeting of stockholders in accordance with Section 242 of the General Corporation Law of the State of Delaware. The resolution setting forth the amendment is as follows:

RESOLVED: That VI of the Fifth Amended and Restated Certificate of Incorporation, as amended, of the Corporation be and hereby is deleted in its entirety and the following is inserted in lieu thereof:

"Article VI — Limitation of Officer and Director Liability

To the fullest extent permitted by the DGCL, no director or officer of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director or officer. No amendment, repeal or elimination of this Article VI shall apply to or have any effect on its application with respect to any act or omission of a director or officer occurring before such amendment, repeal or elimination. If the DGCL or such other law is amended to permit further elimination or limitation of the personal liability of directors or officers to the Corporation or its stockholders, then the liability of a director or officer of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended."

IN WITNESS WHEREOF, this Certificate of Amendment has been executed by a duly authorized officer of the Corporation on this day of , 2023.

MERSANA THERAPEUTICS, INC.

By:				
	Name:			
	Title:			