SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934 (Amendment No.)

File	Filed by the Registrant ⊠				
File	Filed by a Party other than the Registrant \square				
Che	ck the appropriate box:				
	Preliminary Proxy Statement				
	Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))				
X	Definitive Proxy Statement				
	Definitive Additional Materials				
	Soliciting Material Pursuant to § 240.14a-12				
	REPARE THERAPEUTICS INC. (Name of Registrant as Specified In Its Charter)				
	(Name of Person(s) Filing Proxy Statement if Other Than the Registrant)				
Payı	Payment of Filing Fee (Check the appropriate box)				
\boxtimes	No fee required.				
	Fee paid previously with preliminary materials.				
	Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11.				



REPARE THERAPEUTICS INC.

7210 Frederick-Banting, Suite 100 St-Laurent, Québec, Canada H4S 2A1

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS

To be Held on May 13, 2022

Dear Repare Shareholder:

You are cordially invited to attend the 2022 Annual Meeting of Shareholders of Repare Therapeutics Inc., a corporation incorporated under the *Business Corporations Act* (Québec) (the "Company"). The Annual Meeting will be held on Friday, May 13, 2022, at 4:00 p.m., Eastern Time. In light of public health concerns regarding the ongoing COVID-19 pandemic, to protect the health and safety of our shareholders and employees and to facilitate shareholder participation in the Annual Meeting, the Annual Meeting will be held through a live webcast at *www.proxydocs.com/RPTX*. In order to attend, you must register in advance at *www.proxydocs.com/RPTX* prior to the deadline of 5:00 p.m., Eastern Time on May 11, 2022. Upon completing your registration, you will receive further instructions via email, including your unique links that will allow you access to the Annual Meeting and will permit you to submit questions. You will not be able to attend the Annual Meeting in person. Shareholders attending the Annual Meeting virtually will be afforded the same rights and opportunities to participate as they would at an in-person meeting. We encourage you to attend online and participate. We recommend that you log in a few minutes before 4:00 p.m., Eastern Time on May 13, 2022 to ensure you are logged in when the Annual Meeting starts.

The Annual Meeting will be held for the following purposes:

- 1. To elect three Class II directors, David Bonita, M.D., Thomas Civik and Carol A. Schafer, to our board of directors, each to hold office until our Annual Meeting of Shareholders in 2025.
- 2. To approve, on an advisory basis, the compensation of the Company's named executive officers, as disclosed in this proxy statement.
- 3. To indicate, on an advisory basis, the preferred frequency of shareholder advisory votes on the compensation of the Company's named executive officers.
- **4.** To appoint Ernst & Young LLP as the independent registered public accounting firm of the Company for its fiscal year ending December 31, 2022, and to authorize the Company's board of directors to fix Ernst & Young LLP's remuneration.
- 5. To conduct any other business properly brought before the Annual Meeting.

These items of business are more fully described in the Proxy Statement accompanying this Notice.

Our 2022 Annual Meeting will be held virtually through a live webcast. You will be able to attend the Annual Meeting, submit questions and vote during the live webcast by visiting www.proxydocs.com/RPTX and registering prior to the deadline of 5:00 p.m., Eastern Time on May 11, 2022 and entering the Control Number included in your **Notice of Internet Availability**, voting instruction form, or in the instructions that you received via email. Upon completing your registration, you will receive further instructions via email, including your unique links that will allow you access to the Annual Meeting and will permit you to submit questions. Please refer to the additional logistical details and recommendations in the accompanying proxy statement.

The record date for the Annual Meeting is March 21, 2022. Only shareholders of record at the close of business on March 21, 2022 may vote at the Annual Meeting or any adjournment thereof.

By Order of the Board of Directors,



Steve Forte Executive Vice-President and Chief Financial Officer

St-Laurent, Québec, Canada April 1, 2022

You are cordially invited to attend the Annual Meeting. Whether or not you expect to attend the Annual Meeting, PLEASE VOTE YOUR SHARES. As an alternative to voting online at the Annual Meeting, you may vote your shares by proxy in advance of the Annual Meeting via the internet, by telephone or, if you receive a paper proxy card, by mailing the completed proxy card. 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.

Even if you have voted by proxy, you may still vote online if you attend the Annual Meeting. Please note, however, that if your shares are held of record by a broker, bank or other nominee and you wish to vote at the Annual Meeting, you must obtain a proxy issued in your name from that record holder.



REPARE THERAPEUTICS INC. 7210 Frederick-Banting, Suite 100 St-Laurent, Québec, Canada H4S 2A1

PROXY STATEMENT FOR THE 2022 ANNUAL MEETING OF SHAREHOLDERS

To be Held on May 13, 2022 at 4:00 p.m., Eastern Time

Our board of directors is soliciting your proxy to vote at the 2022 Annual Meeting of Shareholders (the "Annual Meeting") of Repare Therapeutics Inc., a corporation incorporated under the *Business Corporations Act* (Québec) (the "Company"), to be held virtually, via live webcast, on Friday, May 13, 2022 at 4:00 p.m., Eastern Time, and any adjournment or postponement thereof. In light of public health concerns regarding the ongoing COVID-19 pandemic, to protect the health and safety of our shareholders and employees and facilitate shareholder participation in the Annual Meeting, we have determined that the Annual Meeting will be held in a virtual meeting format this year, with no physical in-person meeting, as the safety of our employees, communities and shareholders is our first priority. Shareholders attending the Annual Meeting virtually will be afforded the same rights and opportunities to participate as they would at an in-person meeting. In order to attend, you must register in advance at www.proxydocs.com/RPTX prior to the deadline of 5:00 p.m., Eastern Time on May 11, 2022. Upon completing your registration, you will receive further instructions via email, including your unique links that will allow you access to the Annual Meeting and will permit you to submit questions.

For the Annual Meeting, we have elected to furnish our proxy materials, including this proxy statement and our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 (the "Annual Report"), to our shareholders primarily via the internet. On or about April 1, 2022, we expect to mail to our shareholders a *Notice of Internet Availability of Proxy Materials* (the "Notice") that contains notice of the Annual Meeting and instructions on how to access our proxy materials on the internet, how to vote at the Annual Meeting, and how to request printed copies of the proxy materials. Shareholders may request to receive all future materials in printed form by mail or electronically by e-mail by following the instructions contained in the Notice. A shareholder's election to receive proxy materials by mail or email will remain in effect until revoked. We encourage shareholders to take advantage of the availability of the proxy materials on the internet to help reduce the environmental impact and cost of our Annual Meeting.

Only shareholders of record at the close of business on Monday, March 21, 2022 (the "Record Date") will be entitled to vote at the Annual Meeting. On the Record Date, there were 41,875,713 common shares outstanding and entitled to vote. A list of shareholders entitled to vote at the Annual Meeting will be available for examination during normal business hours for ten days before the Annual Meeting at our address above. To the extent office access is impracticable due to the COVID-19 pandemic, you may email us at investor@reparerx.com for alternative arrangements. The shareholder list will also be available online during the Annual Meeting.

For instructions on how to attend the virtual Annual Meeting, please see the instructions at www.proxydocs.com/RPTX and on page 2 of this proxy statement

Unless otherwise noted or the context otherwise requires, all information provided in this proxy statement is given as at April 1, 2022. In this proxy statement, we refer to Repare Therapeutics Inc. as "Repare," "the Company," "we" or "us" and the board of directors of Repare as "our board of directors." All amounts in this proxy statement are in U.S. dollars, except share data.

The Annual Report, which contains financial statements as of December 31, 2021 and 2020 and for each of the three fiscal years ended December 31, 2021 and our "Management's Discussion and Analysis of Financial Condition and Results of Operations," accompanies this proxy statement and is, together with additional information relating to the Company, available on SEDAR at www.sedar.com and on EDGAR at www.sec.gov. You also may obtain a copy of the Annual Report without charge by writing to our Secretary at 7210 Frederick-Banting, Suite 100, St-Laurent, Québec, Canada H4S 2A1, Attention: Secretary or by emailing investor@reparerx.com. Financial information relating to the Company is provided in the Company's audited financial statements as of December 31, 2021 and 2020 and for each of the three fiscal years ended December 31, 2021.

TABLE OF CONTENTS

QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING	3
PROPOSAL 1: ELECTION OF DIRECTORS	11
INFORMATION REGARDING DIRECTOR NOMINEES AND CURRENT DIRECTORS	13
INFORMATION REGARDING THE BOARD OF DIRECTORS AND CORPORATE GOVERNANCE	17
PROPOSAL 2: ADVISORY VOTE ON EXECUTIVE COMPENSATION	27
EXECUTIVE OFFICERS	28
EXECUTIVE COMPENSATION	29
NON-EMPLOYEE DIRECTOR COMPENSATION	47
PROPOSAL 3: ADVISORY VOTE ON THE FREQUENCY OF SOLICITATION OF ADVISORY SHAREHOLDER APPROVAL OF	
EXECUITVE COMPENSATION	50
PROPOSAL 4: APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	51
SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT	53
TRANSACTIONS WITH RELATED PERSONS AND INDEMNIFICATION	57
HOUSEHOLDING OF PROXY MATERIALS	59
OTHER MATTERS	60

OUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING

Why did I receive a notice regarding the availability of proxy materials on the internet?

Pursuant to rules adopted by the Securities and Exchange Commission (the "SEC") and the "Notice-and-Access" provisions of Canadian securities laws under National Instrument 54-101—Communication with Beneficial Owners of Securities of a Reporting Issuer and National Instrument 51-102—Continuous Disclosure Obligations, we have elected to provide access to our proxy materials over the internet. Accordingly, we have sent you a Notice of Internet Availability of Proxy Materials (the "Notice") because our board of directors is soliciting your proxy to vote at the 2022 Annual Meeting of Shareholders (the "Annual Meeting"), including at any adjournments or postponements of the Annual Meeting. All shareholders will have the ability to access the proxy materials on the website referred to in the Notice or request to receive a printed set of the proxy materials. Instructions on how to access the proxy materials over the internet or to request a printed copy may be found in the Notice.

We intend to mail the Notice on or about April 1, 2022 to all shareholders of record entitled to vote at the Annual Meeting.

Will I receive any other proxy materials by mail?

We may send you a proxy card, along with a second Notice, on or after ten calendar days have passed since our first mailing of the Notice.

How do I attend, participate in, and ask questions during the virtual Annual Meeting?

We will be hosting the Annual Meeting via live webcast only. Any shareholder can attend the virtual Annual Meeting live online by registering at www.proxydocs.com/RPTX. The Annual Meeting will start at 4:00 p.m., Eastern Time, on Friday, May 13, 2022. Shareholders attending the Annual Meeting will be afforded the same rights and opportunities to participate as they would at an in-person meeting.

In order to attend, you must register in advance at www.proxydocs.com/RPTX prior to the deadline of 5:00 p.m., Eastern Time on May 11, 2022. Upon completing your registration, you will receive further instructions via email, including your unique links that will allow you access to the Annual Meeting and will permit you to submit questions. In order to register for the Annual Meeting, you will need the control number, which is included in the Notice or on your proxy card if you are a shareholder of record of common shares, or included with your voting instruction card and voting instructions received from your broker, bank or other agent if you hold your common shares in a "street name." We recommend that you log in a few minutes before 4:00 p.m., Eastern Time to ensure you are logged in when the Annual Meeting starts. The virtual meeting room will open 15 minutes before the start of the Annual Meeting.

If you would like to submit a question during the Annual Meeting, you may log in at www.proxydocs.com/RPTX using your control number, type your question into the "Ask a Question" field, and click "Submit."

To help ensure that we have a productive and efficient meeting, and in fairness to all shareholders in attendance, you will also find our rules of conduct for the Annual Meeting posted when you log into the platform prior to the start of the Annual Meeting. These rules of conduct will include the following guidelines:

- We welcome questions from shareholders relevant to the Annual Meeting. An opportunity will be provided to present questions and comments during the question and answer session, which will include questions submitted live during the Annual Meeting.
- Only shareholders of record as of March 21, 2022 (the "Record Date") and their proxy holders may submit questions or comments.

- You may submit questions and comments electronically through the meeting portal during the Annual Meeting. Management with respond
 to appropriate questions in the order received.
- Please direct all questions to Lloyd Segal, our President and Chief Executive Officer, Thomas Civik, our Board Chairperson, or Steve Forte, our Chief Financial Officer who has been appointed as Secretary of the Annual Meeting.
- Please include your name and affiliation, if any, when submitting a question or comment.
- Limit your remarks to one brief question or comment that is relevant to the Annual Meeting and/or our business. Up to one minute will be allocated to each submitted question or comment.
- Questions may be grouped by topic by our management.
- Questions may also be ruled as out of order if they are, among other things, irrelevant to our business, related to pending or threatened
 litigation, disorderly, repetitious of statements already made, or in furtherance of the speaker's own personal, political or business interests.

What if I have technical difficulties or trouble accessing the virtual Annual Meeting?

We will have technicians ready to assist you with any technical difficulties you may have accessing the virtual Annual Meeting. If you encounter any difficulties accessing the virtual Annual Meeting during the check-in or meeting time, please call the technical support number that will be provided in your email prior to the start of the shareholder meeting.

For the Annual Meeting, how do we ask questions of management and the board?

We plan to have a Q&A session at the Annual Meeting and will include as many shareholder questions as the allotted time permits. Shareholders may submit questions that are relevant to our business in advance of the Annual Meeting as well as live during the Annual Meeting. If you are a shareholder, you may submit a question in advance of the Annual Meeting at www.proxydocs.com/RPTX after logging in with your Control Number, during the entirety of the registration period. Questions may also be submitted during the Annual Meeting live while attending the meeting.

Who can vote at the Annual Meeting?

Only shareholders of record at the close of business on the Record Date will be entitled to vote at the Annual Meeting. On the Record Date, there were 41,875,713 common shares outstanding and entitled to vote.

Shareholder 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 Investor Services Inc., then you are a shareholder of record. As a shareholder 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 your shares by proxy in advance of the Annual Meeting, either electronically through the internet, by 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. See "—Shareholder of Record: Shares Registered in Your Name" below for a description of the appointment of a third party as proxyholder.

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

If on the Record Date your shares were held, not in your name, but rather in an account at a brokerage firm, bank 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

shareholder of record for purposes of voting at the Annual Meeting. As a beneficial owner, you have the right to direct your broker, bank 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 shareholder of record, you may be instructed to obtain a legal proxy from your broker, bank or other nominee and to submit a copy in advance of the meeting. Further instructions will be provided to you as part of your registration process.

What am I voting on?

There are four matters scheduled for a vote:

- **Proposal 1:** Election of three Class II directors, David Bonita, M.D., Thomas Civik and Carol A. Schafer, to our board of directors, each to hold office until our Annual Meeting of Shareholders in 2025;
- **Proposal 2:** Advisory approval of the compensation of our named executive officers, as disclosed in this proxy statement in accordance with SEC rules:
- Proposal 3: Advisory indication of the preferred frequency of shareholder advisory votes on the compensation of our named executive officers; and
- **Proposal 4:** Appointment of Ernst & Young LLP as independent registered public accounting firm of the Company for its fiscal year ending December 31, 2022 and to authorize the Company's board of directors to fix Ernst & Young LLP's remuneration.

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

Our 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 Annual Meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment.

How do I vote?

The procedures for voting are fairly simple:

Shareholder of Record: Shares Registered in Your Name

If you are a shareholder of record, you may vote (1) online during the Annual Meeting, or (2) in advance of the Annual Meeting by proxy through the internet, by telephone or by using a proxy card that you may request or that we may elect to deliver at a later time. 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 even if you have already voted by proxy.

- To vote online *during* the Annual Meeting, if you are a shareholder of record as of the Record Date, follow the instructions at
 www.proxydocs.com/RPTX. You will need to enter the Control Number found on your Notice or in the email sending you the Proxy
 Statement
- To vote *prior* to the Annual Meeting, you may vote via the Internet at *www.proxypush.com/RPTX*; by telephone; or by completing and returning their proxy card or voting instruction form, as described below.
 - To vote through the internet prior to the Annual Meeting, go to www.proxypush.com/RPTX and follow the instructions in the Notice or on the proxy card to submit your vote on an electronic proxy card. You will be asked to provide your Control Number from the Notice or proxy card.
 - To vote over the telephone, if you received a Notice or printed copy of the Proxy Materials, follow the instructions provided in the Notice or proxy card. You will be asked to provide your Control Number from the Notice or proxy card.

• To vote using the proxy card, simply complete, sign and date the proxy card that may be delivered to you and return it promptly in the envelope provided. If you return your signed proxy card to us before the Annual Meeting, we will vote your shares as you direct.

Shareholders of record who wish to appoint a third-party proxyholder other than the persons identified on the proxy card to attend, participate or vote at the Annual Meeting as their proxy and vote their shares <u>MUST</u> submit their proxy card appointing such third-party proxyholder <u>AND</u> register the third-party proxyholder, as described below. Registering your proxyholder is an additional step to be completed <u>AFTER</u> you have submitted your proxy. Failure to register the proxyholder will result in the proxyholder not receiving access to attend, participate or vote at the Annual Meeting.

- Step 1: To appoint a third-party proxyholder, insert such person's name and email in the blank space provided in the proxy card and follow the instructions for submitting such proxy card by mail. This must be completed prior to registering such proxyholder, which is an additional step to be completed once you have submitted your proxy card.
- Step 2: To register a duly appointed third-party proxyholder, shareholders MUST provide the proxyholder contact information requested by Mediant Communications in order to be provided with the information and credentials to access, attend, participate or vote at the Annual Meeting.
- Proxies appointing a third-party proxyholder must be deposited in accordance with the instructions set forth on the proxy card by no later than 10:00 a.m., Eastern Time, on May 11, 2022, or if the Annual Meeting is postponed or adjourned, by no later than 48 hours prior to the time of such postponed or adjourned meeting (excluding Saturdays, Sundays and holidays). The Company reserves the right to accept late proxies and to waive the proxy cut-off, with or without notice.

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

If you are a beneficial owner of shares registered in the name of your broker, bank or other agent, you should have received a Notice containing voting instructions from that organization rather than from us. To vote *prior to the Annual Meeting*, 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 broker, bank or other agent. Follow the instructions from your broker, bank or other agent included with these proxy materials, or contact that organization to request a proxy form. You *may access and vote at the Annual Meeting* by logging in with your Control Number on your voting instruction form at *www.proxydocs.com/RPTX*. However, since you are not the shareholder of record, you may be instructed to obtain a legal proxy from your broker, bank or other nominee and to submit a copy in advance of the meeting. Further instructions will be provided to you as part of your registration process.

Internet proxy voting will be provided 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.

How many votes do I have?

On each matter to be voted upon, you have one vote for each common share you own as of the Record Date.

If I am a shareholder of record and I do not vote, or if I return a proxy card or otherwise vote without giving specific voting instructions, what happens?

If you are a shareholder of record and do not vote through the internet, by telephone, by completing the proxy card that may be delivered to you 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 all three nominees for director, "FOR" the advisory approval of executive compensation, "ONE YEAR" as the preferred frequency of advisory votes to approve executive compensation and "FOR" the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2022, and to authorize the board of directors to fix Ernst & Young LLP's remuneration. 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.

If you have specified on the proxy card how you want your shares to be voted on a particular matter, then your proxyholder must vote your shares accordingly. If you have not specified on the proxy card how you want your shares to be voted on a particular matter, then your proxyholder can vote your shares as he or she sees fit.

If I am a beneficial owner of shares held in street name and I do not provide my broker or bank with voting instructions, what happens?

If you are a beneficial owner of shares held in street name and you do not instruct your broker, bank or other agent how to vote your shares, the question of whether your broker or nominee will still be able to vote your shares depends on whether, pursuant to stock exchange rules, the particular proposal is deemed to be a "routine" matter. Brokers and nominees can use their discretion to vote "uninstructed" shares with respect to matters that are considered to be "routine," but not with respect to "non-routine" matters. Under applicable rules and interpretations, "non-routine" matters are matters that may substantially affect the rights or privileges of shareholders, such as mergers, shareholder proposals, elections of directors (even if not contested), executive compensation, and certain corporate governance proposals, even if management-supported. In this regard, Proposals 1, 2 and 3 are considered to be "non-routine" under applicable rules, meaning your broker or nominee may not vote your shares on Proposals 1, 2 or 3 without your instructions. Such an event would result in a "broker non-vote" and these shares will not be counted as having been voted for such proposals. However, your broker or nominee may vote your shares on Proposal 4.

If you a beneficial owner of shares held in street name, and you do not plan to attend the Annual Meeting, in order to ensure your shares are voted in the way you would prefer, you <u>must</u> provide voting instructions to your broker, bank or other agent by the deadline provided in the materials you receive from your broker, bank or other agent.

Can I change my vote after submitting my proxy?

Shareholder 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.
- You may grant a subsequent proxy by telephone or through the internet.
- You may send a timely written notice that you are revoking your proxy to our Secretary at c/o Repare Therapeutics Inc., 7210 Frederick-Banting, Suite 100, St-Laurent, Québec, Canada H4S 2A1, Attention: Secretary.
- You may attend the Annual Meeting and vote online during the Annual Meeting. Simply attending the Annual Meeting will not, by itself, revoke your proxy. Even if you plan to attend the Annual Meeting, we recommend that you also submit your proxy or voting instructions or vote in advance of the Annual Meeting by telephone or through the internet so that your vote will be counted if you later decide not to attend the Annual Meeting.

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

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

If your shares are held by your broker, bank or other agent, you should follow the instructions provided by your broker, bank or other agent.

What are "broker non-votes"?

As discussed above, when a beneficial owner of shares held in street name does not give voting instructions to his or her broker, bank or other securities intermediary holding his or her shares as to how to vote on matters deemed to be "non-routine," the broker, bank or other such agent cannot vote the shares. These un-voted shares are counted as "broker non-votes."

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

How are votes counted?

Votes will be counted by the inspector of election appointed for the Annual Meeting, who will separately count, for the proposal to elect directors, votes "FOR," "WITHHOLD" and broker non-votes; the for the proposal regarding advisory approval of executive compensation, votes "FOR," "AGAINST," abstentions and broker non-votes; for the proposal regarding frequency of shareholder advisory votes to approve executive compensation, votes for frequencies of "ONE YEAR," "TWO YEARS," "THREE YEARS," abstentions and broker non-votes; and the proposal to appoint Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2022, and to authorize the board of directors to fix Ernst & Young LLP's remuneration, votes "FOR" and "AGAINST" and abstentions.

How many votes are needed to approve each proposal?

The following table summarizes the minimum vote needed to approve each proposal and the effect of abstentions and broker non-votes.

Proposal No.	Proposal Description	Vote Required for Approval	Effect of Abstentions	Effect of Broker Non-Votes
1	Election of directors	Directors will be elected by a plurality of the votes cast at the Annual Meeting by the holders of shares present by remote communication or represented by proxy and entitled to vote on the election of directors. The three nominees receiving the most "FOR" votes will be elected as directors; withheld votes will have no effect	No effect	No effect
2	Advisory vote to approve the compensation of our named executive officers	"FOR" votes from the holders of a simple majority of shares present by remote communication or represented by proxy and entitled to vote on the subject matter	Against	No effect

Proposal No.	Proposal Description	Vote Required for Approval	Effect of Abstentions	Effect of Broker Non-Votes
3	Advisory vote to approve the preferred frequency of shareholder advisory votes on the compensation of our named executive officers	The frequency receiving the votes of the holders of a majority of shares present in person or represented by proxy and entitled to vote on the subject matter	No effect	No effect
4	Appointment of Ernst & Young LLP as our independent registered public accounting firm for our fiscal year ending December 31, 2022, and to authorize the board of directors to fix Ernst & Young LLP's remuneration	"FOR" votes from the holders of a simple majority of shares present by remote communication or represented by proxy and entitled to vote on the subject matter	Against	Not applicable(1)

⁽¹⁾ This proposal is considered to be a "routine" matter under NYSE rules. Accordingly, if you hold your shares in street name and do not provide voting instructions to your broker, bank or other agent that holds your shares, your broker, bank or other agent has discretionary authority under NYSE rules to vote your shares on this proposal.

What is the quorum requirement?

A quorum of shareholders is necessary to hold a valid Annual Meeting. A minimum of two persons who either are, or represent by proxy, shareholders holding, in the aggregate, at least 25% of the outstanding common shares entitled to vote at the Annual Meeting will constitute a quorum for the transaction of business at the Annual Meeting. Votes withheld and broker non-votes will be counted for purposes of determining the presence of a quorum.

Who is paying for this proxy solicitation?

We will pay for the entire cost of soliciting proxies. 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.

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

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 the Notices to ensure that all of your shares are voted.

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

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 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 additional Form 8-K to publish the final results.

When are shareholder proposals and director nominations due for next year's annual meeting?

To be considered for inclusion in next year's proxy materials, your proposal must be submitted in writing by December 2, 2022 for proposals submitted pursuant to Rule 14a-8 promulgated under the Exchange Act. Any

such proposals should be submitted to c/o Repare Therapeutics Inc., 7210 Frederick-Banting, Suite 100, St-Laurent, Québec, Canada H4S 2A1, Attention: Secretary.

Nominations for director (made other than pursuant to a shareholder proposal) for inclusion in next year's proxy materials must satisfy the criteria and procedures prescribed under the *Business Corporations Act* (Québec) ("QBCA") and our By-Law No. 2020-1 (the "Bylaws"). To be timely, a shareholder's notice must be made:

- in the case of an annual meeting of shareholders (including an annual and special meeting), not less than 30 nor more than 60 days prior to the date of the annual meeting of shareholders; provided, however, that in the event that the annual meeting of shareholders is to be held on a date that is less than 50 days after the date (the "Notice Date") on which the first public announcement of the date of the annual meeting is made, notice by the nominating shareholder may be made not later than the close of business on the tenth day following the Notice Date; and
- in the case of a special meeting (which is not also an annual meeting) of shareholders called for the purpose of electing directors (whether or not also called for other purposes), not later than the close of business on the 15th day following the day on which the first public announcement of the date of the meeting was made.

Our Bylaws also prescribe the proper written form for a shareholder's notice as well as additional requirements in connection with nominations. Any such submission must be accompanied by the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected. Subject to our board of directors' discretion as provided in our Bylaws, shareholders who fail to comply with the advance notice requirements and the other requirements set out in the Bylaws, would not be entitled to make nominations for directors at an annual or special meeting of shareholders.

PROPOSAL 1

ELECTION OF DIRECTORS

Our board of directors currently consists of nine members and is divided into three classes as follows:

- Class II, which consists of David Bonita, M.D., Thomas Civik and Carol A. Schafer, whose terms will expire at the upcoming Annual Meeting;
- Class III, which consists of Samarth Kulkarni, Ph.D., Briggs Morrison, M.D. and Lloyd M. Segal, whose terms will expire at the Annual Meeting of Shareholders to be held in 2023; and
- Class I, which consists of Jerel Davis, Ph.D., Todd Foley and Ann D. Rhoads, whose terms will expire at the Annual Meeting of Shareholders to be held in 2024.

Each class consists, as nearly as possible, of one-third of the total number of directors, and each class has a three-year term. At each annual meeting of shareholders, the successors to directors whose terms then expire will be elected to serve from the time of election until the third annual meeting following the election. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. Vacancies on the board of directors may be filled only by persons elected by a majority of the remaining directors. A director elected by the board of directors to fill a vacancy in a class, including vacancies created by an increase in the number of directors, shall serve for the remainder of the full term of that class and until the director's successor is duly elected and qualified. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control of Repare.

Directors Whose Term of Office Expires in 2022: Each of Dr. Bonita, Mr. Civik and Ms. Schafer is currently a member of our board of directors and has been nominated for reelection to serve as a Class II director. Each of these nominees was recommended to our board of directors by our nominating and corporate governance committee. Each nominee has agreed to stand for reelection at the Annual Meeting, and our management has no reason to believe that any nominee will be unable to serve. If elected at the Annual Meeting, each of these nominees would serve until the annual meeting of shareholders to be held in 2025 and until his successor has been duly elected, or if sooner, until the director's death, resignation or removal.

Plurality Voting: Directors are elected by a plurality of the votes of the holders of shares present by virtual attendance or represented by proxy and entitled to vote on the election of directors. Accordingly, the three nominees receiving the highest number of "FOR" votes will be elected. Shares represented by executed proxies will be voted, if authority to do so is not withheld, for the election of the three nominees named above. If any nominee becomes unavailable for election as a result of an unexpected occurrence, shares that would have been voted for that nominee instead will be voted for the election of a substitute nominee proposed by us.

Director Selection: Our nominating and corporate governance committee employs a rigorous, thorough and in-depth process to identify director candidates and recommend the strongest possible director nominees to the full board of directors. The nominating and corporate governance committee seeks to assemble a board that, as a whole, possesses the appropriate balance of professional and industry knowledge, financial expertise, public company governance experience, diversity and high-level management experience necessary to oversee and direct our business and strategy.

Our nominating and corporate governance committee deliberates on and determine the skills and experience that would best serve the board of directors and Repare and that would address any gaps identified in the annual assessment process of our board of directors, with the goal of recruiting members who complement and strengthen the skills of other members and who also represent the highest standards of integrity, collegiality, sound business judgment and other qualities that the nominating and corporate governance committee views as

critical to effective functioning of the board. To provide a mix of experience and perspective on the board, the nominating and corporate governance committee also takes into account gender, sexual preference, disability, age, ethnicity, business experience, functional expertise, stakeholder expectations, culture and geography.

The nominating and corporate governance committee considers director candidates recommended by shareholders, directors and other sources, and also engages an executive search firm from time to time to assist in identifying prospective candidates. When selecting candidates for recommendation to the board of directors, the nominating and corporate governance committee consider the attributes of the candidates and the needs of our board of directors and reviews all candidates in the same manner, regardless of the source of the recommendation. In evaluating director nominees, a candidate is expected to have certain minimum qualifications, including being able to read and understand basic financial statements, having familiarity with our business and industry, having high moral character and mature judgment and being able to work collegially with others.

In addition, factors such as the following may be considered:

- the independence standards as set forth in the applicable Nasdaq listing standards, the presence of any material interests that could cause a conflict between our interests and the interests of the director nominee, and the director nominee's ability to exercise his or her best business judgment in the interest of all shareholders;
- the knowledge, skills and experience of the director nominee, including experience in the industry in which Repare operates, as well as in the general areas of clinical development, business, finance, management and public service, in light of prevailing business conditions and the knowledge, skills and experience already possessed by other members of our board of directors;
- the director nominee's ability to devote sufficient time to the business of our board of directors and at least one of the standing committees of the board of directors, in light of the number of other boards on which the director nominee serves (for profit and not-for-profit) and the other business and professional commitments of the director nominee;
- the appropriate size and the diversity of our board of directors;
- how the director nominee's skills and experience would complement and enhance the overall mix of skills and experience on our board of directors; and
- the director nominee's experience with public company governance and relevant accounting rules and practices.

Before the nominating and corporate governance committee recommends a qualified director nominee to our board of directors for consideration, the nominee is interviewed by each member of the board of directors and meets with the chief executive officer and other senior executives.

The biographies below under "Information Regarding Director Nominees and Current Directors" include information, as of the date of this proxy statement, regarding the specific and particular experience, qualifications, attributes or skills of each director or director nominee that led the committee to believe that that nominee should continue to serve on the board. However, each of the members of the nominating and corporate governance committee may have a variety of reasons why a particular person would be an appropriate nominee for the board, and these views may differ from the views of other members.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" EACH CLASS II DIRECTOR NOMINEE NAMED ABOVE.

INFORMATION REGARDING DIRECTOR NOMINEES AND CURRENT DIRECTORS

The following table sets forth, for the Class II nominees and our other directors who will continue in office after the Annual Meeting, their ages and position or office held with us as of the date of this proxy statement:

			DIRECTOR	
NAME	AGE	POSITION(S)	SINCE	RESIDENCE
Class II directors whose terms expire	for election			
David Bonita, M.D.	46	Director	September 2019	Connecticut (USA)
Thomas Civik	53	Chair of the Board of Directors	September 2021	New York (USA)
Carol A. Schafer	58	Director	March 2019	Florida (USA)
Class III directors continuing in offic	e until the 202	23 Annual Meeting of Shareholders		
Samarth Kulkarni, Ph.D.	43	Director	November 2019	Massachusetts (USA)
Briggs Morrison, M.D.	63	Director	June 2017	Pennsylvania (USA)
Lloyd M. Segal 58 Pres		President, Chief Executive Officer and Director	September 2016	Québec (Canada)
Class I directors continuing in office	until the 2024	Annual Meeting of Shareholders		
Jerel Davis, Ph.D.	45	Director	September 2016	British Columbia (Canada)
Todd Foley	50	Director	June 2017	Wyoming (USA)
Ann D. Rhoads	56	Director	June 2020	Montana (USA)

Set forth below is biographical information for the director nominees and each person whose term of office as a director will continue after the Annual Meeting. This includes information regarding each director's experience, qualifications, attributes or skills that led our board of directors to recommend them for board service.

Nominees for Election at the 2022 Annual Meeting of Shareholders

David Bonita, M.D. has served as a member of our board of directors since September 2019. Dr. Bonita is a member at OrbiMed Advisors LLC, an investment firm. He currently serves on the boards of directors of Acutus Medical Inc., Ikena Oncology, Inc., IMARA Inc., Prelude Therapeutics Inc. and Tricida, Inc., as well as several private companies. Dr. Bonita also previously served on the boards of directors of Clementia Pharmaceuticals Inc., Loxo Oncology, Inc., SI-BONE, Inc. and ViewRay Inc. Prior to OrbiMed, Dr. Bonita worked as a corporate finance analyst in the healthcare investment banking groups of Morgan Stanley and UBS. He has published scientific articles in peer-reviewed journals based on signal transduction research performed at Harvard Medical School. He received his B.A. in biology from Harvard University and his joint M.D./M.B.A. from Columbia University. Our board of directors believes that Dr. Bonita's extensive investment experience in the healthcare industry and his experience on the boards of directors of several public and private companies qualify him to serve on our board of directors.

Thomas Civik has served as Chair of our board of directors since September 2021. Mr. Civik most recently served as President and Chief Executive Officer of Five Prime Therapeutics and as a member of its board of directors until its acquisition by Amgen Inc. in April 2021. He previously served as Chief Commercial Officer of Foundation Medicine, Inc. from November 2017 until September 2019. From December 2000 to November 2017, Mr. Civik held various roles of increasing responsibility over a 17-year career at Genentech, Inc., including responsibility for therapies such as Avastin, Tecentriq, Alecensa and Tarceva. In addition, Mr. Civik currently serves on the board of directors of Pyxis Oncology, Inc. Mr. Civik received a B.A. in political science from Saint Norbert College and an M.B.A. in business strategy and marketing from the Kellogg School of Management at

Northwestern University. Our board of directors believes that Mr. Civik's extensive experience as an executive and director in the life sciences industry qualifies him to serve on our board of directors and as our Chair.

Carol A. Schafer has served as a member of our board of directors since March 2019. Ms. Schafer is currently a consultant in the biotech industry and has more than 25 years of experience in investment banking, equity capital markets, corporate finance and business development in the biopharmaceutical sector. From April 2007 to September 2018, she worked at Wells Fargo Securities, most recently serving as its Vice Chair, Equity Capital Markets. From December 2003 to February 2007, Ms. Schafer served as Vice President of Finance and Business Development at Lexicon Pharmaceuticals. Prior to that, Ms. Schafer worked at J.P. Morgan, where she held various positions of increasing responsibility, most recently serving as a Managing Director in Equity Capital Markets. Ms. Schafer currently serves on the boards of directors of Idera Pharmaceuticals, Inc., Insmed Incorporated and Kura Oncology, Inc. She served on the board of directors of Five Prime Therapeutics, Inc. from May 2019 until it was acquired by Amgen in April 2021. Ms. Schafer received a B.A. from Boston College and an M.B.A. from New York University. Our board of directors believes that Ms. Schafer's extensive financial background and experience providing investment banking, equity capital markets and strategic support to companies within the healthcare sector qualify her to serve on our board of directors.

Directors Continuing in Office Until the 2023 Annual Meeting of Shareholders

Samarth Kulkarni, Ph.D. has served as a member of our board of directors since November 2019. Dr. Kulkarni currently serves as the Chief Executive Officer of CRISPR Therapeutics AG, a position he has held since 2017, and as a member of its board of directors since 2017. Dr. Kulkarni initially joined CRISPR in August 2015 as Chief Business Officer, and then served as CRISPR's President and Chief Business Officer from May 2017 to November 2017. Prior to joining CRISPR, Dr. Kulkarni was a partner within the pharmaceuticals and biotechnology practice at McKinsey & Company, a global consulting firm, where he held various positions of increasing responsibility after joining in 2006. He also serves on the boards of directors of Black Diamond Therapeutics, Inc. and Centessa Pharmaceuticals plc. Dr. Kulkarni received a Ph.D. in bioengineering and nanotechnology from the University of Washington and a B. Tech. from the Indian Institute of Technology. Our board of directors believes that Dr. Kulkarni's extensive management and industry experience qualify him to serve on our board of directors.

Briggs Morrison, M.D. has served as a member of our board of directors since June 2017. Dr. Morrison currently serves as President, Head of Research and Development of Syndax Pharmaceuticals, Inc., a position he has held since February 2022, and as a member of its board of directors since July 2015. Dr. Morrison previously served as Syndax's Chief Executive Officer from June 2015 to February 2022. Prior to joining Syndax, Dr. Morrison served as Executive Vice President, Global Medicines Development and Chief Medical Officer at AstraZeneca plc from January 2012 to June 2015, leading the company's global, late-stage development organization and serving as a member of the AstraZeneca senior executive team. From October 2007 to December 2011, Dr. Morrison held a number of positions of increasing responsibility at Pfizer Inc., culminating in his appointment as Head, Medical Affairs, Safety and Regulatory Affairs for Pfizer's human health business. Dr. Morrison served as chairman of the board of TransCelerate BioPharma Inc. from 2014 to 2015, a member of the executive committee of the Clinical Trials Transformation Initiative sponsored by FDA, and is on the board of the Alliance for Clinical Research Excellence and Safety. In addition to Syndax, Dr. Morrison currently serves on the boards of directors of Arvinas, Inc. and Werewolf Therapeutics, Inc., as well as on the boards of directors of several private companies. Dr. Morrison also previously served on the boards of directors of Codiak Biosciences, Inc., NextCure, Inc. and Oncorus, Inc. He is currently an executive partner at MPM Capital LLC, a healthcare-focused venture capital firm, a position he has held since June 2015. Dr. Morrison received a B.S. in biology from Georgetown University and an M.D. from the University of Connecticut Medical School. He completed residency training in internal medicine at Massachusetts General Hospital and a fellowship in medical oncology at the Dana-Farber Cancer Institute. Our board of directors believes that Dr. Morrison's extensive executive leadership experience, his medical background and training and his service on the boards of other public and private biopharmaceutical and biotechnology companies qualify him to serve on our board of directors.

Lloyd M. Segal has served as our President and Chief Executive Officer and as a member of our board of directors since our incorporation in September 2016. From February 2010 to January 2016, he served as a Managing Partner with Persistence Capital Partners, a Canadian-based healthcare private equity investor. Prior to then, Mr. Segal was a consultant with McKinsey & Company, and served as chief executive officer of several emerging biotechnology companies including Advanced Bioconcept Inc., Caprion Pharmaceuticals Inc. (now CellCarta Inc.), which he co-founded, and Thallion Pharmaceuticals Inc. He serves as a member of the board of directors of GBC American Fund, a U.S. growth-focused mutual fund, and Aktis Oncology Inc., a private, venture-funded radiotherapy-focused oncology research company. Mr. Segal also previously served as Chairman of LMC Diabetes & Endocrinology, Canada's leading national endocrinology practice. From June 2016 to March 2020, Mr. Segal served as Entrepreneur-in-Residence with Versant Ventures. He was honored in 2013 by the Financial Times as Outstanding Director of the Year for public companies and also previously served on the boards of directors of several public and private U.S. and Canadian companies, including Valeant Pharmaceuticals International and its predecessor company, Biovail Corporation. He received a B.A. in politics from Brandeis University and an M.B.A. from Harvard Business School. Our board of directors believes that Mr. Segal's extensive experience in the biotechnology industry in addition to his corporate governance and executive leadership experience qualify him to serve on our board of directors.

Directors Continuing in Office Until the 2024 Annual Meeting of Shareholders

Jerel Davis, Ph.D. has served as a member of our board of directors since our incorporation in September 2016 and was Chair of our board of directors until September 2021. Since June 2011, Dr. Davis has been at Versant Venture Management, LLC, a healthcare investment firm, where he has held the position of Managing Director since 2015. Dr. Davis currently serves on the board of directors of two other public biotechnology companies, including Graphite Bio, Inc. since October 2019 and Chinook Therapeutics, Inc. since December 2018. In addition, Dr. Davis serves on the board of directors of several private companies. Prior to joining Versant, Dr. Davis was at McKinsey & Company where he worked in various healthcare markets including the United States, Europe and China. Dr. Davis received a B.S. in mathematics and biology from Pepperdine University and a Ph.D. in population genetics from Stanford University. Our board of directors believes that Dr. Davis's broad and extensive experience in the life sciences industry as both an investor of and launching numerous life sciences companies qualifies him to serve on our board of directors.

Todd Foley has served as a member of our board of directors since June 2017. Since 1999, Mr. Foley has worked at MPM Capital LLC, a healthcare-focused venture capital firm, where he currently serves as a Managing Director focusing on investments in biotech companies. He currently serves on the board of directors of Entrada Therapeutics, Inc., and also serves as on the boards of directors of several other privately-held life sciences and pharmaceutical companies. Mr. Foley previously served on the boards of directors of Chiasma, Inc. and Rhythm Pharmaceuticals, Inc. In addition, Mr. Foley currently serves as the President of Turmeric Acquisition Corp., a recently founded special purpose acquisition company. Mr. Foley received a B.S. in chemistry from the Massachusetts Institute of Technology and an M.B.A from Harvard Business School. Our board of directors believes that Mr. Foley's financial expertise and experience as both an investor of and a member of the board of directors of numerous life sciences companies qualify him to serve on our board of directors.

Ann D. Rhoads has served as a member of our board of directors since June 2020. Ms. Rhoads most recently served as Chief Financial Officer of Forty Seven, Inc. (acquired by Gilead Sciences, Inc.), a position she held from March 2018 until its sale to Gilead in 2020. Previously, from 2010 to January 2017, Ms. Rhoads was Executive Vice President and Chief Financial Officer of Zogenix, Inc. From 1998 through 2009, Ms. Rhoads was at Premier, Inc., serving as Vice President, Strategic Initiatives from 1998 to 2000 before serving as Chief Financial Officer from 2000 through 2009. Ms. Rhoads currently serves on the board of directors of Globus Medical Inc., Quidel Corporation and iTeos Therapeutics Inc. and she previously served on the board of directors of Evoke Pharma, Inc., Iridex Corporation and Novellus Systems, Inc. Ms. Rhoads received a B.S. in Finance from the University of Arkansas and an M.B.A. from the Harvard Graduate Business School. Our board of directors believes that Ms. Rhoads' extensive experience as a chief financial officer of multiple publicly traded

biotech and pharmaceutical companies, in addition to her experience as a member of the boards of directors of multiple publicly traded biotech and pharmaceutical companies, qualify her to serve on our board of directors.

Board Diversity

Our board of directors believes that a diverse board is better able to effectively oversee our management and strategy, and position Repare to deliver long-term value for our shareholders. Our nominating and corporate governance committee considers diversity, including gender, sexual preference and ethnicity, as adding to the overall mix of perspectives of our board of directors as a whole. With the assistance of the nominating and corporate governance committee, our board of directors regularly reviews trends in board composition, including on director diversity.

The table below provides additional diversity information regarding our board of directors as of March 15, 2022. Each of the categories listed in the below table has the meaning as it is used in Nasdaq Listing Rule 5605(f).

Board Diversity M	Iatrix (As of March 15, 2022)			
Total Number of Directors	· · · · · ·		9	
	Female	Male	Non- Binary	Did Not Disclose Gender
Part I: Gender Identity			•	
Directors	2	6	_	1
Part II: Demographic Background				
African American or Black			_	
Alaskan Native or Native American			_	
Asian	_	1	_	_
Hispanic or Latinx			_	
Native Hawaiian or Pacific Islander			_	
White	2	4	_	_
Two or More Races or Ethnicities			_	
LGBTQ+			_	
Did Not Disclose Demographic Background			2.	

INFORMATION REGARDING THE BOARD OF DIRECTORS AND CORPORATE GOVERNANCE

Independence of the Board of Directors

Our common shares are listed on the Nasdaq Global Select Market ("Nasdaq"). As required under Nasdaq listing standards, a majority of the members of our board of directors must qualify as "independent," as affirmatively determined by our board of directors. Our board of directors consults with our external counsel to ensure that its determinations are consistent with relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in pertinent listing standards of Nasdaq, as in effect from time to time.

Other than Mr. Segal, our president and chief executive officer, all members of the board of directors are independent, and all members of committees of the Board are independent. To determine independence, the board of directors reviewed all relevant identified transactions or relationships between each director, or any of his or her family members, and us, our senior management and our independent auditors, our board of directors has affirmatively determined that the following eight directors are independent directors within the meaning of the applicable Nasdaq listing standards: Dr. Bonita, Mr. Civik, Dr. Davis, Mr. Foley, Dr. Kulkarni, Dr. Morrison, Ms. Rhoads and Ms. Schafer. In making this determination, our board of directors found that none of these directors or nominees for director had a material or other disqualifying relationship with Repare. Mr. Segal was determined as not being independent by virtue of his executive leadership role with Repare.

Accordingly, a majority of our directors are independent, as required under applicable Nasdaq rules. In making this determination, our board of directors considered the applicable Nasdaq rules and the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including their beneficial ownership of our share capital.

Board Leadership Structure

Our board of directors has an independent chair, Mr. Civik, who has authority, among other things, to call and preside over meetings of our board of directors, including meetings of the independent directors, to set meeting agendas and to determine materials to be distributed to our board of directors. Accordingly, Mr. Civik has substantial ability to shape the work of our board of directors. We believe that the separation of the positions of chair of our board of directors and Chief Executive Officer reinforces the independence of our board of directors in its oversight of the business and affairs of our company. In addition, we believe that having an independent chair of our board of directors creates an environment that is more conducive to objective evaluation and oversight of management's performance, increasing management accountability and improving the ability of our board of directors to monitor whether management's actions are in the best interests of Repare and its shareholders. As a result, we believe that having an independent chair of our board of directors can enhance the effectiveness of our board of directors as a whole.

Role of the Board in Risk Oversight

One of the key functions of our board of directors is informed oversight of our risk management process. Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through the board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure and our audit committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The audit committee also reviews and receives regular briefings concerning information security and technology risks, and monitors ongoing compliance with legal and regulatory requirements.

Our nominating and corporate governance committee reviews our key enterprise risks and risk-management strategies, as well as monitors the effectiveness of our corporate governance guidelines, including whether they are successful in preventing illegal or improper liability-creating conduct, and monitors compliance with legal, regulatory and ethical requirements.

Our compensation committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking.

Meetings of Our Board of Directors

Our board of directors met five times during the last fiscal year. Each member of our board of directors attended **75% or more** of the aggregate number of meetings of the board and of the committees on which he or she served, held during the portion of the last fiscal year for which he or she was a director or committee member.

Director Commitments

The nominating and corporate governance committee and our board of directors believe that all directors should have sufficient time and attention to devote to board duties and to otherwise fulfill the responsibilities required of directors. In assessing whether directors and nominees for director have sufficient time and attention to devote to board duties, the nominating and corporate governance committee considers, among other things, whether directors may be "overboarded," which refers to the situation where a director serves on an excessive number of boards. Our Corporate Governance Guidelines also require that non-employee directors seek approval from the chair of the board of directors or the lead independent director in advance of accepting an invitation to serve on any additional corporate boards or board committee of another company. Management members of the board of directors must advise the chair of the board of directors and consult with the chair of the nominating and corporate governance committee in advance of accepting an invitation to serve on the board of another company and should only do so to the extent such service would not detract from his or her ability to fulfill his or her management functions at Repare. The nominating and corporate governance committee and our board of directors believe that each of our directors has demonstrated the ability to devote sufficient time and attention to board duties and to otherwise fulfill the responsibilities required of directors.

Board Refreshment

A thorough and in-depth review is conducted for the directors whose term will expire at the next annual meeting of shareholders. The review assesses each director based on his or her board and committee experience to date and the skills and experiences deemed appropriate to meet the current and future needs of our board of directors and Repare. The review consists of a two-part process to determine if each director should seek another three-year term.

- Members of the nominating and corporate governance committee conducts one-on-one reviews with each director to ensure maximum
 frankness, confidentiality and respect for the individual. These meetings are designed to gain the directors' perspective on their
 contributions to the board of directors and whether they believe continuing for another term is appropriate and advisable.
- The nominating and corporate governance committee then meets in executive session, along with the Chair of the Board, to discuss the results of the reviews and determine the appropriate slate of directors.

Information Regarding Committees of the Board of Directors

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee. Our board of directors may establish other committees to facilitate the management of our business. Our board of directors has adopted written charters for each of our committees, which are available to shareholders on our investor relations website at *ir.reparerx.com*.

The following table provides membership and meeting information for 2021 for each of the committees of our board of directors:

			Nominating and Corporate
Name	Audit	Compensation	Governance
David Bonita, M.D.		X	
Thomas Civik			X
Jerel Davis, Ph.D.			X
Todd Foley	X		
Samarth Kulkarni, Ph.D.		X	
Briggs Morrison, M.D.		X*	
Ann D. Rhoads	X*		
Carol A. Schafer	X		X*
Lloyd M. Segal			
Total meetings in 2021	5	6	5

* Committee Chairperson

Our board of directors has determined that each member of each committee meets the applicable Nasdaq rules and regulations regarding "independence" and each member is free of any relationship that would impair his or her individual exercise of independent judgment with regard to us.

Below is a description of each committee of our board of directors.

Audit Committee

The audit committee of our board of directors is composed of three directors: Mr. Foley, Ms. Rhoads and Ms. Schafer, with Ms. Rhoads serving as chair of the audit committee.

Our board of directors has determined that each of these individuals meets the independence requirements of the Sarbanes-Oxley Act of 2002, as amended (the "Sarbanes-Oxley Act"), Rule 10A-3 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the applicable listing standards of Nasdaq. Each member of our audit committee can read and understand fundamental financial statements in accordance with Nasdaq audit committee requirements. In arriving at this determination, the board has examined each audit committee member's scope of experience and the nature of their prior and/or current employment. Additionally, our board of directors has determined that each of Ms. Rhoads and Ms. Schafer qualifies as an audit committee financial expert within the meaning of SEC regulations and meets the financial sophistication requirements of the Nasdaq Listing Rules. In making this determination, our board has considered each of Ms. Rhoads' and Ms. Schafer's formal education and previous and current experience in financial and accounting roles. Both our independent registered public accounting firm and management periodically meet privately with our audit committee.

The audit committee is responsible for assisting our board of directors in its oversight of the integrity of our consolidated financial statements, the qualifications and independence of our independent auditors and our internal financial and accounting controls. The principal duties and responsibilities of our audit committee include, among other things:

- selecting a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- helping to ensure the independence and performance of the independent registered public accounting firm;

- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing our policies on risk assessment and risk management;
- reviewing related party transactions;
- reviewing with our independent auditors and management significant issues that arise regarding accounting principles and financial statement presentation and matters concerning the scope, adequacy and effectiveness of our financial controls; and
- approving (or, as permitted, pre-approving) all audit and all permissible non-audit services, other than de minimis non-audit services, to be performed by the independent registered public accounting firm.

We believe that the composition and functioning of our audit committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Report of the Audit Committee of Our Board of Directors

The material in this report is not "soliciting material," is not deemed "filed" with the SEC and is not to be incorporated by reference in any filing of Repare under the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

The audit committee has reviewed and discussed the audited financial statements for the fiscal year ended December 31, 2021 with our management. The audit committee has discussed with Ernst & Young LLP the matters required to be discussed by the applicable requirements of the Public Company Accounting Oversight Board ("PCAOB") and the SEC. The audit committee has also received the written disclosures and the letter from Ernst & Young LLP required by applicable requirements of the PCAOB regarding the independent accountants' communications with the audit committee concerning independence and has discussed with Ernst & Young LLP the accounting firm's independence. Based on the foregoing, the audit committee has recommended to our board of directors that the audited financial statements be included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, and filed with the SEC.

Audit Committee of Repare Therapeutics Inc.

Ann D. Rhoads (Chair) Todd Foley Carol A. Schafer

Compensation Committee

The compensation committee of our board of directors is composed of three directors: Dr. Bonita, Dr. Kulkarni and Dr. Morrison, with Dr. Morrison serving as chair of the compensation committee. All members of the compensation committee are independent (as independence is currently defined in Rule 5605(d)(2) of the Nasdaq listing standards).

Each of the members of the compensation committee is a non-employee director, as defined in Rule 16b-3 promulgated under the Exchange Act. Our board of directors has determined that each of these individuals is "independent" as defined under the applicable listing standards of Nasdaq, including the standards specific to members of a compensation committee.

The compensation committee oversees the compensation objectives for the company and the compensation of the Chief Executive Officer and other executives. The principal duties and responsibilities of our compensation committee include, among other things:

- reviewing and recommending to our board of directors the compensation of our executive officers, including evaluating the performance of our Chief Executive Officer and, with his assistance, that of our other executive officers;
- reviewing and recommending to our board of directors the compensation of our directors;
- reviewing and approving, or recommending that our board of directors approve, the terms of compensatory arrangements with our executive officers;
- administering our equity and non-equity incentive plans;
- · reviewing and approving, or recommending that our board of directors approve, incentive compensation and equity plans; and
- reviewing and establishing general policies relating to compensation and benefits of our employees and reviewing our overall compensation philosophy.

We believe that the composition and functioning of our compensation committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Compensation Committee Processes and Procedures

Typically, the compensation committee meets quarterly and with greater frequency if necessary. The compensation committee also acts periodically by unanimous written consent in lieu of a formal meeting. The agenda for each meeting is usually developed by the chair of the compensation committee, in consultation with our Chief Executive Officer. The compensation committee meets regularly in executive session. However, from time to time, various members of management and other employees as well as outside advisors or consultants may be invited by the compensation committee to make presentations, to provide financial or other background information or advice or to otherwise participate in compensation committee meetings. The Chief Executive Officer may not participate in, or be present during, any deliberations or determinations of the compensation committee regarding his compensation. The charter of the compensation committee grants the compensation committee full access to all books, records, facilities and personnel of Repare. In addition, under the charter, the compensation committee has the authority to obtain, at our expense, advice and assistance from compensation consultants and internal and external legal, accounting or other advisors and other external resources that the compensation committee considers necessary or appropriate in the performance of its duties. The compensation committee has direct responsibility for the oversight of the work of any consultants or advisers engaged for the purpose of advising the compensation committee. In particular, the compensation committee has the sole authority to retain, in its sole discretion, compensation consultants to assist in its evaluation of executive and director compensation, including the authority to approve the consultant's reasonable fees and other retention terms. Under the charter, the compensation committee may select, or receive advice from, a compensation consultant, legal counsel or other adviser to the compensation committee, other than in-house legal counsel and certain other types of advisers, only after taking into consideration six factors, prescribed by the SEC and Nasdaq, that bear upon the adviser's independence; however, there is no requirement that any adviser be independent.

During the past fiscal year, after taking into consideration the six factors prescribed by the SEC and Nasdaq described above, the compensation committee engaged Aon Consulting Inc. ("Aon") as compensation consultants. The compensation committee requested that Aon:

• evaluate the efficacy of our existing compensation strategy and practices in supporting and reinforcing our long-term strategic goals; and

 assist in refining our compensation strategy and in developing and implementing an executive compensation program to execute that strategy.

As part of its engagement, Aon was requested by the compensation committee to develop a comparative group of companies and to perform analyses of competitive performance and compensation levels for that group. Aon ultimately developed recommendations that were presented to the compensation committee for its consideration

Generally, the compensation committee's process comprises two related elements: the determination of compensation levels and the establishment of performance objectives for the current year. For executives other than our Chief Executive Officer, the compensation committee solicits and considers evaluations and recommendations submitted to the compensation committee by our Chief Executive Officer. The evaluation of our Chief Executive Officer's performance is conducted by the compensation committee, which determines any adjustments to his compensation as well as awards to be granted. Aon then presents such proposed adjustments and awards to our board of directors for approval. For all executives and directors as part of its deliberations, the compensation committee may review and consider, as appropriate, materials such as financial reports and projections, operational data, executive and director share ownership information, company share performance data, analyses of historical executive compensation levels and current company-wide compensation levels and recommendations of Aon, including analyses of executive and director compensation paid at other companies identified by the consultant.

Compensation Committee Interlocks and Insider Participation

No member of our compensation committee is currently one of our officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee of our board of directors is composed of three directors: Mr. Civik, Dr. Davis and Ms. Schafer, with Ms. Schafer serving as chair of the nominating and corporate governance committee. All members of the nominating and corporate governance committee are independent (as independence is currently defined in Rule 5605(a)(2) of the Nasdaq listing standards).

The nominating and corporate governance committee oversees our corporate governance policies and evaluates the composition of our board of directors and candidates for director. The nominating and corporate governance committee's responsibilities include, among other things:

- identifying, evaluating and selecting, or recommending that our board of directors approve, nominees for election to our board of directors and its committees;
- evaluating the performance of our board of directors and of individual directors;
- considering and making recommendations to our board of directors regarding the composition of our board of directors and its committees;
- reviewing developments in corporate governance practices;
- evaluating the adequacy of our corporate governance practices and reporting;
- developing and making recommendations to our board of directors regarding corporate governance guidelines and matters; and
- overseeing an annual evaluation of the board's performance.

We believe that the composition and functioning of our nominating and corporate governance committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

The nominating and corporate governance committee believes that candidates for director should have certain minimum qualifications, including the ability to read and understand basic financial statements, understanding our industry and having the highest personal integrity and ethics. The nominating and corporate governance committee also intends to consider such factors as possessing relevant expertise upon which to be able to offer advice and guidance to management, having sufficient time to devote to the affairs of the Company, demonstrated excellence in his or her field, having the ability to exercise sound business judgment, experience as a board member or executive officer of other publicly-held companies and having the commitment to rigorously represent the long-term interests of the Company's shareholders. An acceptable candidate may not fully satisfy all of the criteria, but is expected to satisfy nearly all of them. Candidates for director nominees are reviewed in the context of the current composition of our board of directors, the operating requirements of the Company and the long-term interests of shareholders. In conducting this assessment, the nominating and corporate governance committee typically considers diversity (including gender, sexual preference, disability, age, ethnicity, business experience, functional expertise, stakeholder expectations, culture and geography), skills and such other factors as it deems appropriate, given the current needs of our board of directors, to maintain a balance of knowledge, experience and capability.

The nominating and corporate governance committee appreciates the value of thoughtful board refreshment, and regularly identifies and considers qualities, skills and other director attributes that would enhance the composition of our board of directors. In the case of incumbent directors whose terms of office are set to expire, the nominating and corporate governance committee reviews these directors' overall service to the Company during their terms, including the number of meetings attended, level of participation, quality of performance and any other relationships and transactions that might impair the directors' independence. The nominating and corporate governance committee also takes into account the results of our board of directors' self-evaluation, conducted annually on a group and individual basis and every three years, conducted with an outside consultant. In the case of new director candidates, the nominating and corporate governance committee also determines whether the nominee is independent for Nasdaq purposes, which determination is based upon applicable Nasdaq listing standards, applicable SEC rules and regulations and the advice of counsel, if necessary. The nominating and corporate governance committee then uses its network of contacts to compile a list of potential candidates, but may also engage, if it deems appropriate, a professional search firm. The nominating and corporate governance committee conducts any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of our board of directors. The nominating and corporate governance committee meets to discuss and consider the candidates' qualifications and then selects a nominee for recommendation to our board of directors by majority vote.

The nominating and corporate governance committee will consider director candidates recommended by shareholders. The nominating and corporate governance committee does not intend to alter the manner in which it evaluates candidates, including the minimum criteria set forth above, based on whether or not the candidate was recommended by a shareholder. Nominations for director (made other than pursuant to a shareholder proposal) for inclusion in next year's proxy materials must satisfy the criteria and procedures prescribed under the QBCA and our Bylaws. To be timely, a shareholder's notice must be made:

• in the case of an annual meeting of shareholders (including an annual and special meeting), not less than 30 nor more than 60 days prior to the date of the annual meeting of shareholders; provided, however, that in the event that the annual meeting of shareholders is to be held on a date that is less than 50 days after the Notice Date on which the first public announcement of the date of the annual meeting is made, notice by the nominating shareholder may be made not later than the close of business on the tenth day following the Notice Date; and

• in the case of a special meeting (which is not also an annual meeting) of shareholders called for the purpose of electing directors (whether or not also called for other purposes), not later than the close of business on the 15th day following the day on which the first public announcement of the date of the meeting was made.

Our Bylaws also prescribe the proper written form for a shareholder's notice as well as additional requirements in connection with nominations. Any such submission must be accompanied by the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected. Subject to our board of directors' discretion as provided in our Bylaws, shareholders who fail to comply with the advance notice requirements and the other requirements set out in the Bylaws, would not be entitled to make nominations for directors at an annual or special meeting of shareholders.

Shareholder Communications with Our Board of Directors

Our board of directors has adopted a formal process by which shareholders may communicate with the board or any of its directors. Shareholders who wish to communicate with our board of directors may do so by sending written communications addressed to our Secretary at Repare Therapeutics Inc., 7210 Frederick-Banting, Suite 100, St-Laurent, Québec, Canada H4S 2A1, Attn: Secretary. Our Secretary will review each communication and will forward such communication to the board of directors or any of its directors to whom the communication is addressed, unless the communication contains advertisements or solicitations or is unduly hostile, threatening or similarly inappropriate, in which case the Secretary shall discard the communication.

Board and Board Member Self-Assessment

The nominating and corporate governance committee believes that a strong director assessment process and periodic board refreshment enhances the effectiveness of our board of directors and is an essential element of sound corporate governance. Director assessment is conducted on an annual basis at both the full board and individual director level, led by the direction of the nominating and corporate governance committee. The nominating and corporate governance committee leads an annual board member self-assessment, which elicits each director's opinions on the overall effectiveness of the board of directors and its committees, the information the board of directors receives, the conduct of board meetings, communication among directors and management, the oversight of key business risks and environmental, social and governance issues, board composition, and any other matters that any director wishes to raise. The results are summarized in an anonymous matter and reviewed by the nominating and corporate governance committee and key findings and observations are reported to the full board of directors for discussion and action, if appropriate. This process has resulted in several meaningful improvements to the effectiveness of meetings of our board of directors and timing and means of providing information to the board of directors.

Director Orientation and Continuing Education

We do not currently intend to adopt a formal orientation and continuing education program for new directors. However, it is expected that all new directors will be given training which will include background material on our policies and procedures, written information about the duties and obligations of members of our board of directors, our business and operations, as well as documents from recent meetings of our board of directors. New directors will also visit our facilities and have access to management to discuss the activities of the Company and the organization. Directors are encouraged to be involved in continuing director education on an ongoing basis, and we intend to pay all reasonable expenses related to continuing director education.

Code of Business Conduct and Ethics

Our board of directors has adopted the Repare Therapeutics Inc. Code of Business Conduct and Ethics that applies to all officers, directors and employees. The nominating and corporate governance committee is

responsible for overseeing the Code of Business Conduct and Ethics and must approve any waivers of the Code of Ethics for our employees, executive officers and directors. The Code of Business Conduct and Ethics is available on our website at *ir.reparerx.com*. If we make any substantive amendments to the Code of Business Conduct and Ethics or grant any waiver from a provision of the Code of Business Conduct and Ethics to any executive officer or director, we will promptly disclose the nature of the amendment or waiver on our website.

In accordance with the QBCA, directors and officers must disclose the nature and value of any interest he or she has in a contract or transaction, whether made or proposed (including related negotiations), to which we are a party. Such "interest" means any financial stake in a contract or transaction that may reasonably be considered likely to influence decision-making. Such disclosure is also required for any contract of transaction to which we are a party and (i) an associate of the director or officer; (ii) a group of which the director or officer is a director or officer; or (iii) a group in which the director or officer or an associate of the director or officer has an interest, whether or not such contract or transaction requires approval by our board of directors. Subject to certain limited exceptions under the QBCA, no director may vote on, any resolution to approve, amend or terminate a contract or transaction which is subject to such disclosure requirement.

Hedging Policy

Our board of directors has adopted an insider trading policy, which prohibits our employees, directors and certain consultants from engaging in hedging or monetization transactions with respect to our common shares, including through the use of financial instruments such as prepaid variable forwards, equity swaps, collars, and exchange funds. In addition, our insider trading policy prohibits trading in derivative securities related to our common shares, which include publicly traded call and put options, engaging in short selling of our common shares, purchasing our common shares on margin or holding it in a margin account and pledging our shares as collateral for a loan.

Position Description of the Chief Executive Officer

We do not intend to adopt a written position description for our Chief Executive Officer. The scope and duties of the Chief Executive Officer include, among other things, strategic planning, corporate and business development, fundraising and value creation. The Chief Executive Officer is subject to the oversight of our board of directors and a written position description for such position may be developed in the future.

Policies Regarding the Representation of Women on the Board

Under our corporate governance guidelines, the nominating and corporate governance committee must take into account a variety of criteria, including gender, when identifying, reviewing and evaluating candidates to serve on our board of directors. Accordingly, we do not intend to adopt a formal policy for the representation and nomination of women on our board of directors.

Consideration Given to the Representation of Women in Executive Officer Appointments

We do not explicitly consider the level of representation in executive officer positions when making executive officer appointments, as our board of directors is of the view that such an analysis is not required in order to retain the best candidates for available openings. We will, however, be mindful of the benefit of diversity of our executive officers and the need to maximize their effectiveness and respective decision-making abilities. Accordingly, in searches for new candidates, we will consider the level of female representation and diversity of its executive officers and this will be one of several factors used in the search process. This will be achieved through continuously monitoring the level of female representation and, where appropriate, recruiting qualified female candidates as part of our overall recruitment and selection process to fill openings, as the need arises, through vacancies, growth or otherwise.

Targets Regarding the Representation of Women on the Board and in Executive Officer Positions

We have not adopted a target regarding women on our board of directors, or regarding women in executive officer positions, as the directors are of the view that such an analysis is not required in order to retain the best candidates for available openings.

Number of Women on the Board and in Executive Officer Positions

Of our nine directors to hold office as of the date of this proxy statement, two (22%) are women. Of our four executive officers, one (25%) is a woman.

PROPOSAL 2

APPROVAL, ON A NON-BINDING, ADVISORY BASIS, OF THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS

In accordance with the requirements of Section 14A of the Exchange Act, we are providing our shareholders the opportunity to vote to approve, on a non-binding, advisory basis, the compensation of our named executive officers (as disclosed under "Executive Compensation—Compensation Discussion and Analysis," the tables included under the heading "Executive Compensation" and the accompanying narrative).

You are encouraged to review the section titled "Executive Compensation" and, in particular, the section titled "Executive Compensation— Compensation Discussion and Analysis" in this proxy statement, which provide a comprehensive review of our executive compensation program and its elements, objectives and rationale.

The vote on this resolution is not intended to address any specific element of compensation, rather the vote relates to the compensation of our named executive officers in its totality, as described in this proxy statement in accordance with the compensation disclosure rules of the SEC.

Accordingly, the board is asking the shareholders to indicate their support for the compensation of the Company's named executive officers as described in this proxy statement by casting a non-binding advisory vote "FOR" the following resolution:

"RESOLVED, that the shareholders of Repare Therapeutics Inc. (the "Company") hereby approve, on a non-binding, advisory basis, the compensation of the Company's named executive officers, as disclosed in the Company's proxy statement for the 2022 Annual Meeting of Shareholders, pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the Compensation Discussion and Analysis, the compensation tables and the accompanying narrative."

Advisory approval of this proposal requires the vote of the holders of a majority of the shares present by virtual attendance or represented by proxy and entitled to vote at the annual meeting.

Because the vote is advisory, it is not binding on the board or Repare. Nevertheless, the views expressed by the shareholders, whether through this vote or otherwise, are important to management and the Board and, accordingly, the board and the compensation committee intend to consider the results of this vote in making determinations in the future regarding executive compensation arrangements.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE APPROVAL OF THE NON-BINDING ADVISORY VOTE ON EXECUTIVE COMPENSATION

EXECUTIVE OFFICERS

The following table sets forth, for our executive officers, their ages and position held with us as of the date of this proxy statement:

Name	AGE	POSITION(S)
Lloyd M. Segal	58	President, Chief Executive Officer and Director
Steve Forte	43	Executive Vice President, Chief Financial Officer
Maria Koehler, M.D., Ph.D.	65	Executive Vice President, Chief Medical Officer
Michael Zinda, Ph.D.	51	Executive Vice President, Chief Scientific Officer

Lloyd M. Segal. Biographical information for Lloyd M. Segal is included above under the caption "Information Regarding Director Nominees and Current Directors—Directors Continuing in Office Until the 2023 Annual Meeting of Shareholders."

Steve Forte has served as our Executive Vice President, Chief Financial Officer since October 2019. Prior to joining us, he served as Chief Financial Officer of Clementia Pharmaceuticals Inc. from August 2018 through June 2019, during which time Clementia was acquired by Ipsen S.A. From September 2015 to August 2018, Mr. Forte served as Chief Financial Officer of Thinking Capital Financial Corporation, a Canadian financial technology firm, where he ultimately led the firm through a sale to Purpose Investments. From September 2014 to September 2015, he served as Executive Director of Finance of CST Canada Co. From 2005 to 2014, Mr. Forte held positions of increasing responsibility at Aptalis Pharma Inc., including most recently holding the position of Vice President, Financial Reporting where he was responsible for the overall corporate controllership function of the company. Mr. Forte received his Bachelor of Commerce in accountancy from Concordia University and is a Certified Professional Accountant in the Province of Québec and a Certified Information Systems Auditor (non-practicing) with ISACA.

Maria Koehler, M.D., Ph.D. has served as our Executive Vice President, Chief Medical Officer since May 2019. Prior to joining us, from September 2017 to April 2019, Dr. Koehler served as the Chief Medical Officer of Bicycle Therapeutics Limited. From March 2009 to September 2017, Dr. Koehler served as Vice President of Strategy, Innovation and Collaborations for the Oncology Business Unit at Pfizer Inc. Prior to joining Pfizer, Dr. Koehler was the group leader for the Medicine Development Center of GlaxoSmithKline Oncology. Prior to that, Dr. Koehler was a Senior Medical Director for oncology research and development at AstraZeneca plc. She has also served as the clinical director of Bone Marrow Transplantation at University Hospital in Pittsburgh as well as the director of the Bone Marrow Transplant Program and associate professor at St. Christopher's Hospital in Philadelphia. Dr. Koehler currently serves on the boards of directors of Ikena Oncology, Inc. and Silverback Therapeutics Inc., and previously served on the board of directors of Celyad Oncology SA. Dr. Koehler is a board-certified hematology/oncology physician. She received her M.D. and Ph.D. from Silesian School of Medicine in Katowice, Poland.

Michael Zinda, Ph.D. has served as our Executive Vice President, Chief Scientific Officer since May 2019 and previously served as Executive Vice President, Head of Research and Development of our U.S. subsidiary, Repare Therapeutics USA Inc., from June 2017 to May 2019. Prior to joining us, Dr. Zinda spent 16 years at AstraZeneca from 2001 to May 2017, where he obtained the position of Executive Director, Head of Cancer Bioscience. In this role, Dr. Zinda served on the global science leadership team, oncology research board and the Acerta research and early development teams accountable for strategy, key collaborations/partnerships and delivery of an innovative portfolio of patient-centric drug discovery programs. Dr. Zinda holds a B.Sc. in biology from Minnesota State University Moorhead and a Ph.D. in molecular biology from Vanderbilt University. He received his post-doctoral training at Princeton University and Eli Lilly & Company.

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Overview

We became a public company in June 2020, and we have filed our proxy statements since that time under the scaled-down executive compensation disclosure requirements generally available to emerging growth companies. As of January 1, 2022, we ceased to be an emerging growth company. This proxy statement, therefore, includes detail regarding executive compensation that would not have been required had we continued to be an emerging growth company, including (i) this Compensation Discussion and Analysis, (ii) the additional compensation tables titled "Grants of Plan-Based Awards," "Option Exercises," and "Potential Payments and Benefits upon Termination or Change in Control," (iii) an advisory vote on the compensation of our named executive officers, which is included as Proposal 2 in this proxy statement, and (iv) an advisory vote on the preferred frequency of future advisory votes on the compensation of our named executive officers, which is included as Proposal 3 in this proxy statement.

This Compensation Discussion and Analysis section discusses our executive compensation policies and how and why our compensation committee arrived at specific compensation decisions for the year ended December 31, 2021 for the following individuals, collectively referred to as our "named executive officers":

- Lloyd M. Segal, our President and Chief Executive Officer;
- Steve Forte, our Executive Vice President, Chief Financial Officer;
- Maria Koehler, M.D., Ph.D., our Executive Vice President, Chief Medical Officer; and
- Michael Zinda, Ph.D., our Executive Vice President, Chief Scientific Officer.

Messrs. Segal and Forte are named executive officers for 2021 based on their positions with us as principal executive officer and principal financial officer during 2021. Dr. Koehler and Dr. Zinda are named executive officers for 2021 by virtue of being our two highest compensated executive officers other than Messrs. Segal and Forte. Because we only had four "executive officers" as defined in Exchange Act Rule 3b-7 during 2021, we only have four named executive officers.

Executive Summary

We compensate our executive officers in a manner consistent with our business strategy, competitive practice, responsible pay practices that effectively balance risk and reward such as alignment of executive compensation with corporate and individual performance and shareholder interests and concerns. Our compensation policies and decisions are focused on aligning management interests with our business strategies and goals, as well as the interests of our shareholders, employees and patients, while also mitigating excessive risk-taking.

Our compensation committee believes that our executive compensation program should include short- and long-term performance incentive components, including cash and equity-based compensation, and should reward consistent performance that meets or exceeds expectations. The compensation committee evaluates both performance and compensation to make sure that the total compensation provided to our executive officers remains competitive relative to compensation paid by companies of similar size and stage of development that operate in the biotech industry and appropriately reflects our relative performance and our own strategic objectives.

The compensation of our executive officers during our fiscal year ended December 31, 2021 is consistent with significant business achievements and individual performance over the course of the year. We achieved several key milestones in 2021 to advance our innovative, synthetic lethality-based pipeline across multiple clinical programs, as described below.

2021 Business Highlights

RP-3500

- We announced initial monotherapy clinical data from Phase 1/2 TRESR clinical trial of RP-3500 in patients with solid tumors, which
 provided clinical proof of concept and validated our SNIPRx platform for molecular selection of tumors for therapy with RP-3500.
 Preliminary data from the trial showed that monotherapy RP-3500 appears safe and well tolerated, with compelling early efficacy signals across multiple genotypes and tumor types in heavily pretreated patients.
- We initiated the gemcitabine combination arm of our Phase 1/2 TRESR clinical trial in 2021.
- We initiated the PARP-inhibitor (talazoparib) combination arm of our Phase 1/2 TRESR trial and the ATTACC trial of RP-3500 in combination with two additional PARP inhibitors (olaparib and niraparib) in 2021.

RP-6306

- We advanced RP-6306, a first in class, oral PKMYT1 inhibitor, both as monotherapy and in combination with gemcitabine and in combination with FOLFIRI.
 - We initiated a Phase 1 clinical trial of RP-6306 in advanced solid tumors (MYTHIC).
 - We initiated a Phase 1 clinical trial of RP-6306 in combination with gemcitabine for the treatment of molecularly selected advanced solid tumors (MAGNETIC).
 - We initiated a Phase 1 clinical trial of RP-6306 in combination with FOLFIRI for the treatment of molecularly selected advanced solid tumors (MINOTAUR).

Other Corporate Milestones

- We raised gross proceeds of \$101.2 million in an upsized follow-on public offering in November 2021.
- We achieved a \$0.9 million (¥100 million) milestone payment, triggered under the terms of our research services, license and collaboration agreement with Ono Pharmaceutical Co., Ltd.
- We recognized revenue in relation to Bristol Myers Squibb's exercise of its option to license two druggable targets directed at a single synthetic lethal lesion pursuant to the terms of our collaboration and license agreement with Bristol Myers Squibb Company.

Our corporate accomplishments in 2021 were a direct product of the performance of our executive officers, and thus, were an important factor in determining the 2021 compensation of our executive officers.

Overview of Executive Compensation Program

The board of directors and the compensation committee are responsible for establishing, implementing and continually monitoring adherence with our compensation philosophy and executive compensation programs. The board of directors and the compensation committee strive to ensure that the total compensation paid to our executive officers is fair, reasonable and competitive. Generally, the types of compensation and benefits provided to our executive officers, including the named executive officers, are similar to those provided to executive officers at comparable companies in similarly situated positions, which allows us to attract and retain talented executives.

Compensation Objectives and Philosophy

Our compensation programs are designed to attract and retain qualified and talented executives, motivate such executives to achieve business goals and reward them for short- and long-term performance with a simple and

clear compensation structure. To achieve this objective, the compensation committee structures our executives' compensation with a number of key elements, each with its own focus and purpose. 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 in order to help us achieve our short-and long-term financial and operational goals. Our board of directors reviews compensation annually for our executives. In setting executive base salaries and bonuses and granting equity incentive awards, we consider the following:

- Compensation for comparable positions in the biopharmaceutical market;
- Historical compensation levels of our executives;
- · Individual performance as compared to our expectations and objectives; and
- Our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our shareholders and a long-term commitment to our Company.

Setting Executive Compensation

Role of the Board of Directors, the Compensation Committee and Management

Our board of directors has historically determined the compensation of our executives, upon recommendation of the compensation committee. The compensation committee has reviewed and recommended to the board for approval the compensation and other terms of employment of our chief executive officer, and evaluates the chief executive officer's performance in light of relevant corporate goals and objectives. Our chief executive officer has typically discussed his recommendations for all other executives (other than himself) with the compensation committee and the board. Based on those discussions and its discretion, the compensation committee has recommended the compensation of each executive officer to the board, and the board of directors has then approved. The board, based on the compensation committee's recommendation, has final approval over all compensation decisions for our named executive officers.

Role of the Compensation Consultant

During the past fiscal year, the compensation committee retained Aon Consulting Inc. ("Aon") as its compensation consultant to develop a comparative peer group of companies. The compensation consultant reports directly to the compensation committee and provided no advisory services to management in 2021. The compensation consultant's advisory services primarily include:

- assessing the executive team's base salaries, short-term incentive opportunities, target total cash and long-term incentives against the biopharmaceutical market and the peer group;
- reviewing the current unvested equity ownership levels and wealth creation opportunities of our executive team; and
- assessing our aggregate equity use both in terms of annual equity spend as well as cumulative equity delivery.

The compensation committee has sole authority to hire the compensation consultant, approve its compensation, determine the nature and scope of its services, evaluate its performance, and terminate and replace (or supplement) its engagement with an alternative consultant.

The total amount of fees paid to Aon for services to the compensation committee in 2021 was \$20,000. The compensation consultant also billed us \$11,260 in fees for access to certain compensation databases in 2021. No other fees or compensation were billed by the compensation consultant. The compensation committee has assessed the independence of the compensation consultant pursuant to the listing standards of the Nasdaq Stock Market and SEC rules and concluded that no conflict of interest exists that would prevent the compensation consultant from serving as an independent consultant to the compensation committee.

Compensation Peer Group

As our compensation consultant, Aon developed a comparative group of companies and analyzed competitive performance and compensation levels for that group. Aon developed recommendations that were presented to the compensation committee for its consideration after analyzing executive compensation paid at other companies identified by the consultant and broader survey data for size-appropriate companies in the biopharmaceutical industry, such as the Radford Global Life Sciences Survey. The criteria used to determine the composition of the peer group were the following:

- companies competing in the same talent market;
- · companies operating in the bio/pharmaceutical industry with similar business and financial profiles; and
- · companies of similar size, measured by R&D expenditures, number of employees and market capitalization.

The peer group, supplemented by other sources of competitive pay information, were an important input in establishing compensation levels and structure for fiscal 2021. We target total cash compensation at the market median.

The 22 companies in our 2021 peer group are listed below.

2021 Approved Peer Group

Arcus Biosciences
Beam Therapeutics
Black Diamond Therapeutics
Constellation Pharmaceuticals
Editas Medicine
Epizyme
Forma Therapeutics
Keros Therapeutics
Kura Oncology
Mersana Therapeutics
NantKwest

RAPT Therapeutics
Replimune Group
Revolution Medicines
Rubius Therapeutics
Spring Works Therapeutics
Stoke Therapeutics
Translate Bio
Turning Point Therapeutics
Y-mAbs Therapeutics
Zentalis Pharmaceuticals
ZIOPHARM Oncology

Elements of Executive Compensation

The principal components of compensation for our named executive officers are: (1) annual base salary; (2) short-term incentive compensation; and (3) equity-based incentive awards.

Compensation Element	Objective	Key Features
Base salary (fixed cash)	Attract, retain and reward talented executives needed to drive our business and provide a fixed level of cash compensation for performing day-to-day responsibilities.	Fixed component of compensation to provide financial stability, targeted at the median of the peer group with adjustments for individual performance and experience.
Annual performance-based cash bonuses (at-risk cash)	Reward short-term financial, operational and individual performance and motivate the achievements of business goals that the compensation committee and the board believe are important to the overall success of the business and will enhance shareholder value over time.	Variable component of compensation tied to the achievement of pre-determined quantitative and qualitative corporate goals and the achievement of individual targets.

Compensation Element	Objective]
Long-term equity incentives	Align management interests with those of shareholders,	Variable component of
(at-risk equity)	encourage retention and reward long-term Company	stock options with an e

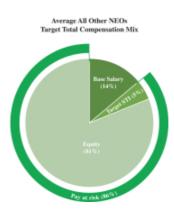
performance.

of compensation in the form of exercise price no less than the fair market value on the grant date and typically vesting based on continued service over a four-year period.

Key Features

A significant portion of target executive pay is "at risk" or based on meeting performance goals to align executive pay with the long-term goals of the company and shareholder interests. The following charts demonstrate the target pay mix for our Chief Executive Officer and the average target pay mix for the other named executive offers as a group.





Annual Base Salary

The annual base salaries of our named executive officers are generally determined, approved and reviewed periodically by our compensation committee and board of directors, based on the recommendation of the compensation committee, to compensate our named executive officers for the satisfactory performance of duties to Repare. Annual base salaries are intended to provide a fixed component of compensation to our named executive officers, reflecting their skill sets, experience, roles and responsibilities. Base salaries for our named executive officers generally have been positioned at the market median level to attract and retain individuals with superior executive talent. Individual pay levels may be above or below the market median based on the experience the individual brings to the table, including their scope of position and performance, and considering internal pay equity.

The following table sets forth the annual base salaries for each of our named executive officers for the periods presented:

Name	2020 Base Salary (\$)	2021 Base Salary (\$)(1)	% Change from 2020	2022 Base Salary (\$)(2)	% Change from 2021
Lloyd M. Segal	550,000	572,000	4%	592,000	3%
Steve Forte	395,000	410,000	4%	424,400	4%
Maria Koehler, M.D., Ph.D.	415,000	440,000	6%	474,600	8%
Michael Zinda, Ph.D.	415.000	430,000	4%	445.100	4%

In January 2021, our board and the compensation committee, as applicable, approved increases to the base salaries of our named executive officers (1) to the amounts shown in this column, effective January 1, 2021.

In January and March 2022, our board and the compensation committee, as applicable, approved increases to the base salaries of our named (2) executive to the amounts shown in this column, effective as of January 1, 2022.

For 2021 and 2022, our board and the compensation committee, as applicable, approved increases in base salary ranging from 3% to 8% based on a review of market data, individual performance and experience and recommendations from Aon, as well as general cost of living increases. The 2021 and 2022 base salary increases were effective as of January 1, 2021 and January 1, 2022, respectively.

Non-Equity Incentive Plan Compensation

Under the terms of their employment agreements, our named executive officers are eligible to receive discretionary annual bonuses of up to a specified percentage of each executive's gross base salary based on individual performance, company performance against corporate goals or as otherwise determined appropriate by the compensation committee. Target awards are set at the market median with actual awards higher or lower based on performance. Corporate performance goals may be based on criteria such as the progress of our research and clinical development programs, financial metrics and strategic collaborations that support our plans. Based on performance against these goals, the compensation committee determined the cash bonus earned by our named executive officers.

Company performance goals vary from year to year. For 2021, we established the following key corporate objectives which were then approved by the board, addressing generally: (i) advancing our discovery programs to build our long-term pipeline, (ii) advancing our clinical development programs through key clinical milestones, (iii) raising capital necessary to fund our long-term objectives, (iv) scaling the organization to support execution, and (v) pursuing key business development initiatives. The compensation committee determines whether any weighting will be applied to each of the goals that comprise the established corporate performance goals. The compensation committee applies a performance weighting to each goal relative to the overall performance of Repare to reflect the prioritization of key business objectives. Additionally, a weighting between corporate performance and individual performance is also applied for each named executive office to reflect the level of impact such individual would be able to make on the overall corporate performance. The relative weighting for each corporate goal and corporate versus individual performance was as follows for 2021.

Corporate goals	Weighting (%)	Named executive officer	Weighting of corporate goals (%)	individual performance assessment (%)
Advance discovery programs	15	Lloyd Segal	100	
Advance clinical programs	55	Steve Forte	75	25
Raise capital	5	Maria Koehler	75	25
Scale the organization	10	Michael Zinda	75	25
Business development	15			
Total	100			

Weighting of

The compensation committee and our board review Repare's achievement of the corporate goals in their totality, considering our overall performance for the year and come to a general overall conclusion as to whether the corporate goals were met, and whether there were any other extraordinary factors that should be considered in determining the amount of bonus earned for the year. The board believes that maintaining discretion to evaluate corporate performance at the close of the year based on the totality of the circumstances, and the discretion to award or fail to award bonus compensation without reliance on rote calculations under set formulas, is appropriate in responsibly discharging its duties.

Our corporate accomplishments in 2021 were a direct product of the performance of our named executive officers, and thus, their individual contributions were an important factor in determining 2021 compensation. Following an assessment of our corporate accomplishments to the 2021 corporate goals, the compensation committee recommended, and our board approved, a corporate goal achievement percentage of 115% overall and

an individual performance assessment of 110% for all named executive officers other than Mr. Segal who does not receive an individual performance assessment.

	2021 Target (% of Base	2022 Target (% of Base	Actual 2021 Award	Actual 2021 Award (% of Base
Name	Salary)_	Salary)	(\$)	Salary)
Lloyd M. Segal	50	55	328,900	58
Steve Forte	40	40	186,550	46
Maria Koehler, M.D., Ph.D.	40	40	200,200	46
Michael Zinda, Ph.D.	40	40	195,960	46

As per the terms of their employment agreement, to qualify for the annual target bonus set at a percentage of their adjusted base salary, in respect of any calendar year, our named executive officers must remain continuously employed with us through the 15th day of February of the following year.

Equity-Based Incentive Awards

We grant equity-based incentive awards to our named executive officers from time to time, and these awards are designed to align the interests of our executive officers with those of our shareholders. To date, share option awards are the only form of equity awards we have granted to any of our executive officers.

We have historically used share options as an incentive for long-term compensation to our executive officers because the share options allow our executive officers to profit from this form of equity compensation only if our share price increases relative to the share option's exercise price, which exercise price is set at the fair market value of our common shares on the date of grant, determined based on the volume weighted average trading price of our common shares for the five trading days prior to the date of grant. Vesting of equity awards is generally tied to each officer's continuous service with us and serves as an additional retention measure. We may grant equity awards at such times as our board of directors or the compensation committee determines appropriate. Our executives generally are awarded an initial grant in the form of a share option in connection with their commencement of employment with us. Annual grant levels are based on the market 50th-75th percentile for our peer group companies and relevant survey data. Additional grants may occur periodically to specifically incentivize executives with respect to achieving certain corporate goals or to reward executives for exceptional performance.

Prior to our initial public offering ("IPO"), all share options were granted under our Repare Therapeutics Inc. Amended and Restated Option Plan (the "Pre-IPO Plan"). Following our IPO, we grant equity incentive awards under the terms of the Repare Therapeutics Inc. 2020 Equity Incentive Plan (the "2020 Plan").

All options are granted with an exercise price that is no less than the fair market value of our common shares on the date of grant of such award, determined based on the volume weighted average trading price of our common shares for the five trading days prior to the date of grant. Our share option awards generally vest over a four-year period and may be subject to acceleration of vesting and exercisability under certain termination and change in control events. See "—Outstanding Equity Awards at December 31, 2021." Our share option awards have a ten-year term.

On February 8, 2021, in recognition of each officer's 2021 performance, our board of directors approved grants of options to our named executive officers under our 2020 Plan with an exercise price of \$36.91 per share, as set forth in the following table.

	2021 Option Grant
Name	Option Grant (#)
Lloyd M. Segal	125,000
Steve Forte	71,000
Maria Koehler, M.D., Ph.D.	125,000
Michael Zinda, Ph.D.	125,000

These option awards vest over a four-year period, with 25% of the shares subject to the award vesting on February 5, 2022, with the remainder of the award vesting monthly in equal installments over the following 36 months such that the award will vest in full on February 5, 2025, subject to the executive's continuous service with us as of each vesting date.

Health and Welfare and Retirement Benefits

Our named executive officers are eligible to participate in benefits available generally to salaried employees, such as participation in our 401(k) Plan in the United States and our registered retirement savings plan in Canada, medical, dental, vision coverage, short-term disability insurance, long-term disability insurance, group life insurance, retiree medical benefits, paid time off, holiday, and the Employee Share Purchase Plan, in each case on the same basis as our other employees.

Since January 1, 2018, we have offered our employees in the United States the ability to participate in a 401(k) plan, with no employer contributions. Since January 1, 2021, we have offered our employees in Canada the ability to participate in a registered retirement savings plan. As of January 1, 2021, we started making non-matching employer contributions into both of these plans on behalf of participants equal to 3% of their base salary.

The compensation committee periodically reviews the levels of benefits provided to executive officers to ensure that they remain reasonable and consistent with its compensation philosophy. Our board of directors may elect to adopt qualified or nonqualified benefit plans in the future, if it determines that doing so is in our best interests.

Perquisites

We generally do not provide significant perquisites or personal benefits to our named executive officers.

Employment Agreements and Severance Benefits

We provide our named executive officers with certain severance protections in their employment agreements in order to attract and retain an appropriate caliber of talent for such positions. Our employment agreements with the named executive officers and the severance provisions set forth therein are summarized below under "—Employment Arrangements with our Named Executive Officers" and "—Potential Payments and Benefits upon Termination or Change in Control." Our compensation committee intends to periodically review the level of the benefits in these agreements.

Prohibition on Hedging and Pledging

Our board of directors has adopted an insider trading policy, which prohibits our employees, directors and certain consultants from engaging in hedging or monetization transactions with respect to our common shares, including through the use of financial instruments such as prepaid variable forwards, equity swaps, collars, and exchange funds. In addition, our insider trading policy prohibits trading in derivative securities related to our common

shares, which include publicly traded call and put options, engaging in short selling of our common shares, purchasing our common shares on margin or holding it in a margin account and pledging our shares as collateral for a loan.

Compensation Risk Assessment

The compensation committee has reviewed our compensation policies and practices, in consultation with the compensation consultant and outside counsel, to assess whether they encourage employees to take inappropriate risks. After conducting this review of compensation-related risk, the compensation committee has concluded that our compensation policies and practices are not reasonably likely to have a material adverse effect on us.

Tax and Accounting Implications

One of the factors the compensation committee and the board of directors consider when determining executive compensation is the anticipated tax treatment to Repare and to the executives of the various payments and benefits. Section 162(m) of the Internal Revenue Code ("Section 162(m)") generally provides that a publicly held company may not deduct compensation paid to certain covered executive officers to the extent that such compensation exceeds \$1,000,000 per executive officer in any year. While the compensation committee and the board of directors generally consider this limit when determining compensation, there are instances in which the compensation committee and the board of directors have concluded, and reserve the discretion to conclude in the future, that it is appropriate to exceed the limitation on deductibility under Section 162(m) to ensure that executive officers are compensated in a manner that it believes to be consistent with our best interests and those of our shareholders.

Post-Fiscal Year 2021 End Actions

Equity Awards

On January 18, 2022 and January 21, 2022, the compensation committee of our board of directors and our board of directors, respectively, approved grants of an aggregate of 630,000 options under our 2020 Plan with an exercise price of \$15.63 per share to our named executive officers, including 300,000 options to Mr. Segal, 100,000 options to Mr. Forte, 115,000 options to Dr. Koehler and 115,000 options to Dr. Zinda. The awards will vest over a four-year period, with 25% of the shares subject to the award vesting on January 18, 2023, with the remainder of the award vesting monthly in equal installments over the following 36 months such that the award will vest in full on January 18, 2026, subject to the executive's continuous service with us as of each such vesting date.

Report of the Compensation Committee of Our Board of Directors

The material in this report is not "soliciting material," is furnished to, but not deemed "filed" with, the SEC and is not deemed to be incorporated by reference in any filing of Repare under the Securities Act or the Exchange Act, other than our Annual Report on Form 10-K, where it shall be deemed to be "furnished," whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

The compensation committee has reviewed and discussed with management the Compensation Discussion and Analysis ("CD&A") contained in this proxy statement. Based on this review and discussion, the compensation committee has recommended to our board of directors that the CD&A be included in this proxy statement and incorporated into our Annual Report on Form 10-K for the fiscal year ended December 31, 2021.

Compensation Committee of Repare Therapeutics Inc.

Briggs Morrison, M.D. (Chair) David Bonita, M.D. Samarth Kulkarni, Ph.D.

Executive Compensation Tables

Summary Compensation Table

The following table sets forth information regarding compensation awarded to, earned by or paid to the following individuals during the years ended December 31, 2021, 2020 and 2019: (i) Lloyd Segal, our Chief Executive Officer; (ii) Steve Forte, our Chief Financial Officer and (ii) Maria Koehler and Michael Zinda, our two other most highly compensated executive officers other than the Chief Executive Officer and Chief Financial Officer who were serving as officers at the end of our fiscal year ended December 31, 2021. These individuals are referred to throughout this proxy statement as our named executive officers.

		Salary(1)	Option Awards(2)	Non-Equity Incentive Compensation(3)	All Other Compensation(4)	Total
Name and Principal Position	Year	(\$)	(\$)	(\$)	(\$)	(\$)
Lloyd M. Segal(5)	2021	572,000	2,996,250	328,900	12,469	3,909,619
President and Chief Executive Officer	2020	505,464	4,472,363	357,500	15,404	5,350,732
	2019	430,000	1,031,000	122,550	1,362	1,584,912
Steve Forte(6)	2021	410,000	1,701,870	186,550	11,974	2,310,394
Chief Financial Officer						
Maria Koehler, M.D., Ph.D.(7)	2021	454,632	2,996,250	200,200	14,993	3,666,074
Executive Vice President, Chief	2020	412,773	520,036	206,390	5,854	1,145,054
Medical Officer	2019	272,596	363,500	76,146	15,466	727,708
Michael Zinda, Ph.D.	2021	444,632	2,996,250	195,960	14,693	3,651,225
Executive Vice President, Chief	2020	386,052	520,036	193,030	6,764	1,105,883
Scientific Officer	2019	324,077	403,200	70,000	34,355	831,632

- (1) Salary amounts represent actual amounts earned during the periods presented. See "Compensation Discussion and Analysis—Elements of Executive Compensation Program—Annual Base Salary" for further information.
- (2) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during the periods presented computed in accordance with ASC 718 for share-based compensation transactions. Assumptions used in the calculation of these amounts are included in the notes to our audited consolidated financial statements included in our Annual Report on Form 10-K. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting of the share options, the exercise of the share options or the sale of the common shares underlying such share options.
- (3) Reflects performance-based cash bonuses awarded to our named executive officers during the periods presented. See "Compensation Discussion and Analysis—Elements of Executive Compensation Program—Non-Equity Incentive Plan Compensation" for a description of the material terms of the program pursuant to which this compensation was awarded.
- (4) Amounts reflect for 2021: (a) for Mr. Segal, life insurance premiums in the amount of \$807 paid by us on behalf of Mr. Segal and \$11,662 in non-matching employer contributions to a registered retirement savings plan; (b) for Mr. Forte, life insurance premiums in the amount of \$312 paid by us on behalf of Mr. Forte and \$11,662 in non-matching employer contributions to a registered retirement savings plan; (c) for Dr. Koehler, life insurance premiums in the amount of \$1,793 paid by us on behalf of Dr. Koehler and \$13,200 in non-matching employer contributions to a 401(k) plan; and (d) for Dr. Zinda, life insurance premiums in the amount of \$1,793 paid by us on behalf of Dr. Zinda and \$12,900 in non-matching employer contributions to a 401(k) plan.
- (5) Mr. Segal also serves as a member of our board of directors but does not receive any additional compensation for his service as a director.
- (6) Mr. Forte was not a named executive officer for 2019 and 2020 and, as a result, his compensation information for these years has been omitted.

(7) Dr. Koehler commenced employment with us on May 1, 2019. Amount represents the pro rata portion of her 2019 annual base salary.

Grants of Plan-Based Awards

The following table presents information regarding each plan-based award granted to our named executive officers during the fiscal year ended December 31, 2021.

			Estimated Future Payouts Under Non-Equity Incentive Plan Awards(1)		All Other Option Awards: Number of Shares of Securities	Or Base Price of	Grant Date Fair Value of Stock	
Name	Grant type	Grant date	Threshold (\$)	Target (\$)	Max (\$)	Underlying Options (#)(3)	Option Awards (\$/Share)	and Option Awards (\$)(2)
Lloyd M. Segal	Annual Cash			286,000	=			
	Share Option	2/8/2021	_	_	_	125,000	36.91	2,996,250
Steve Forte	Annual Cash	_	_	164,000	_	_	_	_
	Share Option	2/8/2021	_	_	_	71,000	36.91	1,701,870
Maria Koehler	Annual Cash	_	_	176,000	_	_	_	_
	Share Option	2/8/2021	_	_	_	125,000	36.91	2,996,250
Michael Zinda	Annual Cash	_	_	172,000	_	_	_	_
	Share Option	2/8/2021	_	_	_	125,000	36.91	2,996,250

⁽¹⁾ The amounts set forth in the "Target" column represent target bonus amounts for each named executive officer for 2021 under our 2021 non-equity incentive plan, and do not represent either additional or actual compensation earned by our named executive officers for the year ended December 31, 2021. The dollar value of the actual payments for these awards is included in the "Non-Equity Incentive Plan Compensation" column of the "Summary Compensation Table" above. The plan does not provide for threshold or maximum payout amounts.

⁽²⁾ Amounts reported represent the aggregate grant date fair value of option awards granted during 2021 presented computed in accordance with ASC 718 for share-based compensation transactions. Assumptions used in the calculation of these amounts are included in the notes to our audited consolidated financial statements included in our Annual Report on Form 10-K. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting of the share options, the exercise of the share options or the sale of the common shares underlying such share options.

⁽³⁾ All of the awards were granted under the 2020 Plan. Twenty-five percent of the common shares subject to this award vested on the first anniversary of the vesting commencement date, and the remaining shares vest in 36 equal monthly installments thereafter, subject to the officer's continued service through each vesting date.

Outstanding Equity Awards as of December 31, 2021

The following table sets forth certain information regarding outstanding equity awards granted to our named executive officers that remain outstanding as of December 31, 2021.

			Option Awards(1)			
Name	Grant Date	Vesting Commencement Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)(2)	Option Expiration Date
Lloyd M. Segal	12/1/2017	12/1/2017	283,683	(3)	1.64	6/22/2027
	3/29/2019	3/29/2019	187,134	85,053(3)	2.06	3/29/2029
	12/16/2019	12/16/2019	233,972	252,666(4)	2.42	12/16/2029
	6/18/2020	6/18/2020	133,000	221,668(3)	20.00	6/18/2030
	2/8/2021	2/5/2021	_	125,000(3)	36.91	2/8/2031
Steve Forte	10/28/2019	10/28/2019	176,477	149,323(3)	1.88	10/28/2019
	6/18/2020	6/18/2020	15,465	25,775(3)	20.00	6/18/2030
	2/8/2021	2/5/2021	_	71,000(3)	36.91	2/8/2031
Maria Koehler	3/29/2019	5/1/2019	24,229	68,646(3)	2.06	5/1/2029
	12/16/2019	12/16/2019	53,485	57,813(4)	2.42	12/16/2029
	6/18/2020	6/18/2020	15,465	25,775(3)	20.00	6/18/2030
	2/8/2021	2/5/2021	_	125,000(3)	36.91	2/8/2031
Michael Zinda	3/29/2019	3/29/2019	5,876	29,384(3)	2.06	3/29/2029
	12/16/2019	12/16/2019	35,211	102,782(4)	2.42	12/16/2029
	6/18/2020	6/18/2020	15,465	25,775(3)	20.00	6/18/2030
	2/8/2021	2/5/2021	_	125,000(3)	36.91	2/8/2031

⁽¹⁾ All of the awards in this table granted prior to June 18, 2020 were granted under the Pre-IPO Plan, and all awards in this table granted on or subsequent to June 18, 2020 were granted under the 2020 Plan.

⁽²⁾ All of the option awards listed in the table with a grant date up to June 18, 2020 were granted with an exercise price per share that is no less than the fair market value of our common shares on the date of grant of such award, as determined in good faith by our board of directors. All of the option awards granted as of June 18, 2020 onwards are granted with an exercise price per share that is based on the volume weighted average trading price of our common shares for the five trading days prior to the date of grant.

⁽³⁾ Twenty-five percent of the common shares subject to this award vested on the first anniversary of the vesting commencement date, and the remaining shares vest in 36 equal monthly installments thereafter, subject to the officer's continued service through each vesting date.

⁽⁴⁾ Twenty-five percent of the common shares subject to this award vested on the first anniversary of the vesting commencement date, and the remaining shares vest in 39 equal monthly installments thereafter, subject to the officer's continued service through each vesting date

Option Exercises

The following table shows sets forth certain information regarding any option exercises during the fiscal year ended December 31, 2021 with respect to our named executive officers.

	Option	1 Awards
Name	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$)
Lloyd M. Segal	5,000	148,070
Steve Forte	_	_
Maria Koehler	48,511	892,972
Michael Zinda	46,041	1,065,984

⁽¹⁾ The value realized on exercise is based on the closing price of our common shares on the date of exercise minus the exercise price and does not reflect actual proceeds received.

Employment Arrangements with our Named Executive Officers

We have entered into employment agreements with each of our named executive officers. The agreements set forth the terms and conditions of each executive's employment with us, including base salary, bonus opportunity, eligibility for employee benefits and severance benefits upon a qualifying termination of employment, and certain non-solicitation and non-competition provisions. Any potential payments and benefits due upon a qualifying termination of employment or a change in control are further described below under "— Potential Payments and Benefits upon Termination or Change in Control."

The employment of each of our named executive officers may be terminated at any time in accordance with the terms of the respective agreements. In addition, each of our named executive officers has executed a form of our standard proprietary information and inventions agreement. The material terms of each agreement are described below.

Lloyd M. Segal

We entered into an employment agreement with Mr. Segal in January 2018, effective July 1, 2017 in connection with his appointment as our President and Chief Executive Officer. In June 2020, we entered into a new employment agreement with Mr. Segal which became effective upon the execution of the underwriting agreement for our IPO. Pursuant to his June 2020 employment agreement, Mr. Segal was initially entitled to an annual base salary of \$550,000, an annual target bonus with a target amount equal to 50% of his annual base salary and certain severance benefits, as described below under "—Potential Payments and Benefits upon Termination or Change of Control." To qualify for the annual target bonus set at a percentage of his adjusted base salary, in respect of any calendar year, Mr. Segal must remain continuously employed with us through the 15th day of February of the following year. Under the June 2020 employment agreement, we granted Mr. Segal an option to acquire 354,668 common shares pursuant to the 2020 Plan upon the execution of the underwriting agreement for our IPO, as described in "—Outstanding Equity Awards as of December 31, 2021" above, and Mr. Segal is also eligible for additional equity awards under our equity compensation plans, as may be granted from time to time.

Steve Forte

We entered into an employment agreement with Mr. Forte in October 2019 in connection with his appointment as our Chief Financial Officer. In June 2020, we entered into a new employment agreement with Mr. Forte which became effective upon execution of the underwriting agreement for our IPO. Pursuant to his June 2020

employment agreement, Mr. Forte was initially entitled to an annual base salary of \$395,000, an annual target bonus equal to 40% of his annual base salary and certain severance benefits, as described below under "—Potential Payments and Benefits upon Termination or Change of Control." To qualify for the annual target bonus set at a percentage of his adjusted base salary, in respect of any calendar year, Mr. Forte must remain continuously employed with us through the 15th day of February of the following year. Under the June 2020 employment agreement, we granted Mr. Forte an option to acquire 41,240 common shares pursuant to the 2020 Plan upon the execution of the underwriting agreement for our IPO, as described in "—Outstanding Equity Awards as of December 31, 2021" above. Mr. Forte is also eligible for additional equity awards under our equity compensation plans, as may be granted from time to time.

Maria Koehler, M.D., Ph.D.

We entered into an employment agreement with Dr. Koehler in April 2019, effective May 1, 2019 in connection with her appointment as our Executive Vice President, Chief Medical Officer. In June 2020, we entered into a new employment agreement with Dr. Koehler which became effective upon the execution of the underwriting agreement for our IPO. Pursuant to her June 2020 employment agreement, Dr. Koehler was initially entitled to an annual base salary of \$415,000, an annual target bonus with a target amount equal to 40% of her annual base salary and certain severance benefits, as described below under "—Potential Payments and Benefits upon Termination or Change of Control." To qualify for the annual target bonus set at a percentage of her adjusted base salary in respect of any calendar year, Dr. Koehler must remain continuously employed with us through the 15th day of February of the following year. Under the June 2020 employment agreement, we granted Dr. Koehler an option to acquire 41,240 common shares pursuant to the 2020 Plan upon the execution of the underwriting agreement for our IPO, as described in "—Outstanding Equity Awards as of December 31, 2021" above. Dr. Koehler is also eligible for additional equity awards under our equity compensation plans, as may be granted from time to time.

Michael Zinda, Ph.D.

We entered into an employment agreement with Dr. Zinda in August 2017, effective June 14, 2017, in connection with his appointment as our Executive Vice President, Head of Research and Development from June 2017 to December 2018. He subsequently was promoted to the role of our Executive Vice President, Chief Scientific Officer effective January 1, 2019. In June 2020, we entered into a new employment agreement with Dr. Zinda which became effective upon the execution of the underwriting agreement for our IPO. Pursuant to his June 2020 employment agreement, Dr. Zinda was initially entitled to an annual base salary of \$415,000, an annual target bonus with a target amount equal to 40% of his annual base salary and certain severance benefits, as described below under "—Potential Payments and Benefits upon Termination or Change of Control." To qualify for the annual target bonus set at a percentage of his adjusted base salary in respect of any calendar year, Dr. Zinda must remain continuously employed with us through the 15th day of February of the following year. Under the June 2020 employment agreement, we granted Dr. Zinda an initial option to acquire 41,240 common shares pursuant to the 2020 Plan upon the execution of the underwriting agreement for our IPO, as described in "—Outstanding Equity Awards as of December 31, 2021" above. Dr. Zinda is also eligible for additional equity awards under our equity compensation plans, as may be granted from time to time.

Potential Payments and Benefits upon Termination or Change in Control

Regardless of the manner in which the executive's service with us terminates, each of Mr. Segal, Mr. Forte, Dr. Koehler and Dr. Zinda is entitled to receive amounts earned during his or her term of service, including unpaid salary, accrued unused vacation and any vested entitlements under any employee benefit plan. Pursuant to the employment agreements we entered into with each of Mr. Segal, Mr. Forte, Dr. Koehler and Dr. Zinda in June 2020, each executive will be entitled to the following payments and benefits upon a qualifying termination of employment or a change in control. The terms of "cause," "disability" and "good reason" are each defined in the respective amended and restated employment agreements.

If the executive is terminated by us involuntarily without "cause" and not due to death or "disability" or the executive resigns for "good reason," in each case, not in connection with a "change in control" (each term as defined in the 2020 Plan), then:

- With respect to Mr. Segal, he shall be entitled to (1) cash severance equal to 12 months of base salary, paid in 12 equal monthly installments; (2) continued participation in our group insurance plans and employee benefits for 12 months; (3) accelerated vesting of his options that are subject to time-based vesting schedule that were scheduled to vest in the 12 months following the date of termination, and Mr. Segal's vested options shall remain exercisable for up to 12 months following such termination; and (4) a lump sum payment equal to his target bonus pro-rated for the year of termination.
- With respect to Mr. Forte, he shall be entitled to (1) cash severance equal to seven months of base salary, paid in seven equal monthly installments; (2) continued participation in our group insurance plans and employee benefits for seven months; (3) accelerated vesting of his options that are subject to time-based vesting schedule that were scheduled to vest in the six months following the date of termination, and the executive's vested options shall remain exercisable for up to nine months following the date of such termination.
- With respect to Dr. Koehler and Dr. Zinda, the executive shall be entitled to (1) cash severance equal to seven months of base salary, paid in seven equal monthly installments; (2) payment of COBRA premiums for up to seven months; and (3) accelerated vesting of the executive's options that are subject to time-based vesting schedule that were scheduled to vest in the six months following the date of termination, and the executive's vested options (other than options qualifying as incentive stock options) shall remain exercisable for up to nine months following the date of such termination.

If within 90 days before or within 12 months following a change in control, either of Mr. Segal, Mr. Forte, Dr. Koehler and Dr. Zinda is terminated by us (or a successor) involuntarily without "cause" and not due to death or "disability" or the executive resigns for "good reason," then:

- With respect to Mr. Segal, he shall be entitled to (1) a lump sum cash severance equal to 1.5 times the sum of base salary and the higher of his target bonus for the year in which the termination occurs or the annual bonus received for the prior year; (2) continued participation in our group insurance plans and employee benefits for 18 months; (3) full accelerated vesting of his options that are subject to time-based vesting schedule, and Mr. Segal's vested options shall remain exercisable for up to 12 months following such termination; and (4) a lump sum payment equal to his target bonus pro-rated for the year of termination.
- With respect to Mr. Forte, he shall be entitled to (1) a lump sum cash severance equal to the sum of base salary and the higher of his target bonus for the year in which the termination occurs or the annual bonus received for the prior year; (2) continued participation in our group insurance plans and employee benefits for 12 months; and (3) full accelerated vesting of his options that are subject to time-based vesting schedule, and his vested options shall remain exercisable for up to nine months following such termination.
- With respect to Dr. Koehler and Dr. Zinda, the executive will be entitled to (1) a lump-sum cash severance equal to the sum of base salary and the higher of the executive's target bonus for the year in which the termination occurs or the annual bonus received for the prior year; (2) payment of COBRA premiums for up to 12 months; and (3) full accelerated vesting of the executive's options that are subject to time-based vesting schedule, and the executive's vested options (other than options qualifying as incentive stock options) shall remain exercisable for up to nine months following such termination.

Mr. Segal's, Mr. Forte's, Dr. Koehler's and Dr. Zinda's severance payments and benefits under the employment agreements are, in all events, conditioned on the executive, among other things, giving notice following a cure period (as applicable), complying with post-resignation or post termination obligations under the applicable agreement, including any non-disparagement and confidentiality obligations contained therein, and signing a general release of claims against us.

Further, in the event the executive's employment terminates due to death or "disability", then:

- With respect to Mr. Segal and Mr. Forte, the executive shall be entitled to (1) continued participation in our group insurance plans and employee benefits for 12 months; and (2) accelerated vesting of the executive's options that are subject to time-based vesting schedule that were scheduled to vest in the 12 months following the date of termination, and the executive's vested options shall remain exercisable for up to 12 months following such termination.
- With respect to Dr. Koehler and Dr. Zinda, the executive shall be entitled to (1) payment of COBRA premiums for up to seven months and (2) accelerated vesting of the executive's options that are subject to time-based vesting schedule that were scheduled to vest in the 12 months following the date of termination, and the executives' vested options (other than options qualifying as incentive stock options) shall remain exercisable for up to 12 months following the date of such termination.

If we elect to enforce the non-competition provisions set forth in Dr. Koehler's or Dr. Zinda's employment agreement following an involuntary termination by us for "just cause" (as such term is defined in the respective agreement) or such executive's resignation, then we have agreed to provide the executive with consideration in the form of the greater of (x) continuing salary payments for one year following the date of the executive's termination at a rate equal to no less than 50% of the highest annualized base salary paid to the executive by us within the two years prior to the executive's termination date and (y) accelerated vesting of all of the executive's options that are subject to a time-based vesting schedule which would have vested if the executive had remained employed for an additional 12 months following the termination date.

Potential Payments Upon Termination or Change in Control

The table below provides information with respect to potential payments and benefits to which our named executive officers would be entitled under the arrangements set forth in their respective offer letters or employment agreement, as described under the section titled "Employment Arrangements with our Named Executive Officers," assuming their employment was terminated as of December 31, 2021, including in connection with a change in control as of December 31, 2021.

Name	Type of Termination	Base Salary (\$)	Bonus (\$)	Accelerated Vesting of Equity Awards(1) (\$)	Continuation of Insurance Coverage (\$)	Total (\$)
Lloyd M. Segal	Termination without Cause or with Good Reason	572,000	286,000	3,488,073	19,205	4,365,277
	Termination without Cause or with Good Reason in connection with a CIC	858,000	536,250	6,577,451	28,807	7,893,258
Steve Forte	Termination without Cause or with Good Reason	239,167	_	787,985	11,203	1,038,354
	Termination without Cause or with Good Reason in connection with a CIC	410,000	187,480	2,896,590	19,205	3,512,344
Maria Koehler	Termination without Cause or with Good Reason	256,667	_	706,513	19,703	982,882
	Termination without Cause or with Good Reason in connection with a CIC	440,000	206,390	2,413,797	33,776	3,087,773
Michael Zinda	Termination without Cause or with Good Reason	250,833	_	655,739	8,571	915,143
	Termination without Cause or with Good Reason in connection with a CIC	430,000	193,030	2,506,212	14,693	3,146,555

(1) The value of the acceleration is based on the excess of the share price at December 31, 2021, being \$21.09 per share, over the exercise price of the options for all in-the-money options, excluding underwater options.

Equity Compensation Plan Information

The following table summarizes our equity compensation plan information as of December 31, 2021. Information is included for equity compensation plans approved by our shareholders. We do not have any equity compensation plans not approved by our shareholders.

Plan Catagory	(a) Number of Securities to be Issued Upon Exercise of Outstanding	(b) Weighted Average Exercise Price of Outstanding	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column
Plan Category	Options(1)	Options(1)	(a))(2)
Equity plans approved by			
shareholders	5,322,591	14.76	6,487,163
Equity plans not approved by			
shareholders	_	_	_

- (1) Includes the Pre-IPO Plan and the 2020 Plan, but does not include future rights to purchase common shares under our 2020 Employee Share Purchase Plan ("2020 ESPP"), which depend on a number of factors described in our 2020 ESPP and will not be determined until the end of the applicable purchase period.
- (2) Includes the 2020 Plan and 2020 ESPP. Share options or other share awards granted under the Pre-IPO Plan that are forfeited, terminated, expired or repurchased become available for issuance under the 2020 Plan. In accordance with the terms of the 2020 Plan and the 2020 ESPP, the total number of our common shares reserved for issuance thereunder automatically increased on January 1st in an amount equal to 5.0% and 1.0%, respectively, of the total number of shares of share capital outstanding on December 31st of the preceding year. Accordingly, on January 1, 2022, the number of our common shares available for issuance under the 2020 Plan and the 2020 ESPP increased by 2,092,508 shares and 418,501 shares, respectively, pursuant to these provisions. These increases are not reflected in the table above.

Limitation on Liability and Indemnification Matters

Under the QBCA and our Bylaws, we must indemnify our current or former directors and officers, agents or any other individuals who act or has acted at our request as a director or officer of another group, against all costs, charges and expenses reasonably incurred in the exercise of such individual's functions, including an amount paid to settle an action or satisfy a judgment, or arising from any investigative or other proceeding in which such individual is involved. The QBCA also provides that we must advance moneys to such individual for costs, charges and expenses incurred in connection with such a proceeding; provided that such individual shall repay such payment if he or she does not fulfill the conditions described below.

Indemnification is prohibited under the QBCA unless the individual:

- acted with honesty and loyalty in our interests, or in the interest of the other group for which the individual acted as director or officer or in a similar capacity at our request; and
- in the case of a proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that his or her conduct was lawful.

The QBCA and our Bylaws authorize us to purchase and maintain insurance for the benefit of each of our current or former directors or officers and each person who acts or acted at our request as a director, officer or an individual acting in a similar capacity, of another entity.

In addition, we have entered, and intend to continue to enter, into separate indemnity agreements with each of our directors and officers. These indemnity agreements, among other things, require us to indemnify our directors and officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of their services as a director or officer, or any other company or enterprise to which the person provides services at our request.

We maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers. We believe that these provisions in our articles of continuance and Bylaws and these indemnity agreements are necessary to attract and retain qualified persons as directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or control persons, in the opinion of the SEC, such indemnification is against public policy, as expressed in the Securities Act and is therefore unenforceable.

NON-EMPLOYEE DIRECTOR COMPENSATION

Director Compensation Table

The following table sets forth information regarding compensation earned by or paid to our non-employee directors for the fiscal year ended December 31, 2021. Mr. Segal, our President and Chief Executive Officer, is also a member of our board of directors but he does not receive any additional compensation for his service as a director. See the section titled "Executive Compensation" for more information regarding the compensation earned by Mr. Segal.

Name	Fees Earned or Paid in Cash (\$)	Option Awards (\$)(1)(2)	Total (\$)
David Bonita, M.D.	40,000	423,990	463,990
Thomas Civik(3)	23,000	923,580	946,580
Jerel Davis, Ph.D.	59,543	423,990	483,533
Todd Foley	45,239	423,990	469,229
Samarth Kulkarni, Ph.D.	40,000	423,990	463,990
Briggs Morrison, M.D.	45,000	423,990	468,990
Ann D. Rhoads	50,000	423,990	473,990
Carol A. Schafer	50,500	423,990	474,490

⁽¹⁾ In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during 2021 computed in accordance with ASC 718. Assumptions used in the calculation of these amounts are included in the notes to our audited consolidated financial statements included elsewhere in the Annual Report. These amounts do not reflect the actual economic value that will be realized by our non-employee directors upon the vesting of the share options, the exercise of the share options or the sale of the common shares underlying such share options.

(2) On May 13, 2021, each non-employee director, except for Mr. Civik. was automatically granted an annual refresher award of an option to purchase 21,000 common shares at an exercise price of \$32.44, vesting in equal monthly installments over a 12-month period. The following table provides information regarding the number of common shares underlying share options granted to our non-employee directors that were outstanding as of December 31, 2021.

	Option Awards Outstanding at Year End
Name	(#)
David Bonita, M.D.	21,000
Thomas Civik	42,000
Jerel Davis, Ph.D.	21,000
Todd Foley	21,000
Samarth Kulkarni, Ph.D.	91,933
Briggs Morrison, M.D.	111,728
Ann D. Rhoads	59,907
Carol A. Schafer	91,933

(3) Mr. Civik was appointed to our board of directors in September 2021 and our board of directors approved a one-time, initial award to Mr. Civik of 42,000 options at an exercise price of \$33.89 in connection with his appointment to our board of directors, under our 2020 Plan. One-third of the shares subject to the option award shall vest on the one-year anniversary of the grant date, with the remainder vesting in equal installments over a 24-month period.

Non-Employee Director Compensation Policy

Under our non-employee director compensation policy, as amended, each of our non-employee directors is eligible to receive cash and equity compensation for service on our board of directors and committees of our board of directors. The non-employee director compensation policy was adopted effective as of the closing of our IPO.

Cash Compensation

The non-employee director compensation policy provides our non-employee directors with the following cash compensation for their services:

	Annual Cash Retainer (\$)
Annual retainer	35,000
Additional retainer for non-executive chairperson	30,000
Additional retainer for audit committee chair	15,000
Additional retainer for audit committee member	7,500
Additional retainer for compensation committee chair	10,000
Additional retainer for compensation committee member	5,000
Additional retainer for nominating and governance committee chair	8,000
Additional retainer for nominating and governance committee member	4,000

These retainers are payable in arrears in four equal quarterly installments within thirty days after the end of each calendar quarter, provided that the amount of such payment will be prorated for any portion of such quarter that the director is not serving on our board. We also reimburse our directors for their reasonable out-of-pocket expenses in connection with attending our board and committee meetings.

Equity Compensation

In addition to cash compensation, each non-employee director is eligible to receive options under the 2020 Plan. Each option granted under the policy is a nonstatutory stock option and has an exercise price per share equal to the fair market value of a common share on the date of grant. Any options granted under this policy have a term of 10 years from the date of grant, subject to earlier termination in connection with a termination of the eligible director's continuous service with us. Vesting schedules for equity awards are subject to the non-employee director's continuous service on each applicable vesting date.

Upon the termination of the membership of the non-employee director on the board for any reason, his or her options granted under this policy shall remain exercisable for three months following his or her date of termination (or such longer period as the board may determine in its discretion on or after the date of grant of such options).

Notwithstanding any vesting schedule, for each non-employee director who remains in continuous service with us until immediately prior to the closing of a change in control (as such term is defined in our 2020 Plan), the shares subject to his or her then-outstanding initial or annual equity awards that were granted pursuant to this policy will become fully vested immediately prior to the closing of such change in control.

Initial Award

Each new non-employee director who first joins our board of directors will automatically, upon the date of his or her initial election or appointment to be a non-employee director, be granted an initial, one-time equity award of

options to purchase 42,000 common shares, referred to as the initial grant. One-third of each initial grant will vest on the first anniversary of the date of grant, with the remainder vesting in equal monthly installments thereafter until the third anniversary of the date of grant.

Annual Awards

On the date of each annual meeting of our shareholders, each non-employee director who continues to serve will automatically be granted an option to purchase 21,000 common shares, which will vest in equal monthly installments over the 12 months following the date of grant, subject to (i) the non-employee director's continuous service through each applicable vesting date and (ii) that no annual award will be granted to a non-employee director in the same calendar year that such director received his or her initial grant.

PROPOSAL 3

APPROVAL, ON A NON-BINDING, ADVISORY BASIS, OF THE FREQUENCY OF FUTURE NON-BINDING, ADVISORY VOTES TO APPROVE THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS

Section 14A of the Exchange Act provides that every six years we must provide shareholders an opportunity to vote, on a non-binding, advisory basis, for their preference on how frequently we should seek future non-binding, advisory votes to approve the compensation of our named executive officers (such as the one described in Proposal 2 above). Specifically, shareholders may indicate whether they would prefer these advisory resolutions on named executive officer compensation to be presented for shareholder approval every one, two or three years.

Our board of directors believes at this time that an annual frequency is appropriate for Repare. The board of directors believes that an annual vote on named executive officer compensation provides shareholders with the opportunity to provide timely and direct input to the board of directors and the compensation committee about our executive compensation philosophy, policies and practices as disclosed in the proxy statement each year. The board of directors believes that an annual vote is therefore consistent with our efforts to engage in an ongoing dialogue with our shareholders on executive compensation and corporate governance matters. The board of directors will continue to evaluate the appropriate frequency for the shareholder executive compensation vote.

Please note that shareholders are not voting to approve or disapprove the recommendation of the board of directors with respect to this proposal. Instead, the proxy card provides four choices: a one-, two- or three-year frequency or shareholders may abstain from voting on the proposal. The option that receives the highest number of votes of the holders of our common shares present at the meeting (by virtual attendance) or by proxy and entitled to vote thereon will be deemed to be the frequency preferred by our shareholders.

Since this proposal is an advisory vote, the result will not be binding on our board of directors. As such, the results of the vote will not be construed to create or imply any change to the fiduciary duties of our board of directors. Our board of directors may decide that it is in the best interests of Repare and our shareholders to hold a non-binding, advisory vote on our named executive officer compensation more or less frequently than the option approved by our shareholders. However, our board of directors values our shareholders' opinions, and our board of directors and the compensation committee will take into account the outcome of the advisory vote when determining how often we should submit to shareholders future "say-on-pay" votes. We expect that the next shareholder vote on the frequency of non-binding, advisory votes on named executive officer compensation will occur at our 2028 Annual Meeting of Shareholders.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE FOR A "ONE-YEAR" FREQUENCY FOR FUTURE ADVISORY SHAREHOLDER VOTES ON EXECUTIVE COMPENSATION.

PROPOSAL 4

APPOINTMENT OF ERNST & YOUNG LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The audit committee of our board of directors has recommended Ernst & Young LLP be put before the shareholders at the Annual Meeting for appointment as our independent registered public accounting firm for the fiscal year ending December 31, 2022. Ernst & Young LLP has audited our financial statements since 2017. Representatives of Ernst & Young LLP are expected to be present at the Annual Meeting. Such representatives will have an opportunity to make a statement if he or she desires to do so and will be available to respond to appropriate questions.

Under the *Business Corporations Act* (Québec), at each annual meeting of shareholders, shareholders must appoint, by a simple majority of the votes cast in respect of that proposal, an auditor to hold office until the close of the next annual meeting of shareholders. Notwithstanding the foregoing, if an auditor is not appointed at a meeting of shareholders, the incumbent auditor continues in office until a successor is appointed. Ernst & Young LLP currently serves as our auditor and, therefore, shall continue to serve as our auditor in the event that this proposal is not adopted by the shareholders.

Vote Required: A simple majority of the votes cast at the Annual Meeting by virtual attendance or represented by proxy will be required to appoint Ernst & Young LLP and to authorize the board of directors to fix Ernst & Young LLP's remuneration. You may vote "FOR" the appointment of Ernst & Young LLP, "AGAINST" such appointment or abstain from voting. An abstention will have the same effect as a vote "AGAINST".

Principal Accountant Fees and Services

The following table represents aggregate fees billed to us by Ernst & Young LLP for the periods set forth below.

	Fiscal Year Er	Fiscal Year Ended(1)			
	2021	2020			
	(in thousar	ids)			
Audit Fees(2)	\$ 700	\$ 584			
Audit-Related Fees	-	_			
Tax Fees(3)	114	110			
All Other Fees	_	_			
Total Fees	\$ 814	\$ 694			
					

⁽¹⁾ Fees paid in Canadian dollars have been converted to U.S. dollars at the average exchange rate of \$0.7978 for the year ended December 31, 2021 and \$0.7454 for the year ended December 31, 2020, respectively, based on Bank of Canada average exchange rates.

All fees described above were pre-approved by our audit committee.

Pre-Approval Policies and Procedures

Our audit committee has adopted a policy and procedures for the pre-approval of audit and non-audit services rendered by our independent registered public accounting firm, Ernst & Young LLP. The policy generally

⁽²⁾ Audit fees consist of fees billed for professional services provided in connection with the audit of our annual financial statements, the review of our quarterly financial statements, and audit services that are normally provided by independent registered public accounting firm in connection with regulatory filings. The audit fees also include fees for professional services provided in connection with registration statements, including comfort letters, consents and review of documents filed with the SEC.

⁽³⁾ Tax fees consist of professional services for corporate tax compliance and tax advisory services.

pre-approves specified services in the defined categories of audit services, audit-related services and tax services up to specified amounts. Pre-approval may also be given as part of the audit committee's approval of the scope of the engagement of the independent auditor or on an individual, explicit, case-by-case basis before the independent auditor is engaged to provide each service. The pre-approval of services may be delegated to one or more of the audit committee's members, but the decision must be reported to our full audit committee at its next scheduled meeting.

Our audit committee has determined that the rendering of services other than audit services by Ernst & Young LLP is compatible with maintaining the principal accountant's independence.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE APPOINTMENT OF ERNST & YOUNG LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM AND AUTHORIZATION OF THE BOARD TO FIX ERNST & YOUNG LLP'S REMUNERATION.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding the ownership of our common shares as of March 15, 2022 by:

- each person or entity known by us to be beneficial owners of more than five percent of our common shares;
- each of our directors;
- each of our named executive officers; and
- all of our executive officers and directors as a group.

We have determined beneficial ownership in accordance with the rules of the SEC. Under these rules, beneficial ownership includes any common shares as to which the individual or entity has sole or shared voting power or investment power. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, common shares subject to options held by such person that are currently exercisable or will become exercisable within 60 days of March 15, 2022 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person.

Unless noted otherwise, the address of all listed shareholders is c/o Repare Therapeutics Inc., 7210 Frederick-Banting, Suite 100, St-Laurent, Québec, Canada H4S 2A1.

	Beneficial Ownership(1)		
Beneficial Owner	Number of Shares	Percent of Total	
Greater than 5% Shareholders			
Entities affiliated with Versant(2)	4,994,862	11.9%	
Entities affiliated with BVF Inc.(3)	4,858,761	11.6%	
Entities affiliated with OrbiMed (4)	3,322,488	7.9%	
Entities affiliated with FMR LLC(5)	3,021,313	7.2%	
ARK Investment Management LLC(6)	2,980,836	7.1%	
Entities affiliated with Redmile(7)	2,789,496	6.7%	
Entities affiliated with MPM(8)	2,242,636	5.4%	
CHI Advisors LLC(9)	2,212,256	5.3%	
T. Rowe Price Associates, Inc.(10)	2,166,822	5.2%	
Entities affiliated with Deep Track Capital(11)	2,100,000	5.0%	
Named Executive Officers and Directors			
Lloyd M. Segal(12)	1,067,115	2.5%	
Steve Forte(13)	250,874	*	
Maria Koehler, M.D.(14)	265,438	*	
Michael Zinda, Ph.D.(15)	168,156	*	
David Bonita, M.D.(3)	3,343,598	8.0%	
Thomas Civik(16)	7,500	*	
Jerel Davis, Ph.D.(6)	5,027,638	12.0%	
Todd Foley(8)	2,263,636	5.4%	
Samarth Kulkarni, Ph.D.(17)	62,333	*	
Briggs Morrison, M.D.(18)	97,406	*	
Ann D. Rhoads(19)	46,615	*	
Carol A. Schafer(20)	76,653	*	
All executive officers and directors as a group (12 persons)(21)	12,676,962	30.3%	

- * Less than one percent.
- (1) This table is based upon information supplied by officers, directors and principal shareholders and Schedules 13D and 13G and Forms 3 and 4 filed with the SEC. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, we believe that each of the shareholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned. Applicable percentages are based on 41,875,139 shares outstanding on March 15, 2021, adjusted as required by rules promulgated by the SEC.
- (2) Consists of (a) 1,903,670 common shares held by Versant Venture Capital V, L.P. ("Versant V"); (b) 144,879 common shares held by Versant Venture Capital V (Canada) LP ("Versant V Canada"); (c) 63,387 common shares held by Versant Ophthalmic Affiliates Fund I, L.P. ("Versant Ophthalmic"); (d) 57,264 common shares held by Versant Affiliates Fund V, L.P. ("Versant Affiliates V"); (e) 2,594,451 common shares held by Versant Venture Capital VI, L.P. ("Versant VI"); (f) 231,211 common shares held by Versant Vantage I, L.P. ("Versant Vantage"); and (g) with respect to Jerel Davis, Ph.D., a member of our board of directors, only, (i) 11,776 common shares held by Dr. Davis and (ii) 21,000 common shares issuable upon the exercise of options granted to Dr. Davis that are exercisable within 60 days of March 15, 2022, Versant V. Versant V. Canada, Versant Ophthalmic, Versant Affiliates V, Versant VI and Versant Vantage are collectively referred to as the Versant Entities, Versant Ventures V, LLC is the general partner of each of Versant V, Versant Ophthalmic and Versant Affiliates V and has voting and dispositive control over the shares held by such entities. Versant Ventures V (Canada), L.P. is the general partner of Versant V Canada and Versant Ventures V GP-GP (Canada), Inc. is the sole general partner of Versant Ventures V (Canada), L.P. and has voting and dispositive control over the shares held by Versant V Canada. Dr. Davis, Brad Bolzon, Tom Woiwode, William Link, Samuel Colella, Kirk Nielsen and Robin Praeger, the managing directors of Versant Ventures V. LLC and the directors of Versant Ventures V GP-GP (Canada), Inc., may be deemed to possess voting and dispositive control over the shares held by Versant V, Versant V Canada, Versant Ophthalmic and Versant Affiliates V and may be deemed to have indirect beneficial ownership of the shares held by Versant V, Versant V Canada, Versant Ophthalmic and Versant Affiliates V but disclaims beneficial ownership of such securities, except to the extent of their respective pecuniary interest therein, if any. Versant Ventures VI GP, L.P. is the sole general partner of Versant VI and Versant Ventures VI GP-GP, LLC is the sole general partner of Versant Ventures VI GP, L.P. and has voting and dispositive control over the shares held by Versant VI. Dr. Davis, Brad Bolzon, Tom Woiwode, Clare Ozawa, Kirk Nielsen and Robin Praeger, the managing directors of Versant Ventures VI GP-GP, LLC, may be deemed to possess voting and dispositive control over the shares held by Versant VI and may be deemed to have indirect beneficial ownership of the shares held by Versant VI but disclaims beneficial ownership of such securities, except to the extent of their respective pecuniary interest therein, if any. Versant Vantage I GP, L.P. is the sole general partner of Versant Vantage and Versant Vantage I GP-GP, LLC is the sole general partner of Versant Vantage I GP, L.P. and has voting and dispositive control over the shares held by Versant Vantage. Dr. Davis, Brad Bolzon, Tom Woiwode, Clare Ozawa and Robin Praeger, the managing directors of Versant Vantage I GP-GP, LLC, may be deemed to possess voting and dispositive control over the shares held by Versant Vantage and may be deemed to have indirect beneficial ownership of the shares held by Versant Vantage but disclaims beneficial ownership of such securities, except to the extent of their respective pecuniary interest therein, if any. The address each of the above persons and entities is One Sansome Street, Suite 3630, San Francisco, CA 94104.
- (3) Consists of (a) 2,548,764 common shares held by Biotechnology Value Fund, L.P. ("BVF"); (b) 1,903,361 common shares held by Biotechnology Value Fund II, L.P. ("BVF2"); (c) 299,728 common shares held by Biotechnology Value Trading Fund OS LP ("Trading Fund OS"); and (d) 106,908 common shares held in a certain managed account (the "Partners Managed Account") managed by BVF Partners L.P. ("BVF Partners"). BVF I GP LLC ("BVF GP"), as the general partner of BVF, may be deemed to beneficially own the common shares beneficially owned by BVF. BVF II GP LLC ("BVF2 GP"), as the general partner of BVF2, may be deemed to beneficially own the common shares beneficially owned by BVF2. BVF Partners OS Ltd ("Partners OS"), as the general partner of Trading Fund OS, may be deemed to

beneficially own the common shares beneficially owned by Trading Fund OS. BVF GP Holdings LLC ("BVF GPH"), as the sole member of each of BVF GP and BVF2 GP, may be deemed to beneficially own the common shares beneficially owned in the aggregate by BVF and BVF2. BVF Partners, as the investment manager of BVF, BVF2 and Trading Fund OS, and the sole member of Partners OS, may be deemed to beneficially own the Shares beneficially owned in the aggregate by BVF, BVF2, Trading Fund OS, and the Partners Managed Account. BVF Inc., as the general partner of BVF Partners, may be deemed to beneficially own the common shares beneficially owned by BVF Partners. Mark N. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the common shares beneficially owned by BVF Inc. Each of the entities and individuals listed above expressly disclaims beneficial ownership of the securities listed above except to the extent of any pecuniary interest therein. The address of each of the above person and entities is 44 Montgomery St., 40th Floor, San Francisco, CA 94104. Consists of (a) 3,177,041 common shares held by OrbiMed Private Investments VII, L.P. ("OPI VII"), (b) 49,257 common shares held by The

- (4)Biotech Growth Trust PLC ("BIOG"), (c) 96,190 common shares held by OrbiMed Partners Master Fund Limited ("OPM") and (d) with respect to David Bonita, M.D., a member of our board of directors, only, 21,000 common shares issuable upon the exercise of options granted to Dr. Bonita that are exercisable within 60 days of March 15, 2022. OrbiMed Capital GP VII LLC ("OrbiMed GP") is the general partner of OPI VII, pursuant to the terms of the limited partnership agreement of OPI VII, and OrbiMed Advisors LLC ("OrbiMed Advisors") is the managing member of OrbiMed GP, pursuant to the terms of the limited liability company agreement of OrbiMed GP. As a result, OrbiMed Advisors and OrbiMed GP share power to direct the vote and disposition of the common shares held by OPI VII and may be deemed directly or indirectly, including by reason of their mutual affiliation, to be the beneficial owners of the common shares held by OPI VII. OrbiMed Advisors exercises this investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho, and W. Carter Neild, each of whom disclaims beneficial ownership of the common shares held by OPI VII. David Bonita, M.D., a member of our board of directors, is a member of OrbiMed Advisors. OrbiMed Capital LLC ("OrbiMed Capital") is the investment advisor of each of BIOG and OPM. As a result, OrbiMed Capital has the power to direct the vote and disposition of the common shares held by BIOG and OPM and may be deemed directly or indirectly, including by reason of mutual affiliation, to be the beneficial owner of the common shares held by BIOG and OPM. OrbiMed Capital exercises this investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho, and W. Carter Neild, each of whom disclaims beneficial ownership of the common shares held by BIOG and OPM. Dr. Bonita is a member of OrbiMed Capital. The address of each of the above persons and entities is 601 Lexington Avenue, 54th Floor, New York, NY 10022.
- Consists of 3,021,313 common shares held by FMR LLC, certain of its subsidiaries and affiliates and other companies. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act ("Fidelity Funds") advised by Fidelity Management & Research Company LLC ("FMR Co. LLC"), a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Boards of Trustees. FMR Co. LLC carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees. The address for FMR, LLC is 245 Summer Street, Boston, MA 02110.
- (6) Consists of 2,980,836 common shares held by ARK Investment Management LLC. The address of ARK Investment Management LLC is 3 East 28th Street, 7th Floor, New York, NY 10016.
- (7) Consists of 2,789,496 common shares held by certain private investment vehicles and/or separately managed accounts managed by Redmile Group, LLC ("Redmile"). Redmile serves as investment manager

- of such provide investment vehicles and/or separately managed accounts may be deemed to beneficially own such shares. Jeremy C. Green serves as the principal of Redmile, and as such shares voting and dispositive power over the shares. Redmile and Mr. Green each disclaim beneficial ownership of these shares, except to the extent of its or his pecuniary interest in such shares, if any. The address of the above person and entity is Letterman Digital Arts Center, One Letterman Drive, Suite D3-300, San Francisco, CA 94129.
- (8) Consists of (a) 2,036,689 common shares held by MPM BioVentures 2014, L.P. ("MPM 2014"); (b) 135,843 common shares held by MPM BioVentures 2014 (B), L.P. ("MPM B 2014"); (c) 70,104 common shares held by MPM Asset Management Investors BV2014 LLC ("MPM LLC") and (d) with respect to Todd Foley, a member of our board of directors, only, 21,000 common shares issuable upon the exercise of options granted to Mr. Foley that are exercisable within 60 days of March 15, 2022. MPM 2014, MPM B 2014 and MPM LLC are collectively referred to as the MPM Entities. Mr. Foley, a member of our board of directors, Luke Evnin and Ansbert Gadicke and are managing directors of MPM BioVentures 2014 LLC ("BV2014 LLC"). BV2014 LLC is the Managing Member of MPM BioVentures 2014 GP LLC, which is the General Partner of MPM 2014 and MPM B 2014. MPM LLC invests alongside MPM 2014 and MPM B 2014. Each of Drs. Evnin and Gadicke and Mr. Foley shares power to vote, acquire, hold and dispose of the shares held by each of the MPM Entities. Each of the entities and individuals listed above expressly disclaims beneficial ownership of the securities listed above except to the extent of any pecuniary interest therein. The address of each of the above persons and entities is 450 Kendall Street, Cambridge, MA 02142.
- (9) Consists of 2,212,256 common shares held by CHI Advisors LLC. The address of CHI Advisors LLC is 100 E. Pratt Street, Baltimore, MD 21202.
- (10) Consists of 2,166,822 common shares held by T. Rowe Price Associates, Inc. The address of T. Rowe Price Associates, Inc is 3 East 28th Street, 7th Floor New York NY 10016
- (11) Consists of 2,100,000 common shares held by Deep Track Capital, LP, Deep Track Biotechnology Master Fund, Ltd. and David Kroin. The address for each of Deep Track Capital, LP and Mr. Kroin is 200 Greenwich Ave., 3rd Floor, Greenwich, CT 06830. The address for Deep Track Biotechnology Master Fund, Ltd. is c/o Walkers Corporate Limited, 190 Elgin Ave, George Town, KY1-9001, Cayman Islands.
- (12) Consists of (a) 94,466 common shares held by Arvala Inc., (b) 6,127 common shares held by Mr. Segal and (c) 966,522 common shares issuable upon the exercise of options granted to Mr. Segal that are exercisable within 60 days of March 15, 2022.
- (13) Consists of (a) 6,157 common shares held by Mr. Forte and (b) 244,717 common shares issuable upon the exercise of options granted to Mr. Segal that are exercisable within 60 days of March 15, 2022.
- (14) Consists of (a) 101,006 common shares held by Dr. Koehler and (b) 164,432 common shares issuable upon the exercise of options granted to Dr. Koehler that are exercisable within 60 days of March 15, 2022.
- (15) Consists of (a) 46,041 common shares held by Dr. Zinda and (b) 122,115 common shares issuable upon the exercise of options granted to Dr. Zinda that are exercisable within 60 days of March 15, 2022.
- (16) Consists of 7,500 common shares held by Mr. Civik.
- (17) Consists 62,333 common shares issuable upon the exercise of options granted to Dr. Kulkarni that are exercisable within 60 days of March 15, 2022.
- (18) Consists of (a) 4,800 common shares held by Dr. Morrison and (b) 92,606 common shares issuable upon the exercise of options granted to Dr. Morrison that are exercisable within 60 days of March 15, 2022.
- (19) Consists of (a) 4,000 common shares held by Ms. Rhoads and (b) 42,615 common shares issuable upon the exercise of options granted to Ms. Rhoads that are exercisable within 60 days of March 15, 2022
- (20) Consists of (a) 8,000 common shares held by Ms. Schafer and (b) 68,653 common shares issuable upon the exercise of options granted to Ms. Schafer that are exercisable within 60 days of March 15, 2022.
- (21) Consists of (a) 10,849,969 common shares held by our directors and executive officers and (b) 1,826,993 common shares issuable upon the exercise of options granted to our directors and executive officers that are exercisable within 60 days of March 15, 2022.

TRANSACTIONS WITH RELATED PERSONS AND INDEMNIFICATION

We describe below transactions and series of similar transactions, since the beginning of fiscal year 2021, with respect to which we were a party, will be a party, or otherwise benefited, in which:

- the amounts involved exceeded or will exceed \$120,000; and
- a director, executive officer, holder of more than 5 percent of our ordinary shares or any member of their immediate family had or will have a direct or indirect material interest.

We also describe below certain other transactions with our directors, executive officers and shareholders. We believe that the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that would be paid or received, as applicable, in arm's-length transactions.

Registration Rights Agreement

We are party to an amended and restated registration rights agreement, or the registration rights agreement, dated September 3, 2019, with all holders of our previously outstanding convertible preferred shares. The registration rights agreement provides that these holders are entitled to certain registration rights, including the right to demand that we file a registration statement or request that their shares be covered by a registration statement that we otherwise file. The registration rights will terminate upon the earliest of (i) the occurrence of certain mergers, amalgamations, consolidations, reorganizations, arrangements, business combinations or similar transactions that result in a change of control of our company, or a sale of all or substantially all of our assets, or a dissolution, liquidation or winding up of our company, (ii) June 23, 2023 or (iii) with respect to any particular holder, at such time that such holder can sell all of its shares under Rule 144 of the Securities Act during any three-month period without registration.

Employment Arrangements

We have entered into employment agreements with our executive officers. Each of our executive officers has entered into a written employment agreement with us that provides for payment of base salary, target annual cash incentive compensation, eligibility for employee benefit programs and potential severance benefits. For more information regarding these agreements with our named executive officers, see "Executive Compensation."

Severance Arrangements

The employment agreements we have entered into with our executive officers provide for certain severance arrangements. For more information regarding these arrangements with our named executive officers, see "Executive Compensation—Potential Payments upon Termination or Change of Control."

Equity Awards Granted to Executive Officers and Directors

We have granted options to our executive officers and directors. Certain grants to our named executive officers are described in "Compensation Discussion and Analysis – Executive Compensation Tables – Grants of Plan-Based Awards". For more information regarding the equity awards granted to our named executive officers and directors, see "Executive Compensation" and "Non-Employee Director Compensation."

Indemnification Agreements

We have entered into separate indemnity agreements with each of our directors and officers, in addition to the indemnification provided for in our Bylaws. These indemnity agreements provide our directors and executive officers with contractual rights to indemnification and, in some cases, expense advancement in any action or

proceeding arising out of their services as one of our directors or executive officers or as a director or executive officer of any other company or enterprise to which the person provides services at our request. We believe that these agreements are necessary to attract and retain qualified persons as our officers and directors. We also maintain directors' and officers' liability insurance. For more information regarding these indemnity agreements, see "Executive Compensation—Limitations on Liability and Indemnification Matters."

Related Person Transaction Policy

In connection with our IPO, we adopted a written related party transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related party transactions. For purposes of this policy only, a "related person transaction" is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which we and any related person are participants involving an amount that exceeds \$120,000. Transactions involving compensation for services provided to us as an employee, consultant or director are not considered related-person transactions under this policy. A "related person" is any executive officer, director, nominee to become a director or a holder of more than 5% of our share capital, or any affiliate or member of the immediate family of the foregoing.

Under the policy, where a transaction has been identified as a related-person transaction, management will be required to present information regarding the proposed related-person transaction to our audit committee or, where review by our audit committee would be inappropriate due to a conflict of interest, to another independent body of our board of directors, for review. The presentation will need to include a description of, among other things, all of the parties, the direct and indirect interests of the related persons, the purpose of the transaction, the material facts, the benefits of the transaction to us and whether any alternative transactions are available, an assessment of whether the terms are comparable to the terms available from unrelated third parties and management's recommendation. To identify related-person transactions in advance, we will rely on information supplied by our executive officers, directors and certain significant shareholders. In considering related-person transactions, our audit committee or another independent body of our board of directors will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the terms of the transaction;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

In the event a director has an interest in the proposed transaction, the director is expected to recuse himself or herself from the deliberations and approval process.

Although we did not have a written policy for the review and approval of transactions with related persons prior to our IPO, our board of directors has historically reviewed and approved any transaction where a director or officer had a financial interest, including the transactions described above. Prior to approving such a transaction, the material facts as to a director's or officer's relationship or interest in the agreement or transaction were disclosed to our board of directors. Our board of directors took this information into account when evaluating the transaction and in determining whether such transaction was fair to us and in the best interest of all our shareholders.

HOUSEHOLDING OF PROXY MATERIALS

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for notices of internet availability of proxy materials or other annual meeting materials with respect to two or more shareholders sharing the same address by delivering a single notice of internet availability of proxy materials or other annual meeting materials addressed to those shareholders. This process, which is commonly referred to as "householding," potentially means extra convenience for shareholders and cost savings for companies.

This year, a number of brokers with account holders who are our shareholders will be "householding" our proxy materials. A single Notice of Internet Availability of Proxy Materials will be delivered to multiple shareholders sharing an address unless contrary instructions have been received from the affected shareholders. Once you have received notice from your broker that they will be "householding" communications to your address, "householding" will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in "householding" and would prefer to receive a separate Notice of Internet Availability of Proxy Materials, please notify your broker or us. Direct your written request to c/o Repare Therapeutics Inc., 7210 Frederick-Banting, Suite 100, St-Laurent, Québec, Canada H4S 2A1, Attention: Secretary or via email at *investor@reparerx.com*. Shareholders who currently receive multiple copies of the Notices of Internet Availability of Proxy Materials at their addresses and would like to request "householding" of their communications should contact their brokers.

OTHER MATTERS

Our 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 Annual Meeting, it is the intention of the persons named in the accompanying proxy to vote on such matters in accordance with their best judgment.

BY Order of the Board of Directors,

Steve Forte

Executive Vice-President and Chief Financial Officer

April 1, 2022

We have filed our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 with the SEC and Canadian securities regulatory authorities. It is available free of charge at the SEC's website at www.sec.gov and on SEDAR at www.sedar.com. Shareholders can also access this proxy statement and our 2021 Annual Report on Form 10-K at ir.reparerx.com. A copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 is also available without charge by written request to our Secretary at c/o Repare Therapeutics Inc., 7210 Frederick-Banting, Suite 100, St-Laurent, Québec, Canada H4S 2A1, Attention: Secretary or via email at investor@reparerx.com.



PO BOX 8016 CARY NC 27512-9903

YOUR VOTE IS IMPORTANT! PLEASE VOTE BY:

INTERNET



Go To: www.proxypush.com/RPTX

- Cast your vote online
- Have your Proxy Card ready
 Follow the simple instructions to record your vote

PHONE Call 1-866-858-9058

- Use any touch-tone telephone
- Have your Proxy Card ready
- Follow the simple recorded instructions



MAIL

- Mark, sign and date your Proxy Card
- Fold and return your Proxy Card in the postage-paid envelope provided Mail is the only method by which a holder may return their Proxy Card to appoint a person as proxyholder other than the Named Proxies



You must pre-register to attend the meeting online and/or participate at www.proxydocs.com/RPTX.

Repare Therapeutics Inc.

Annual Meeting of Shareholders

For Shareholders of record as of March 21, 2022

Friday, May 13, 2022 4:00 PM, Eastern Time

PLACE: Annual Meeting to be held live via live webcast - please visit

www.proxydocs.com/RPTX for more details

This proxy is being solicited on behalf of the Board of Directors

The undersigned hereby appoints Lloyd Segal and Steve Forte (the "Named Proxies"), and each or either of them, OR Print the name and e-mail of the person you are appointing if this person is someone other than the Named Proxies listed herein, as the true and lawful attorneys of the undersigned. with full power of substitution and revocation, and authorizes

with full power of substitution and revocation, and authorizes such person or them, and each of them, as applicable, to vote all the shares in the share capital of Repare Therapeutics Inc. (the "Company") which the undersigned is entitled to vote at said meeting and any adjournment thereof upon the matters specified and upon such other matters as may be properly brought before the meeting or any adjournment thereof, conferring authority upon such true and lawful attorneys to vote in their discretion on such other matters as may properly come before the meeting and revoking any proxy heretofore given

THE SHARES REPRESENTED BY THIS PROXY WILL BE VOTED AS DIRECTED OR, IF NO DIRECTION IS GIVEN, SHARES WILL BE VOTED IDENTICAL TO THE BOARD OF DIRECTORS' RECOMMENDATION. This proxy, when properly executed, will be voted in the manner directed herein. In their discretion, the Named Proxies are authorized to vote upon such amendments or variations to the matters specified and other matters that may properly come before the meeting or any adjournment or postponement thereof.

You are encouraged to specify your choice by marking the appropriate box (SEE REVERSE SIDE) but you need not mark any box if you wish to vote in accordance with the Board of Directors' recommendation. The Named Proxies cannot vote your shares unless you sign (on the reverse side) and return this card

or postponement thereof. If you wish to appoint a person or company of their benefing or any adjournment or postponement thereof. If you wish to appoint a person or company other than the persons whose names are printed herein, please insert the name of your chosen proxyholder in the space provided (see above) and follow the instructions set forth herein to return your proxy card by mail. Proxies must be received by 10:00 AM, Eastern Time, on May 11, 2022. Every holder has the right to appoint some other person or company of their choice, who need not be a holder, to attend and act on their behalf at the meeting or any adjournment

The securities represented by this proxy will be voted in favor or withheld from voting or voted against each of the matters described herein, as applicable, in accordance with the instructions of the holder, on any ballot that may be called for and, if the holder has specified a choice with respect to any matter to be acted on, the securities will be voted accordingly.

This proxy should be read in conjunction with the proxy statement for the 2022 Annual Meeting of Shareholders of the Company.

PLEASE BE SURE TO SIGN AND DATE THIS PROXY CARD AND MARK ON THE REVERSE SIDE

Repare Therapeutics Inc.

Annual Meeting of Shareholders

BOARD OF DIRECTORS

Please make your marks like this:

Ī	Х	1
ı		

THE BOARD OF DIRECTORS RECOMMENDS A VOTE: FOR ON PROPOSALS 1, 2 AND 4 EVERY 1 YEAR ON PROPOSAL 3

	PROPOSAL		YOU	R VOTE		RECOMMENDS
1.	To elect three Class II directors to our Board of Directors, each to hold office until our Annual Meeting of Shareholders in 2025. The Board of Directors intends to present for election the following three current director nominees as Class II directors:					
		FOR		WITHHOLD		
	1.01 David Bonita, M.D.	Ш		Ш		FOR
	1.02 Thomas Civik					FOR
	1.03 Carol A. Schafer					FOR
2.	To approve, on a non-binding, advisory basis, the compensation of our named executive officers;	FOR	AGAINST	ABSTAIN		FOR
3.	To recommend, on a non-binding, advisory basis, the preferred frequency of future advisory votes on compensation of our named executive officers;	1YR	2YR	3YR	ABSTAIN	1 YEAR
4.	To appoint Ernst & Young LLP as our independent registered public accounting firm (the "auditor") for the fiscal year ending December 31, 2022, and to authorize the Board of Directors to fix the auditor's remuneration; and	FOR	AGAINST	ABSTAIN		FOR
5.	To conduct any other business properly brought before the Annual Meeting.					
	You must pre-register to attend the meeting online and/or participate at www.proxydocs.com/Rl	YTX.				
	Authorized Signatures - Must be completed for your instructions to be executed. Please sign exactly as your name(s) appears on your account. If held in joint tenancy, all persons should sign. Trustees, adminis Corporations should provide full name of corporation and title of authorized officer signing the Proxy/Vote Form.		etc., should	include title	e and auth	ority.
Sig	gnature (and Title if applicable) Date Signature (if held jointly)					Date