

---

---

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

---

**SCHEDULE 14A**  
(Rule 14a-101)

**INFORMATION REQUIRED IN PROXY STATEMENT  
SCHEDULE 14A INFORMATION**

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

---

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

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

**Ayala Pharmaceuticals , Inc.**

(Name of Registrant as Specified in its Charter)

(Name of Person(s) Filing Proxy Statement, if Other Than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

Fee paid previously with preliminary materials:

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount previously paid:

---

(2) Form, Schedule or Registration Statement No.:

---

(3) Filing Party:

---

(4) Date Filed:

---

---

---

---

[Table of Contents](#)

Ayala Pharmaceuticals, Inc.

# NOTICE & PROXY STATEMENT

## Annual Meeting of Stockholders

June 10, 2021

10:00 a.m. Eastern time

[Table of Contents](#)

**AYALA PHARMACEUTICALS, INC.  
OPPENHEIMER 4  
REHOVOT, 7670104 ISRAEL**

---

April 27, 2021

To Our Stockholders:

You are cordially invited to attend the 2021 Annual Meeting of Stockholders (the “Annual Meeting”) of Ayala Pharmaceuticals, Inc. at 10:00 a.m. Eastern time, on Thursday, June 10, 2021. In light of the ongoing COVID-19 pandemic, the Annual Meeting will be a completely virtual meeting, which will be conducted via live webcast.

The Notice of Meeting and Proxy Statement on the following pages describe the matters to be presented at the Annual Meeting. Please see the section called “Who can attend the Annual Meeting?” on page 3 of the proxy statement for more information about how to attend the meeting online.

Whether or not you attend the Annual Meeting online, it is important that your shares be represented and voted at the Annual Meeting. Therefore, I urge you to promptly vote and submit your proxy by phone, via the Internet, or, if you received paper copies of these materials, by signing, dating and returning the enclosed proxy card in the enclosed envelope, which requires no postage if mailed in the United States. If you have previously received our Notice of Internet Availability of Proxy Materials, then instructions regarding how you can vote are contained in that notice. If you have received a proxy card, then instructions regarding how you can vote are contained on the proxy card. If you decide to attend the Annual Meeting, you will be able to vote online, even if you have previously submitted your proxy.

Thank you for your support.

Sincerely,

/s/ Roni Mamluk, Ph.D.

Roni Mamluk, Ph.D.  
President, Chief Executive Officer and Director



AYALA PHARMACEUTICALS, INC.

Oppenheimer 4  
Rehovot 7670104, Israel

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS  
TO BE HELD THURSDAY, JUNE 10, 2021**

The Annual Meeting of Stockholders (the "Annual Meeting") of Ayala Pharmaceuticals, Inc., a Delaware corporation (the "Company"), will be held at 10:00 a.m. Eastern time on Thursday, June 10, 2021. In light of the ongoing COVID-19 pandemic, the Annual Meeting will be a completely virtual meeting, which will be conducted via live webcast. You will be able to attend the Annual Meeting online and submit your questions during the meeting by visiting [www.virtualshareholdermeeting.com/AYLA2021](http://www.virtualshareholdermeeting.com/AYLA2021) and entering your 16-digit control number included in your Notice of Internet Availability of Proxy Materials, on your proxy card or on the instructions that accompanied your proxy materials. The Annual Meeting will be held for the following purposes:

- To elect Murray A. Goldberg and Robert Spiegel, M.D., FACP as Class I Directors to serve until the 2024 Annual Meeting of Stockholders, and until their respective successors shall have been duly elected and qualified;
- To ratify the appointment of Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global, as our independent registered public accounting firm for the fiscal year ending December 31, 2021; and
- To transact such other business as may properly come before the Annual Meeting or any continuation, postponement, or adjournment of the Annual Meeting.

Holders of record of our common stock as of the close of business on April 16, 2021 are entitled to notice of and to vote at the Annual Meeting, or any continuation, postponement or adjournment of the Annual Meeting. A complete list of such stockholders will be open to the examination of any stockholder for a period of ten days prior to the Annual Meeting for a purpose germane to the meeting by sending an email to Yossi Maimon, Chief Financial Officer, Secretary and Treasurer at [yossi.m@ayalapharma.com](mailto:yossi.m@ayalapharma.com), stating the purpose of the request and providing proof of ownership of Company stock. The list of these stockholders will also be available during the Annual Meeting after entering the 16-digit control number included on your Notice of Internet Availability of Proxy Materials, on your proxy card or on the instructions that accompanied your proxy materials. The Annual Meeting may be continued or adjourned from time to time without notice other than by announcement at the Annual Meeting.

**It is important that your shares be represented regardless of the number of shares you may hold. Whether or not you plan to attend the Annual Meeting online, we urge you to vote your shares via the toll-free telephone number or over the Internet, as described in the enclosed materials. If you received a copy of the proxy card by mail, you may sign, date and mail the proxy card in the enclosed return envelope. Promptly voting your shares will ensure the presence of a quorum at the Annual Meeting and will save us the expense of further solicitation. Submitting your proxy now will not prevent you from voting your shares at the Annual Meeting if you desire to do so, as your proxy is revocable at your option.**

By Order of the Board of Directors

/s/ Yossi Maimon

Yossi Maimon  
Chief Financial Officer, Secretary and Treasurer  
Rehovot, Israel  
April 27, 2021

**TABLE OF CONTENTS**

	<u>Page</u>
<a href="#">Notice of Annual Meeting of Stockholders To Be Held Thursday, June 10, 2021</a>	i
<a href="#">Proxy Statement</a>	1
<a href="#">Questions and Answers About the 2021 Annual Meeting of Stockholders</a>	3
<a href="#">Proposals To Be Voted On</a>	7
<a href="#">Report of the Audit Committee of the Board of Directors</a>	12
<a href="#">Independent Registered Public Accounting Firm Fees and Other Matters</a>	13
<a href="#">Executive Officers</a>	14
<a href="#">Corporate Governance</a>	15
<a href="#">Committees of the Board</a>	19
<a href="#">Executive and Director Compensation</a>	22
<a href="#">Security Ownership of Certain Beneficial Owners and Management</a>	29
<a href="#">Delinquent Section 16(a) Reports</a>	32
<a href="#">Certain Relationships</a>	33
<a href="#">Stockholders' Proposals</a>	35
<a href="#">Other Matters</a>	35
<a href="#">Solicitation of Proxies</a>	35
<a href="#">Ayala's Annual Report on Form 10-K</a>	36



**AYALA PHARMACEUTICALS, INC.**  
**Oppenheimer 4**  
**Rehovot 7670104, Israel**

**PROXY STATEMENT**

This proxy statement is furnished in connection with the solicitation by the Board of Directors of Ayala Pharmaceuticals, Inc. of proxies to be voted at our Annual Meeting of Stockholders to be held on Thursday, June 10, 2021 (the "Annual Meeting"), at 10:00 a.m. Eastern time, and at any continuation, postponement, or adjournment of the Annual Meeting. In light of the ongoing COVID-19 pandemic, the Annual Meeting will be a completely virtual meeting, which will be conducted via live webcast. You will be able to attend the Annual Meeting online and submit your questions during the meeting by visiting [www.virtualshareholdermeeting.com/AYLA2021](http://www.virtualshareholdermeeting.com/AYLA2021) and entering your 16-digit control number included in your Notice of Internet Availability of Proxy Materials, on your proxy card or on the instructions that accompanied your proxy materials.

Holders of record of shares of our common stock, \$0.01 par value per share, as of the close of business on April 16, 2021 (the "Record Date"), will be entitled to notice of and to vote at the Annual Meeting and any continuation, postponement, or adjournment of the Annual Meeting. As of the Record Date, there were 13,240,962 shares of common stock outstanding and entitled to vote at the Annual Meeting. Each share of common stock is entitled to one vote on any matter presented to stockholders at the Annual Meeting.

This proxy statement and the Company's Annual Report to Stockholders for the year ended December 31, 2020 (the "2020 Annual Report") will be released on or about April 27, 2021 to our stockholders on the Record Date.

In this proxy statement, "Ayala", "Company", "we", "us", and "our" refer to Ayala Pharmaceuticals, Inc.

**IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS  
FOR THE STOCKHOLDER MEETING TO BE HELD ON THURSDAY, JUNE 10, 2021**

**This Proxy Statement and our 2020 Annual Report to Stockholders are available at  
<http://www.proxyvote.com/>**

**Proposals**

At the Annual Meeting, our stockholders will be asked:

- To elect Murray A. Goldberg and Robert Spiegel, M.D., FACP as Class I Directors to serve until the 2024 Annual Meeting of Stockholders, and until their respective successors shall have been duly elected and qualified;
- To ratify the appointment of Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global ("Kost Forer"), as our independent registered public accounting firm for the fiscal year ending December 31, 2021; and
- To transact such other business as may properly come before the Annual Meeting or any continuation, postponement, or adjournment of the Annual Meeting.

We know of no other business that will be presented at the Annual Meeting. If any other matter properly comes before the stockholders for a vote at the Annual Meeting, however, the proxy holders named on the Company's proxy card will vote your shares in accordance with their best judgment.

## **Recommendations of the Board**

The Board of Directors (the “Board”) recommends that you vote your shares as indicated below. If you return a properly completed proxy card, or vote your shares by telephone or Internet, your shares of common stock will be voted on your behalf as you direct. If not otherwise specified, the shares of common stock represented by the proxies will be voted, and the Board of Directors recommends that you vote:

- FOR the election of Murray A. Goldberg and Robert Spiegel, M.D., FACP as Class I Directors; and
- FOR the ratification of the appointment of Kost Forer, as our independent registered public accounting firm for the fiscal year ending December 31, 2021.

If any other matter properly comes before the stockholders for a vote at the Annual Meeting, the proxy holders named on the Company’s proxy card will vote your shares in accordance with their best judgment.

## **Information About This Proxy Statement**

**Why you received this proxy statement.** You are viewing or have received these proxy materials because Ayala’s Board of Directors is soliciting your proxy to vote your shares at the Annual Meeting. This proxy statement includes information that we are required to provide to you under the rules of the Securities and Exchange Commission (“SEC”) and that is designed to assist you in voting your shares.

**Notice of Internet Availability of Proxy Materials.** As permitted by SEC rules, Ayala is making this proxy statement and its 2020 Annual Report available to its stockholders electronically via the Internet. On or about April 27, 2021, we mailed to our stockholders a Notice of Internet Availability of Proxy Materials (the “Internet Notice”) containing instructions on how to access this proxy statement and our 2020 Annual Report and vote online. If you received an Internet Notice by mail, you will not receive a printed copy of the proxy materials in the mail unless you specifically request them. Instead, the Internet Notice instructs you on how to access and review all of the important information contained in the proxy statement and 2020 Annual Report. The Internet Notice also instructs you on how you may submit your proxy over the Internet. If you received an Internet Notice by mail and would like to receive a printed copy of our proxy materials, you should follow the instructions for requesting such materials contained on the Internet Notice.

**Printed Copies of Our Proxy Materials.** If you received printed copies of our proxy materials, then instructions regarding how you can vote are contained on the proxy card included in the materials.

**Householding.** The SEC’s rules permit us to deliver a single set of proxy materials to one address shared by two or more of our stockholders. This delivery method is referred to as “householding” and can result in significant cost savings. To take advantage of this opportunity, we have delivered only one set of proxy materials to multiple stockholders who share an address, unless we received contrary instructions from the impacted stockholders prior to the mailing date. We agree to deliver promptly, upon written or oral request, a separate copy of the proxy materials, as requested, to any stockholder at the shared address to which a single copy of those documents was delivered. If you prefer to receive separate copies of the proxy materials, contact Broadridge Financial Solutions, Inc. at 1-866-540-7095 or in writing at Broadridge, Householding Department, 51 Mercedes Way, Edgewood, New York 11717.

If you are currently a stockholder sharing an address with another stockholder and wish to receive only one copy of future proxy materials for your household, please contact Broadridge at the above phone number or address.



## QUESTIONS AND ANSWERS ABOUT THE 2021 ANNUAL MEETING OF STOCKHOLDERS

### **Who is entitled to vote at the Annual Meeting?**

The Record Date for the Annual Meeting is April 16, 2021. You are entitled to vote at the Annual Meeting only if you were a stockholder of record at the close of business on that date, or if you hold a valid proxy for the Annual Meeting. Each outstanding share of common stock is entitled to one vote for all matters before the Annual Meeting. At the close of business on the Record Date, there were 13,240,962 shares of common stock outstanding and entitled to vote at the Annual Meeting.

### **What is the difference between being a “record holder” and holding shares in “street name”?**

A record holder holds shares in his or her name. Shares held in “street name” means shares that are held in the name of a bank or broker on a person’s behalf.

### **Am I entitled to vote if my shares are held in “street name”?**

Yes. If your shares are held by a bank or a brokerage firm, you are considered the “beneficial owner” of those shares held in “street name.” If your shares are held in street name, these proxy materials are being provided to you by your bank or brokerage firm, along with a voting instruction card if you received printed copies of our proxy materials. As the beneficial owner, you have the right to direct your bank or brokerage firm how to vote your shares, and the bank or brokerage firm is required to vote your shares in accordance with your instructions. If your shares are held in “street name” and you would like to vote your shares online at the Annual Meeting, you should contact your bank or broker to obtain your 16-digit control number or otherwise vote through the bank or broker.

### **How many shares must be present to hold the Annual Meeting?**

A quorum must be present at the Annual Meeting for any business to be conducted. The presence at the Annual Meeting online or by proxy, of the holders of a majority in voting power of the common stock issued and outstanding and entitled to vote on the Record Date will constitute a quorum.

### **Who can attend the Annual Meeting?**

As part of our effort to maintain a safe and healthy environment for our directors, members of management and stockholders who wish to attend the Annual Meeting, in light of the ongoing COVID-19 pandemic, Ayala has decided to hold the Annual Meeting entirely online this year. You may attend the Annual Meeting online only if you are a Ayala stockholder who is entitled to vote at the Annual Meeting, or if you hold a valid proxy for the Annual Meeting. You may attend and participate in the Annual Meeting by visiting the following website: [www.virtualshareholdermeeting.com/AYLA2021](http://www.virtualshareholdermeeting.com/AYLA2021). To attend and participate in the Annual Meeting, you will need the 16-digit control number included in your Internet Notice, on your proxy card or on the instructions that accompanied your proxy materials. If your shares are held in “street name,” you should contact your bank or broker to obtain your 16-digit control number or otherwise vote through the bank or broker. If you lose your 16-digit control number, you may join the Annual Meeting as a “Guest” but you will not be able to vote, ask questions or access the list of stockholders as of the Record Date. The meeting webcast will begin promptly at 10:00 a.m. Eastern time. We encourage you to access the meeting prior to the start time. Online check-in will begin at 9:55 a.m., Eastern time, and you should allow ample time for the check-in procedures.

### **What if a quorum is not present at the Annual Meeting?**

If a quorum is not present at the scheduled time of the Annual Meeting, the Chairperson of the Annual Meeting is authorized by our Amended and Restated Bylaws to adjourn the meeting, without the vote of stockholders.

### **What does it mean if I receive more than one Internet Notice or more than one set of proxy materials?**

It means that your shares are held in more than one account at the transfer agent and/or with banks or brokers. Please vote all of your shares. To ensure that all of your shares are voted, for each Internet Notice or set of proxy materials, please submit your proxy by phone, via the Internet, or, if you received printed copies of the proxy materials, by signing, dating and returning the enclosed proxy card in the enclosed envelope.

### **How do I vote?**

*Stockholders of Record.* If you are a stockholder of record, you may vote:

- by Internet—You can vote over the Internet at [www.proxyvote.com](http://www.proxyvote.com) by following the instructions on the Internet Notice or proxy card;
- by Telephone—You can vote by telephone by calling 1-800-690-6903 and following the instructions on the proxy card;
- by Mail—You can vote by mail by signing, dating and mailing the proxy card, which you may have received by mail; or
- Electronically at the Meeting—If you attend the meeting online, you will need the 16-digit control number included in your Internet Notice, on your proxy card or on the instructions that accompanied your proxy materials to vote electronically during the meeting.

Internet and telephone voting facilities for stockholders of record will be available 24 hours a day and will close at 11:59 p.m., Eastern time, on June 9, 2021. To participate in the Annual Meeting, including to vote via the Internet or telephone, you will need the 16-digit control number included on your Internet Notice, on your proxy card or on the instructions that accompanied your proxy materials.

Whether or not you expect to attend the Annual Meeting online, we urge you to vote your shares as promptly as possible to ensure your representation and the presence of a quorum at the Annual Meeting. If you submit your proxy, you may still decide to attend the Annual Meeting and vote your shares electronically.

*Beneficial Owners of Shares Held in “Street Name.”* If your shares are held in “street name” through a bank or broker, you will receive instructions on how to vote from the bank or broker. You must follow their instructions in order for your shares to be voted. Internet and telephone voting also may be offered to stockholders owning shares through certain banks and brokers. If your shares are not registered in your own name and you would like to vote your shares online at the Annual Meeting, you should contact your bank or broker to obtain your 16-digit control number or otherwise vote through the bank or broker. If you lose your 16-digit control number, you may join the Annual Meeting as a “Guest” but you will not be able to vote, ask questions or access the list of stockholders as of the Record Date. You will need to obtain your own Internet access if you choose to attend the Annual Meeting online and/or vote over the Internet.

### **Can I change my vote after I submit my proxy?**

Yes.

If you are a registered stockholder, you may revoke your proxy and change your vote:

- by submitting a duly executed proxy bearing a later date;
- by granting a subsequent proxy through the Internet or telephone;
- by giving written notice of revocation to the Secretary of Ayala prior to or at the Annual Meeting; or
- by voting online at the Annual Meeting.

Your most recent proxy card or Internet or telephone proxy is the one that is counted. Your attendance at the Annual Meeting by itself will not revoke your proxy unless you give written notice of revocation to the Secretary before your proxy is voted or you vote online at the Annual Meeting.

## [Table of Contents](#)

If your shares are held in street name, you may change or revoke your voting instructions by following the specific directions provided to you by your bank or broker, or you may vote online at the Annual Meeting using your 16-digit control number or otherwise voting through your bank or broker.

Who will count the votes?

A representative of Broadridge Financial Solutions, Inc., our inspector of election, will tabulate and certify the votes.

### **What if I do not specify how my shares are to be voted?**

If you submit a proxy but do not indicate any voting instructions, the persons named as proxies will vote in accordance with the recommendations of the Board of Directors. The Board of Directors' recommendations are indicated on page 2 of this proxy statement, as well as with the description of each proposal in this proxy statement.

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

We know of no other business that will be presented at the Annual Meeting. If any other matter properly comes before the stockholders for a vote at the Annual Meeting, however, the proxy holders named on the Company's proxy card will vote your shares in accordance with their best judgment.

### **Why hold a virtual meeting?**

As part of our effort to maintain a safe and healthy environment for our directors, members of management and stockholders who wish to attend the Annual Meeting, in light of COVID-19, we believe that hosting a virtual meeting this year is in the best interest of the Company and its stockholders. A virtual meeting also enables increased stockholder attendance and participation because stockholders can participate from any location around the world. You will be able to attend the Annual Meeting online and submit your questions by visiting [www.virtualshareholdermeeting.com/AYLA2021](http://www.virtualshareholdermeeting.com/AYLA2021). You also will be able to vote your shares electronically at the Annual Meeting by following the instructions above.

### **What if during the check-in time or during the Annual Meeting I have technical difficulties or trouble accessing the virtual meeting website?**

We will have technicians ready to assist you with any technical difficulties you may have accessing the virtual meeting website, and the information for assistance will be located on [www.virtualshareholdermeeting.com/AYLA2021](http://www.virtualshareholdermeeting.com/AYLA2021).

### **Will there be a question and answer session during the Annual Meeting?**

As part of the Annual Meeting, we will hold a live Q&A session, during which we intend to answer appropriate questions submitted by stockholders during the meeting that are pertinent to the Company and the meeting matters. The Company will endeavor to answer as many questions submitted by stockholders as time permits. Only stockholders that have accessed the Annual Meeting as a stockholder (rather than a "Guest") by following the procedures outlined above in "Who can attend and vote at the Annual Meeting?" will be permitted to submit questions during the Annual Meeting. Each stockholder is limited to no more than two questions. Questions should be succinct and only cover a single topic. We will not address questions that are, among other things:

- irrelevant to the business of the Company or to the business of the Annual Meeting;
- related to material non-public information of the Company, including the status or results of our business since our last Quarterly Report on Form 10-Q;
- related to any pending, threatened or ongoing litigation;

## [Table of Contents](#)

- related to personal grievances;
- derogatory references to individuals or that are otherwise in bad taste;
- substantially repetitious of questions already made by another stockholder;
- in excess of the two question limit;
- in furtherance of the stockholder’s personal or business interests; or
- out of order or not otherwise suitable for the conduct of the Annual Meeting as determined by the Chair or Secretary in their reasonable judgment.

Additional information regarding the Q&A session will be available in the “Rules of Conduct” available on the Annual Meeting webpage for stockholders that have accessed the Annual Meeting as a stockholder (rather than a “Guest”) by following the procedures outlined above in “Who can attend and vote at the Annual Meeting?”.

### **How many votes are required for the approval of the proposals to be voted upon and how will abstentions and broker non-votes be treated?**

<u>Proposal</u>	<u>Votes required</u>	<u>Effect of Votes Withheld / Abstentions and Broker Non-Votes</u>
Proposal 1: Election of Directors	The plurality of the votes cast. This means that the two nominees receiving the highest number of affirmative “FOR” votes will be elected as Class I Directors.	Votes withheld and broker non-votes will have no effect.
Proposal 2: Ratification of Appointment of Independent Registered Public Accounting Firm	The affirmative vote of the holders of a majority in voting power of the votes cast affirmatively or negatively.	Abstentions will have no effect. We do not expect any broker non-votes on this proposal.

### **What is a “vote withheld” and an “abstention” and how will votes withheld and abstentions be treated?**

A “vote withheld,” in the case of the proposal regarding the election of directors, or an “abstention,” in the case of the proposal regarding the ratification of the appointment of Kost Forer, as our independent registered public accounting firm, represents a stockholder’s affirmative choice to decline to vote on a proposal. Votes withheld and abstentions are counted as present and entitled to vote for purposes of determining a quorum. Votes withheld have no effect on the election of directors. Abstentions have no effect on the ratification of the appointment of Kost Forer.

### **What are broker non-votes and do they count for determining a quorum?**

Generally, broker non-votes occur when shares held by a broker in “street name” for a beneficial owner are not voted with respect to a particular proposal because the broker (1) has not received voting instructions from the beneficial owner and (2) lacks discretionary voting power to vote those shares. A broker is entitled to vote shares held for a beneficial owner on routine matters, such as the ratification of the appointment of Kost Forer, as our independent registered public accounting firm, without instructions from the beneficial owner of those shares. On the other hand, absent instructions from the beneficial owner of such shares, a broker is not entitled to vote shares held for a beneficial owner on non-routine matters, such as the election of directors. Broker non-votes count for purposes of determining whether a quorum is present.

### **Where can I find the voting results of the Annual Meeting?**

We plan to announce preliminary voting results at the Annual Meeting and we will report the final results in a Current Report on Form 8-K, which we intend to file with the SEC after the Annual Meeting.

## PROPOSALS TO BE VOTED ON

### **Proposal 1: Election of Directors**

We currently have six (6) directors on our Board. At the Annual Meeting, two (2) Class I Directors, Murray A. Goldberg and Robert Spiegel, M.D., FACP, are to be elected to hold office until the Annual Meeting of Stockholders to be held in 2024 and until each such director's respective successor is elected and qualified or until each such director's earlier death, resignation or removal.

The proposal regarding the election of directors requires the approval of a plurality of the votes cast. This means that the two nominees receiving the highest number of affirmative "FOR" votes will be elected as Class I Directors. Votes withheld and broker non-votes are not considered to be votes cast and, accordingly, will have no effect on the outcome of the vote on this proposal.

As set forth in our Restated Certificate of Incorporation, the Board of Directors is currently divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. The current class structure is as follows: Class I, whose term currently expires at the 2021 Annual Meeting of Stockholders and whose subsequent term will expire at the 2024 Annual Meeting of Stockholders; Class II, whose term will expire at the 2022 Annual Meeting of Stockholders and whose subsequent term will expire at the 2025 Annual Meeting of Stockholders; and Class III, whose term will expire at the 2023 Annual Meeting of Stockholders and whose subsequent term will expire at the 2026 Annual Meeting of Stockholders. The current Class I Directors are Murray A. Goldberg and Robert Spiegel, M.D., FACP; the current Class II Directors are Roni Mamluk, Ph.D. and Todd Sone; and the current Class III Directors are Vered Bisker-Leib, Ph.D., M.B.A and David Sidransky, M.D.

Our Restated Certificate of Incorporation and Amended and Restated Bylaws provide that the authorized number of directors may be changed from time to time by the Board of Directors. 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. 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 our Company. Our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds of our outstanding voting stock entitled to vote in the election of directors.

If you submit a proxy but do not indicate any voting instructions, the persons named as proxies will vote the shares of common stock represented thereby for the election as a Class I Director of the person whose name and biography appears below. In the event that either of Mr. Goldberg or Dr. Spiegel should become unable to serve, or for good cause will not serve, as a director, it is intended that votes will be cast for a substitute nominee designated by the Board of Directors or the Board may elect to reduce its size. The Board of Directors has no reason to believe that either of Mr. Goldberg or Dr. Spiegel will be unable to serve if elected. Each of Mr. Goldberg and Dr. Spiegel has consented to being named in this proxy statement and to serve if elected.

### **Vote required**

The proposal regarding the election of directors requires the approval of a plurality of the votes cast. This means that the nominees receiving the highest number of affirmative "FOR" votes will be elected as Class I Directors.

Votes withheld and broker non-votes are not considered to be votes cast and, accordingly, will have no effect on the outcome of the vote on this proposal.

## Recommendation of the Board of Directors



The Board of Directors unanimously recommends a vote FOR the election of each of the below Class I Director nominees.

### Nominees For Class I Director (terms to expire at the 2024 Annual Meeting)

The current members of the Board of Directors who are also nominees for election to the Board of Directors as Class I Directors are as follows:

<u>Name</u>	<u>Age</u>	<u>Served as a Director Since</u>	<u>Position with Ayala</u>
Murray A. Goldberg	76	2017	Director
Robert Spiegel, M.D., FACP	71	2017	Director

The principal occupations and business experience, for at least the past five years, of each Class I Director nominee for election at the 2021 Annual Meeting are as follows:

#### ***Murray A. Goldberg***

Murray A. Goldberg has served as a member of our board of directors since December 2017. Mr. Goldberg held various management positions at Regeneron Pharmaceuticals, Inc., a biopharmaceutical company, from March 1995 to March 2015, including as Senior Vice President of Administration and Assistant Secretary from October 2013 to March 2015, as Chief Financial Officer and Senior Vice President, Finance and Administration and Assistant Secretary from March 1995 to October 2013 and as Treasurer from March 1995 to October 2012. Mr. Goldberg previously served on the boards of directors of Aerie Pharmaceuticals Inc., a biopharmaceutical company, from August 2013 to June 2020, where he also served as the chairman of its audit committee, and Teva Pharmaceuticals Industries Ltd. from July 2017 to June 2020. Mr. Goldberg received a B.S. in Engineering from New York University, a Master's degree in International Economics from the London School of Economics and an M.B.A. from the University of Chicago. We believe that Mr. Goldberg is qualified to serve on our board of directors because of his broad financial, operational and transactional experience in the industry.

#### ***Robert Spiegel, M.D., FACP***

Robert Spiegel, M.D., FACP has served as a member of our board of directors since December 2017. Since 2012, Dr. Spiegel has served as an Associate Professor at the Weill Cornell Medical School. In addition, Dr. Spiegel has served as a Senior Advisor to Warburg Pincus, a private equity firm, and an Advisor to the Israel Biotech Fund, a venture investment fund since 2010 and 2016, respectively. Prior to these positions, Dr. Spiegel served as Chief Medical Officer of PTC Therapeutics, Inc., a biopharmaceutical company, from March 2011 to April 2016. Prior to his time at PTC Therapeutics, Dr. Spiegel held various management positions at Schering-Plough Corporation, a global healthcare company, including as Chief Medical Officer and Senior Vice President of the Schering-Plough Research Institute, the pharmaceutical research arm of the Schering-Plough Corporation from 1998 to 2009. Dr. Spiegel is currently a member of the board of directors of Geron Corporation and Cyclacel Pharmaceuticals, Inc., biopharmaceutical company, since 2010 and 2018, respectively. Dr. Spiegel has previously served as a member of the board of directors for Sucampo Pharmaceuticals, Inc., a biopharmaceutical company, Edge Therapeutics, Inc., a biotechnology company, Avior Computing Corporation, a privately-held governance risk and compliance process technology company, Talon Therapeutics, Inc., a biopharmaceutical company, Capstone Therapeutics Corp., a biotechnology company, the Cancer Institute of New Jersey and Cancer Care New Jersey. Dr. Spiegel received a B.A. in 1971 from Yale University and an M.D. from the University of Pennsylvania in 1975. Following his residency in internal medicine, Dr. Spiegel completed a fellowship in medical oncology at the National Cancer Institute. We believe that Dr. Spiegel's extensive medical and scientific knowledge as well as his experience in the life science industry qualifies him to serve on our board of directors.

## [Table of Contents](#)

### **Continuing members of the Board of Directors:**

#### **Class II Directors (terms to expire at the 2022 Annual Meeting)**

The current members of the Board of Directors who are Class II Directors are as follows:

<u>Name</u>	<u>Age</u>	<u>Served as a Director Since</u>	<u>Position with Ayala</u>
Roni Mamluk, Ph.D	54	2017	President, Chief Executive Officer and Director
Todd Sone	50	2018	Director

The principal occupations and business experience, for at least the past five years, of each Class II Director are as follows:

#### ***Roni Mamluk, Ph.D.***

Roni Mamluk, Ph.D. has served as our President and Chief Executive Officer and a member of our board of directors since November 2017. Prior to joining us, Dr. Mamluk held various management positions at Chiasma, Inc., a biopharmaceutical company, including as Chief Executive Officer from April 2013 to March 2015 and has served as a member of its board of directors since June 2017. Prior to her time at Chiasma, Dr. Mamluk was the head of preclinical development of an oncology product at Adnexus Therapeutics Inc., a biopharmaceutical company, from April 2004 to June 2006. Dr. Mamluk received a B.Sc. in Animal Sciences from Hebrew University of Jerusalem and a Ph.D. in Biology of Reproduction from the Hebrew University of Jerusalem, where she graduated summa cum laude. Dr. Mamluk also held a postdoctoral fellowship in angiogenesis at Harvard Medical School. We believe that Dr. Mamluk's extensive scientific knowledge, experience with our company and experience serving on a public company board of directors qualifies her to serve on our board of directors.

#### ***Todd Sone***

Todd Sone has served as a member of our board of directors since April 2018. Since December 2017, Mr. Sone has served as a partner at aMoon 2 Fund Limited Partnership, a healthtech and life-science venture capital firm. Prior to his time at aMoon, Mr. Sone served as a Managing Director at Signet Healthcare Partners, an investment fund that provides growth capital to commercial-stage life-science companies, from December 2009 to December 2017. Mr. Sone currently serves on the boards of directors of several private companies, including Biologic Design Ltd., Theranica Bio-Electronics Ltd., MOBILion Systems, Inc., and SMART Medical Systems Ltd., and previously served on the board of directors of Apicore US LLC. Mr. Sone received a B.Com (with High Distinction) from the University of Toronto and an M.B.A. from The Wharton School at the University of Pennsylvania with concentrations in healthcare management and finance. We believe that Mr. Sone's extensive experience in the life-science industry qualifies him to serve on our board of directors.

#### **Class III Directors (terms to expire at the 2023 Annual Meeting)**

The current members of the Board of Directors who are Class III Directors are as follows:

<u>Name</u>	<u>Age</u>	<u>Served as a Director Since</u>	<u>Position with Ayala</u>
Vered Bisker-Leib, Ph.D., M.B.A.	50	2020	Director
David Sidransky, M.D	60	2017	Chairman of the Board

The principal occupations and business experience, for at least the past five years, of each Class III Director are as follows:

#### ***Vered Bisker-Leib, Ph.D., M.B.A.***

Vered Bisker-Leib, Ph.D., M.B.A. has served as a member of our board of directors since August 2020. Dr. Bisker-Leib is the President and Chief Operating Officer of Compass Therapeutics, Inc. where she has been a

## [Table of Contents](#)

member of the executive leadership team since November 2017. Prior to Compass, Dr. Bisker-Leib advised Atlas Venture portfolio companies as an entrepreneur-in-residence from November 2016 to November 2017. Previously, as the Chief Business Officer of Cydan Development, Inc. from October 2014 to October 2016, Dr. Bisker-Leib founded biotech companies focused on therapies addressing rare diseases, including Imara Inc. Dr. Bisker-Leib was a member of Bristol-Myers Squibb's strategic transactions group where she assumed roles of increasing responsibility across five therapeutic areas, most recently as an Executive Director and Global Head of business development for the cardiovascular and metabolic franchises. Dr. Bisker-Leib received a Ph.D. in Chemical Engineering and an M.B.A from the University of Massachusetts, Amherst. Dr. Bisker-Leib has a B.Sc. in Chemical Engineering from the Israel Institute of Technology, Haifa. We believe that Dr. Bisker-Leib's extensive experience in the life-science industry qualifies her to serve on our board of directors.

### ***David Sidransky, M.D.***

David Sidransky, M.D. has served as the chairman of our board of directors since November 2017. Since July 1994, Dr. Sidransky has been the Director of the Head and Neck Cancer Research Division at Johns Hopkins University School of Medicine's Department of Otolaryngology and Professor of Oncology, Cellular & Molecular Medicine, Urology, Genetics, and Pathology at the John Hopkins University School of Medicine. Dr. Sidransky currently serves on the board of directors of Galmed Pharmaceuticals Ltd., a biopharmaceutical company, Orgenesis Inc., a pharmaceutical manufacturing company and Champions Oncology, Inc., a biopharmaceutical company, and is the chairman of the board of directors of Advaxis, Inc., a biotechnology company. He also serves on the board of directors of Biond Biologics Ltd., a private biotechnology company. Previously, Dr. Sidransky served on the board of directors of Akari Therapeutics plc, a biopharmaceutical company, and Rosetta Genomics Ltd., a molecular diagnostics company. In addition, Dr. Sidransky served as Director of the American Association for Cancer Research (AACR) from 2005 to 2008. Dr. Sidransky received a B.S. in Chemistry from Brandeis University and an M.D. from Baylor College of Medicine where he also completed his residency in Internal Medicine. We believe that Dr. Sidransky's pioneering academic work, extensive medical and scientific knowledge and experience serving on public company boards of directors qualify him to serve on our board of directors.

### **Proposal 2: Ratification of Appointment of Independent Registered Public Accounting Firm**

Our Audit Committee has appointed Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global ("Kost Forer"), as our independent registered public accounting firm for the fiscal year ending December 31, 2021. Our Board has directed that this appointment be submitted to our stockholders for ratification at the Annual Meeting. Although ratification of our appointment of Kost Forer is not required, we value the opinions of our stockholders and believe that stockholder ratification of our appointment is a good corporate governance practice.

Kost Forer also served as our independent registered public accounting firm for the fiscal year ended December 31, 2020. Neither the accounting firm nor any of its members has any direct or indirect financial interest in or any connection with us in any capacity other than as our auditors, providing audit and non-audit related services. We do not expect a representative of Kost Forer to attend the 2021 Annual Meeting.

In the event that the appointment of Kost Forer is not ratified by the stockholders, the Audit Committee will consider this fact when it appoints the independent auditors for the fiscal year ending December 31, 2022. Even if the appointment of Kost Forer is ratified, the Audit Committee retains the discretion to appoint a different independent auditor at any time if it determines that such a change is in the interest of the Company.

### **Vote Required**

This proposal requires the affirmative vote of the holders of a majority in voting power of the votes cast affirmatively or negatively. Abstentions are not considered to be votes cast and, accordingly, will have no effect on



the outcome of the vote on this proposal. Because brokers have discretionary authority to vote on the ratification of the appointment of Kost Forer, we do not expect any broker non-votes in connection with this proposal.

**Recommendation of the Board of Directors**



**The Board of Directors unanimously recommends a vote FOR the Ratification of the Appointment of Kost Forer as our Independent Registered Public Accounting Firm for the fiscal year ending December 31, 2021.**

## REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Audit Committee has reviewed the audited consolidated financial statements of the Company for the fiscal year ended December 31, 2020 and has discussed these financial statements with management and the Company's independent registered public accounting firm. The Audit Committee has also received from, and discussed with, the Company's independent registered public accounting firm the matters that they are required to provide to the Audit Committee, including the matters required to be discussed by the Public Company Accounting Oversight Board ("PCAOB") and the SEC.

The Company's independent registered public accounting firm also provided the Audit Committee with a formal written statement required by PCAOB Rule 3526 (Communications with Audit Committees Concerning Independence) describing all relationships between the independent registered public accounting firm and the Company, including the disclosures required by the applicable requirements of the PCAOB regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence. In addition, the Audit Committee discussed with the independent registered public accounting firm its independence from the Company.

Based on its discussions with management and the independent registered public accounting firm, and its review of the representations and information provided by management and the independent registered public accounting firm, the Audit Committee recommended to the Board of Directors that the audited consolidated financial statements be included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2020.

Murray Goldberg (Chair)

Todd Sone

Vered Bisker-Leib, Ph.D., MBA

## INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FEES AND OTHER MATTERS

The following table summarizes the fees of Kost Forer, our independent registered public accounting firm, billed to us for each of the last two fiscal years for audit services and billed to us in each of the last two fiscal years for other services:

<b>Fee Category</b>	<b>2020</b>	<b>2019</b>
Audit Fees	\$280,000	\$400,000
Audit-Related Fees	—	—
Tax Fees	10,000	36,000
All Other Fees	—	—
<b>Total Fees</b>	<b>\$290,000</b>	<b>\$436,000</b>

### Audit Fees

Audit fees for the fiscal year ended December 31, 2019 includes fees in connection with the IPO. Audit fees for the fiscal year ended December 31, 2020 include fees in connection with the audit of our consolidated financial statements and the review of the unaudited interim financial statements included in our quarterly reports on Form 10-Q.

### Audit-Related Fees

There were no such fees incurred in 2020 or 2019.

### Tax Fees

Tax fees consist of fees for tax compliance services.

### All Other Fees

There were no such fees incurred in 2020 or 2019.

### Audit Committee Pre-Approval Policy and Procedures

The Audit Committee has adopted a policy (the “Pre-Approval Policy”) that sets forth the procedures and conditions pursuant to which audit and non-audit services proposed to be performed by the independent auditor may be pre-approved. The Pre-Approval Policy generally provides that we will not engage Kost Forer to render any audit, audit-related, tax or permissible non-audit service unless the service is either (i) explicitly approved by the Audit Committee (“specific pre-approval”) or (ii) entered into pursuant to the pre-approval policies and procedures described in the Pre-Approval Policy (“general pre-approval”). Unless a type of service to be provided by Kost Forer has received general pre-approval under the Pre-Approval Policy, it requires specific pre-approval by the Audit Committee or by a designated member of the Audit Committee to whom the committee has delegated the authority to grant pre-approvals. Any proposed services exceeding pre-approved cost levels or budgeted amounts will also require specific pre-approval. For both types of pre-approval, the Audit Committee will consider whether such services are consistent with the SEC’s rules on auditor independence. The Audit Committee will also consider whether the independent auditor is best positioned to provide the most effective and efficient service, for reasons such as its familiarity with the Company’s business, people, culture, accounting systems, risk profile and other factors, and whether the service might enhance the Company’s ability to manage or control risk or improve audit quality. All such factors will be considered as a whole, and no one factor should necessarily be determinative. On a periodic basis, the Audit Committee reviews and generally pre-approves the services (and related fee levels or budgeted amounts) that may be provided by Kost Forer without first obtaining specific pre-approval from the Audit Committee. The Audit Committee may revise the list of general pre-approved services from time to time, based on subsequent determinations.

## EXECUTIVE OFFICERS

The following table identifies our current executive officers:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Roni Mamluk, Ph.D. (1)	54	President, Chief Executive Officer and Director
Yossi Maimon, CPA, M.B.A. (2)	50	Chief Financial Officer, Secretary and Treasurer
Gary Gordon, M.D., Ph.D. (3)	69	Chief Medical Officer

- (1) See biography on page 9 of this proxy statement.
- (2) Yossi Maimon, CPA, M.B.A. has served as our Chief Financial Officer since March 2019. Prior to joining us, Mr. Maimon served as Chief Financial Officer at Protalix BioTherapeutics Inc., a biopharmaceutical company, from October 2006 to July 2019. Prior to his time at Protalix, Mr. Maimon served as Chief Financial Officer of ColBar LifeScience Ltd., a medical device company, from 2002 to 2006. Mr. Maimon received a B.A. in Accounting from the City University of New York and an M.B.A. from Tel Aviv University. Mr. Maimon is licensed as a Certified Public Accountant in New York and Israel.
- (3) Gary Gordon, M.D., Ph.D. has served as our Chief Medical Officer since August 2019. Prior to joining us, Dr. Gordon served as Vice President of Oncology Development at AbbVie Inc., a biopharmaceutical company, from January 2013 to April 2018. Prior to his time at AbbVie, Dr. Gordon served as Divisional Vice President of Global Oncology Development at Abbott Laboratories, a medical device company, from April 2003 to December 2012. Prior to his time at Abbott, Dr. Gordon served as Chief Scientific Officer and Vice President of Clinical Affairs at Ovation Pharmaceuticals Inc., a biopharmaceutical company, from May 2001 to April 2003. Dr. Gordon received a B.S. in Biochemistry from the State University of New York at Stony Brook and a Ph.D. in Pharmacology and an M.D. from Johns Hopkins University School of Medicine.

## CORPORATE GOVERNANCE

### General

Our Board of Directors has adopted Corporate Governance Guidelines, a Code of Business Conduct and Ethics, and charters for our Nominating and Corporate Governance Committee, Audit Committee and Compensation Committee to assist the Board in the exercise of its responsibilities and to serve as a framework for the effective governance of the Company. You can access our current committee charters and our Code of Business Conduct and Ethics under “Documents & Charters” in the “Corporate Governance” section of the “Investors” page of our website located at [ir.ayalapharma.com](http://ir.ayalapharma.com), or by writing to our Secretary at our offices at Oppenheimer 4, Rehovot 7670104, Israel.

### Board Composition

Our Board of Directors currently consists of six members: Vered Bisker-Leib, Ph.D., M.B.A., Murray A. Goldberg, Roni Mamluk, Ph.D., David Sidransky, M.D., Robert Spiegel, M.D., FACP and Todd Sone. As set forth in our Restated Certificate of Incorporation, the Board of Directors is currently divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our Restated Certificate of Incorporation and Amended and Restated Bylaws provide that the authorized number of directors may be changed only by resolution of the Board of Directors. 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. 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 our Company. Our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of our capital stock entitled to vote in the election of directors.

### Director Independence

Vered Bisker-Leib, Ph.D., M.B.A., Murray A. Goldberg, David Sidransky, M.D., Robert Spiegel, M.D., FACP and Todd Sone each qualify as “independent” in accordance with the listing requirements of Nasdaq. The Nasdaq independence definition includes a series of objective tests, including that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of his family members has engaged in various types of business dealings with us. In addition, as required by Nasdaq rules, our Board of Directors has made a subjective determination as to each independent director that no relationships exist, which, in the opinion of our Board of Directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In making these determinations, our Board of Directors reviewed and discussed information provided by the directors and us with regard to each director’s business and personal activities and relationships as they may relate to us and our management. Based on her employment with the Company, Roni Mamluk, Ph.D. does not qualify as independent under the Nasdaq Rules. There are no family relationships among any of our directors or executive officers.

### Stockholders Agreement

We entered into an Amended and Restated Stockholders Agreement by and among us and certain of our stockholders, pursuant to which the following directors were elected to serve as members on our board of directors and continue to so serve: Dr. Robert Spiegel, Mr. Murray Goldberg, Dr. David Sidransky, Mr. Todd Sone, and Roni Mamluk, Ph.D. Roni Mamluk, Ph.D. was selected to serve on our board of directors in her capacity as our Chief Executive Officer. Dr. Sidransky was initially selected to serve on our board of directors as a representative of holders of our preferred stock, as designated by Israel Biotech Fund I, L.P. Mr. Goldberg and Dr. Spiegel were initially selected to serve on our board of directors as industry expert directors, as designated by

## [Table of Contents](#)

Israel Biotech Fund I, L.P. Mr. Sone was initially selected to serve on our board of directors as representative of holders of our preferred stock, as designated by aMoon 2 Fund Limited Partnership. The stockholders agreement terminated immediately prior to the consummation of our initial public offering.

### **Director Candidates**

The Nominating and Corporate Governance Committee is primarily responsible for searching for qualified director candidates for election to the Board and filling vacancies on the Board. To facilitate the search process, the Nominating and Corporate Governance Committee may solicit current directors and executives of the Company for the names of potentially qualified candidates or ask directors and executives to pursue their own business contacts for the names of potentially qualified candidates. The Nominating and Corporate Governance Committee may also retain search firms to assist in the search for qualified candidates, or consider director candidates recommended by our stockholders. Once potential candidates are identified, the Nominating and Corporate Governance Committee reviews the backgrounds of those candidates, evaluates candidates' independence from the Company and potential conflicts of interest and determines if candidates meet the qualifications desired by the Nominating and Corporate Governance Committee for candidates for election as a director.

In evaluating the suitability of individual candidates (both new candidates and current Board members), the Nominating and Corporate Governance Committee, in recommending candidates for election, and the Board, in approving (and, in the case of vacancies, appointing) such candidates, may take into account many factors, including: personal and professional integrity, ethics and values; experience in corporate management, such as serving as an officer or former officer of a publicly held company; strong finance experience; relevant social policy concerns; experience relevant to the Company's industry; experience as a board member or executive officer of another publicly held company; relevant academic expertise or other proficiency in an area of the Company's operations; diversity of expertise and experience in substantive matters pertaining to the Company's business relative to other board members; diversity of background and perspective, including, but not limited to, with respect to age, gender, race, place of residence and specialized experience; practical and mature business judgment, including, but not limited to, the ability to make independent analytical inquiries; and any other relevant qualifications, attributes or skills. The Board evaluates each individual in the context of the Board as a whole, with the objective of assembling a group that can best perpetuate the success of the business and represent stockholder interests through the exercise of sound judgment using its diversity of experience in these various areas. In determining whether to recommend a director for re-election, the Nominating and Corporate Governance Committee may also consider the director's past attendance at meetings and participation in and contributions to the activities of the Board.

Stockholders may recommend individuals to the Nominating and Corporate Governance Committee for consideration as potential director candidates by submitting the names of the recommended individuals, together with appropriate biographical information and background materials, to the Nominating and Corporate Governance Committee, c/o Secretary, Ayala Pharmaceuticals, Inc., Oppenheimer 4, Rehovot 7670104, Israel. In the event there is a vacancy, and assuming that appropriate biographical and background material has been provided on a timely basis, the Nominating and Corporate Governance Committee will evaluate stockholder-recommended candidates by following substantially the same process, and applying substantially the same criteria, as it follows for candidates submitted by others.

### **Communications from Stockholders**

The Board will give appropriate attention to written communications that are submitted by stockholders, and will respond if and as appropriate. Our Secretary is primarily responsible for monitoring communications from stockholders and for providing copies or summaries to the directors as he considers appropriate.

Communications are forwarded to all directors if they relate to important substantive matters and include suggestions or comments that our Secretary and Chairman of the Board consider to be important for the directors

to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we tend to receive repetitive or duplicative communications. Stockholders who wish to send communications on any topic to the Board should address such communications to the Board of Directors in writing: c/o Secretary, Ayala Pharmaceuticals, Inc., Oppenheimer 4, Rehovot 7670104, Israel.

### **Board Leadership Structure and Role in Risk Oversight**

Our Amended and Restated Bylaws and Corporate Governance Guidelines provide our Board of Directors with flexibility to combine or separate the positions of Chairman of the Board and Chief Executive Officer in accordance with its determination that utilizing one or the other structure would be in the best interests of our Company. We currently have an independent Chairman of the Board and, with the exception of Dr. Mamluk, our Board is comprised of independent directors. Our Board believes that separation of the positions of Chairman and Chief Executive Officer reinforces the independence of the Board from management, creates an environment that encourages objective oversight of management's performance and enhances the effectiveness of the Board as a whole. For these reasons, our Board of Directors has concluded that our current leadership structure is appropriate at this time.

However, our Board of Directors will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate. If, in the future, the Chairman of the Board is a member of management or does not otherwise qualify as independent, our Corporate Governance Guidelines provide for the appointment by the independent directors of a Lead Director. The Lead Director's responsibilities would include, but would not be limited to, presiding over all meetings of the Board of Directors at which the Chairman of the Board is not present, including any executive sessions of the independent directors, approving the Board's meeting schedules and agendas, and acting as liaison between the independent directors of the Board and the Chief Executive Officer and the Chairman of the Board.

Risk assessment and oversight are an integral part of our governance and management processes. Our Board of Directors encourages management to promote a culture that incorporates risk management into our corporate strategy and day-to-day business operations. Management discusses strategic and operational risks at regular management meetings and conducts specific strategic planning and review sessions during the year that include a focused discussion and analysis of the risks facing us. Throughout the year, senior management reviews these risks with the Board of Directors at regular Board meetings as part of management presentations that focus on particular business functions, operations or strategies, and presents the steps taken by management to mitigate or eliminate such risks. 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 the 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, including business continuity risks, such as risks relating to the COVID-19 pandemic, and our Audit Committee is responsible for overseeing our major financial and cybersecurity risk exposures and the steps our management has taken to monitor and control these exposures. The Audit Committee also monitors compliance with legal and regulatory requirements and considers and approves or disapproves any related person transactions. Our Nominating and Corporate Governance Committee monitors the effectiveness of the Corporate Governance Guidelines. Our Compensation Committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking. The Board does not believe that its role in the oversight of our risks affects the Board's leadership structure.

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

We have a written Code of Business Conduct and Ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. We have posted a current copy of the Code of Business Conduct and

---

## [Table of Contents](#)

Ethics on our website, [ir.ayalapharma.com](http://ir.ayalapharma.com), in the “Investors” section under “Corporate Governance” in “Documents & Charters.” In addition, we intend to post on our website all disclosures that are required by law or the rules of Nasdaq concerning any amendments to, or waivers from, any provision of the Code of Business Conduct and Ethics.

### **Anti-Hedging Policy**

Our Board of Directors has adopted an Insider Trading Compliance Policy, which applies to all of our directors, officers and employees. The policy prohibits our directors, officers and employees and any entities they control from purchasing financial instruments such as prepaid variable forward contracts, equity swaps, collars, and exchange funds, or otherwise engaging in transactions that hedge or offset, or are designed to hedge or offset, any decrease in the market value of the Company’s equity securities, or that may cause an officer, director, or employee to no longer have the same objectives as the Company’s other stockholders.

### **Attendance by Members of the Board of Directors at Meetings**

There were nine meetings of the Board of Directors during the fiscal year ended December 31, 2020. During the fiscal year ended December 31, 2020, each director attended at least 75% of the aggregate of (i) all meetings of the Board of Directors and (ii) all meetings of the committees on which the director served during the period in which he or she served as a director.

Under our Corporate Governance Guidelines, a director is expected to spend the time and effort necessary to properly discharge his or her responsibilities. Accordingly, a director is expected to regularly prepare for and attend meetings of the Board and all committees on which the director sits (including separate meetings of the independent directors), with the understanding that, on occasion, a director may be unable to attend a meeting. A director who is unable to attend a meeting of the Board or a committee of the Board is expected to notify the Chairman of the Board or the Chairman of the appropriate committee in advance of such meeting, and, whenever possible, participate in such meeting via teleconference in the case of an in-person meeting. We do not maintain a formal policy regarding director attendance at the Annual Meeting; however, it is expected that absent compelling circumstances directors will attend.



## COMMITTEES OF THE BOARD

Our Board has established three standing committees—Audit, Compensation and Nominating and Corporate Governance—each of which operates under a written charter that has been approved by our Board.

The members of each of the Board committees and committee Chairpersons are set forth in the following chart.

<u>Name</u>	<u>Audit</u>	<u>Compensation</u>	<u>Nominating and Corporate Governance</u>
Vered Bisker-Leib, Ph.D., M.B.A.	X	X	
Murray A. Goldberg	Chairperson		X
David Sidransky, M.D.		Chairperson	Chairperson
Todd Sone			X
Robert Spiegel, M.D., FACP	X	X	

### Audit Committee

Our Audit Committee’s responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
- overseeing the work of our independent registered public accounting firm, including through the receipt and consideration of reports from such firm;
- reviewing and discussing with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures;
- monitoring our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
- discussing our risk management policies;
- establishing policies regarding hiring employees from the independent registered public accounting firm and procedures for the receipt and retention of accounting related complaints and concerns;
- meeting independently with our internal auditing staff, if any, independent registered public accounting firm and management;
- reviewing and approving or ratifying any related person transactions;
- periodically reviewing our investment policy; and
- preparing the audit committee report required by the SEC rules (which is included on page 12 of this proxy statement).

The Audit Committee charter is available on our website at [ir.ayalapharma.com](http://ir.ayalapharma.com). The members of the Audit Committee are Dr. Bisker-Leib, Mr. Goldberg and Dr. Spiegel. Mr. Goldberg serves as the Chairperson of the committee. Our Board has affirmatively determined that each of Dr. Bisker-Leib, Mr. Goldberg Dr. Spiegel is independent for purposes of serving on an audit committee under Rule 10A-3 promulgated under the Exchange Act (“Rule 10A-3”) and the Nasdaq Rules, including those related to Audit Committee membership.

The members of our Audit Committee meet the requirements for financial literacy under the applicable Nasdaq rules. In addition, our Board of Directors has determined that Mr. Goldberg qualifies as an “audit committee financial expert,” as such term is defined in Item 407(d)(5) of Regulation S-K, and under the similar Nasdaq Rules requirement that the Audit Committee have a financially sophisticated member.

## [Table of Contents](#)

The Audit Committee met 5 times in 2020.

### **Compensation Committee**

Our Compensation Committee is responsible for assisting the Board in the discharge of its responsibilities relating to the compensation of our executive officers. In fulfilling its purpose, our Compensation Committee has the following principal duties:

- reviewing and approving, or recommending for approval by the Board, the compensation of our CEO and our other executive officers;
- overseeing and administering our cash and equity incentive plans;
- reviewing and making recommendations to the Board of Directors with respect to director compensation;
- reviewing and discussing annually with management our “Compensation Discussion and Analysis,” to the extent required;
- working with our Chief Executive Officer to evaluate our succession plans for the Chief Executive Officer and other executive officers; and
- preparing the annual compensation committee report, to the extent required by SEC rules.

The Compensation Committee generally considers the Chief Executive Officer’s recommendations when making decisions regarding the compensation of non-employee directors and executive officers (other than the Chief Executive Officer). Pursuant to the Compensation Committee’s charter, which is available on our website at [ir.ayalapharma.com](http://ir.ayalapharma.com), the Compensation Committee has the authority to retain or obtain the advice of compensation consultants, legal counsel and other advisors to assist in carrying out its responsibilities. In 2020, the Compensation Committee engaged Pearl Meyer, a compensation consulting firm, to assist in making decisions regarding the amount and types of compensation to provide our executive officers and non-employee directors. As part of this process, the Compensation Committee reviewed a compensation assessment provided by Pearl Meyer comparing our compensation to that of a group of peer companies within our industry and met with the compensation committee to discuss our executive and non-employee director compensation and to receive input and advice. Pearl Meyer reports directly to the Compensation Committee. The Compensation Committee has considered the adviser independence factors required under SEC rules as they relate to Pearl Meyer and has determined that Pearl Meyer’s work does not raise a conflict of interest.

The Compensation Committee may delegate its authority under its charter to one or more subcommittees as it deems appropriate from time to time. The Compensation Committee may also delegate to an officer the authority to grant equity awards to certain employees, as further described in its charter and subject to the terms of our equity plans.

The members of our Compensation Committee are Dr. Bisker-Leib, Dr. Sidransky and Dr. Spiegel. Dr. Sidransky serves as the Chairperson of the Compensation Committee. Each member of the Compensation Committee qualifies as an independent director under Nasdaq’s heightened independence standards for members of a compensation committee and as a “non-employee director” as defined in Rule 16b-3 of the Exchange Act.

The Compensation Committee met three times during 2020.

### **Nominating and Corporate Governance Committee**

Our Nominating and Corporate Governance Committee’s responsibilities include:

- identifying individuals qualified to become board members;

---

## [Table of Contents](#)

- recommending to the Board of Directors the persons to be nominated for election as directors and to each board committee;
- recommending to the Board the directors to be appointed to each committee of the Board;
- developing and recommending to the Board of Directors corporate governance guidelines; and
- overseeing a periodic evaluation of the Board of Directors.

The Nominating and Corporate Governance Committee charter is available on our website at [ir.ayalapharma.com](http://ir.ayalapharma.com). The members of our Nominating and Corporate Governance Committee are Dr. Sidransky, Mr. Goldberg and Mr. Sone. Dr. Sidransky serves as the Chairperson of the Nominating and Corporate Governance Committee. The Nominating and Corporate Governance Committee has the authority to consult with outside advisors or retain search firms to assist in the search for qualified candidates, or consider director candidates recommended by our stockholders.

The Nominating and Corporate Governance Committee met one time in 2020.

## EXECUTIVE AND DIRECTOR COMPENSATION

This section discusses the material components of the executive compensation program for our executive officers who are named in the “2020 Summary Compensation Table” below. In 2020, our “named executive officers” and their positions were as follows:

- Roni Mamluk, Ph.D., President and Chief Executive Officer;
- Yossi Maimon, CPA, M.B.A., Chief Financial Officer; and
- Gary Gordon, M.D., Ph.D., Chief Medical Officer.

### 2020 Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers for the years ended December 31, 2019 and 2020.

Name and Principal Position	Year	Salary \$(1)	Bonus (\$)	Stock Awards \$(5)	Option Awards \$(5)	Non-Equity Incentive Plan Compensation \$(6)	All Other Compensation (\$)	Total (\$)
Roni Mamluk, Ph.D. <i>President and Chief Executive Officer</i> (2)	2020	361,712	—	709,485	397,930	146,000	127,889 (7)	1,743,016
	2019	248,784	—	307,447	—	56,940	84,843	698,014
Yossi Maimon, C.P.A., M.B.A. <i>Chief Financial Officer</i> (3)	2020	288,288	144,144	170,280	—	116,364	143,386 (7)	862,462
	2019	217,103	—	—	357,776	74,571	78,278	727,728
Gary Gordon, M.D., Ph.D. <i>Chief Medical Officer</i> (4)	2020	375,000	—	—	—	150,000	25,311 (8)	550,311
	2019	156,250	70,000	—	447,751	53,151	43,861	771,013

- (1) Amounts reported for the named executive officer and paid in New Israeli Shekels are converted from New Israeli Shekels to U.S. dollars using an exchange rate of 3.33 New Israeli Shekels to 1 U.S. dollar.
- (2) Dr. Mamluk is based in Israel.
- (3) Mr. Maimon is based in Israel.
- (4) Dr. Gordon is based in the United States.
- (5) Amounts for 2020 reflect the full grant-date fair value of stock awards and stock options granted during the year computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named individual. We provide information regarding the assumptions used to calculate the value of all stock awards and option awards made to named executive officers in Note 9 to the consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2020.
- (6) Amounts reported for 2020 represent annual bonuses paid based upon the achievement of our corporate objectives for the year. Refer to “— Narrative Disclosure to Summary Compensation Table—2020 Bonuses” below for additional information.
- (7) Consists of contributions to Dr. Mamluk’s and Mr. Maimon’s severance funds, pension funds and educational funds, in each case, under Israeli law, and the use of a leased company car.
- (8) Amount represents matching 401(k) contributions, travel allowance, cell phone use and reimbursement of certain other items relating to Dr. Gordon’s use of a home office.

## Narrative Disclosure to Summary Compensation Table

The following describes material features of the compensation disclosed in the Summary Compensation Table.

### 2020 Salaries

The named executive officers receive a base salary to compensate them for services rendered to our company. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities. The 2020 annual base salaries for our named executive officers were as follows (converted to U.S. dollars based on the exchange rate of 3.33 New Israeli Shekels to 1 U.S. dollar for each of Dr. Mamluk and Mr. Maimon):

<u>Name</u>	<u>2020 Annual Base Salary (\$)</u>
Roni Mamluk	361,712
Yossi Maimon	288,288
Gary Gordon	375,000

### 2020 Bonuses

We offer our named executive officers the opportunity to earn annual performance bonuses to compensate them for attaining short-term corporate goals established by our board of directors. Our board of directors determines the amount of any annual performance bonus payment by multiplying the level of achievement of the applicable performance criteria by the named executive officer's target bonus percentage and the named executive officer's annual base salary. In addition, the board of directors retains discretion to adjust the bonus amounts upward or downward based on any factors that it determines are relevant. For 2020, performance bonuses were based on achieving certain clinical, development and corporate targets.

The 2020 target bonus amount for each of our named executive officers was 40% of the named executive officer's annual base salary. The actual annual cash bonuses awarded to each named executive officer for their 2020 performance are set forth above in the 2020 Summary Compensation Table in the column titled "Non-Equity Incentive Plan Compensation."

### Equity Compensation

We maintain the 2017 Stock Incentive Plan (the "2017 Plan") to facilitate the grant of equity incentives to directors, employees (including our named executive officers) and consultants of our company and certain of its affiliates and to enable our company and certain of its affiliates to obtain and retain services of these individuals, which is essential to our long-term success. Effective May 7, 2020, in connection with our initial public offering, we granted to Dr. Mamluk and Mr. Maimon certain equity awards under the 2017 Plan. In accordance with Dr. Mamluk's employment agreement, Dr. Mamluk was granted an option to purchase 47,299 shares with an exercise price equal to the initial public offering price of our common stock and 47,299 shares of restricted stock, each of which vests as to 25% of the underlying shares on the first anniversary of the effective grant date and an additional 6.25% of the underlying shares quarterly thereafter, provided that the award will vest in full upon a Merger/Sale (as defined in the 2017 Plan), subject to continued service to the Company. Mr. Maimon was granted 11,352 shares of restricted stock, which vests as to 6.25% of the underlying shares quarterly for a period of four years from the effective grant date, subject to continued service to the Company, provided that in the event Mr. Maimon's employment is terminated without Cause or if he resigns for Good Reason (each, as defined in the award agreement) on or within 12 months following a Merger/Sale, the award will vest in full. Dr. Gordon was not granted any equity awards in 2020.

## [Table of Contents](#)

### **Other Elements of Compensation**

#### *U.S. Retirement Plan*

We maintain a 401(k) retirement savings plan for our U.S.-based employees, including Dr. Gordon, who satisfy certain eligibility requirements. Dr. Gordon is eligible to participate in the 401(k) plan on the same terms as other full-time U.S. employees. In 2020, we made a matching contribution of 100% of all employee contributions up to 6% of the employee's base salary. We believe that providing a vehicle for tax-deferred retirement savings through our 401(k) plan adds to the overall desirability of our executive compensation package and further incentivizes our U.S. employees, including Dr. Gordon, in accordance with our compensation policies.

#### *Benefits to Israeli Employees*

We are obligated under labor laws in Israel to make regular deposits to funds administered by financial institutions for certain pension and severance liabilities on behalf of each of our Israeli employees, including our Israel-based named executive officers, subject to certain conditions. The amount of these contributions is based on the benefit obligation amount, which has not yet been deposited into an employee's fund. We also make certain non-obligatory contributions to an education fund for our Israeli employees generally, including our Israel-based named executive officers.

#### *Employee Benefits and Perquisites*

During their employment, our named executive officers are eligible to participate in our employee benefit plans and programs, including medical and dental benefits, to the same extent as our other full-time employees, subject to the terms and eligibility requirements of those plans. We reimburse business expenses to our named executive officers on the same basis as other employees and also provide our named executive officers with the personal use of a leased company car and reimbursement of certain car-related expenses.

#### *No Tax Gross-Ups*

We do not make gross-up payments to cover our named executive officers' personal income taxes that may pertain to any of the compensation or perquisites paid or provided by us.

### **Outstanding Equity Awards at 2020 Fiscal Year-End**

The following table summarizes the number of shares of common stock underlying outstanding equity incentive plan awards for each named executive officer as of December 31, 2020.

Name	Grant Date	Option Awards				Stock Awards	
		Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)(1)
Roni Mamluk	02/01/2018(2)	35,332	35,333	5.10	02/01/2028	—	—
Roni Mamluk	12/24/2019(3)	—	—	—	—	35,474	390,214
Roni Mamluk	05/07/2020(4)	—	47,299	15.00	05/06/2030	—	—
Roni Mamluk	05/07/2020(4)	—	—	—	—	47,299	520,289
Yossi Maimon	03/15/2019(5)	30,843	39,657	5.16	03/15/2029	—	—
Yossi Maimon	12/24/2019(6)	2,365	7,095	6.50	12/23/2029	—	—
Yossi Maimon	05/07/2020(7)	—	—	—	—	9,933	109,263
Gary Gordon	09/19/2019(8)	29,687	65,313	5.16	09/19/2029	—	—

## Table of Contents

- (1) Calculated based on \$11.00, the per share closing price of our common stock as of December 31, 2020.
- (2) 25% of the shares subject to the option vested on November 15, 2018, and the remainder vests in equal quarterly installments over the following three years, subject to continued service with the Company.
- (3) The restricted shares vest in sixteen substantially equal quarterly installments from December 24, 2019, subject to continued service with the Company.
- (4) 25% of the underlying shares vest on May 7, 2021 and the remainder vests in equal quarterly installments over the following three years, subject to continued service with the Company.
- (5) 25% of the shares subject to the option vested on March 15, 2020, and the remainder vests in equal quarterly installments over the following three years, subject to continued service with the Company.
- (6) The shares subject to the option vest quarterly over four years from December 24, 2019, subject to continued service with the Company.
- (7) The restricted shares vest in sixteen substantially equal quarterly installments from May 7, 2020, subject to continued service with the Company, provided that in the event Mr.
- (8) 25% of the shares subject to the option vested on September 19, 2020, and the remainder vests in equal quarterly installments over the following three years, subject to continued service with the Company.

All options and restricted stock awards are subject to full acceleration, subject to certain terms and conditions, in the event of a Merger/Sale.

### **Executive Compensation Arrangements**

#### ***Employment Agreement with Dr. Roni Mamluk***

Pursuant to the terms of Dr. Mamluk's employment agreement, as amended and restated effective January 1, 2020, she is entitled to an initial monthly salary of NIS 100,375 and is eligible to receive an initial annual target bonus of 40% of her annual base salary. Dr. Mamluk's employment agreement provides that the Company may terminate Dr. Mamluk's employment without Cause (as defined in the agreement) with 90 days' prior notice, or provide pay in lieu of such notice. Dr. Mamluk's employment agreement also provides for her use of a leased company car and reimbursement of certain car-related expenses or an equivalent monthly travel allowance in lieu of a leased car and payment for lunch on each business day.

Dr. Mamluk's amended and restated employment agreement also provide that immediately prior to an initial public offering of the Company, the Company would grant to her an additional option award covering 0.5% of the Company's fully diluted shares outstanding and an additional restricted stock award covering 0.5% of the Company's fully diluted shares outstanding. Refer to "—Narrative Disclosure to Summary Compensation Table—Equity Compensation" above for additional information regarding these awards.

Pursuant to the amended and restated employment agreement, if Dr. Mamluk's employment is terminated by the Company without Cause or she resigns for Justified Reason (as defined in the agreement), in each case, on or within 12 months following a Merger/Sale, then she shall be entitled to receive a cash amount equal to the sum of her annual base salary and her target annual bonus for the year of termination, and accelerated vesting of all unvested equity awards.

#### ***Employment Agreement with Mr. Yossi Maimon***

Pursuant to the terms of Mr. Maimon's employment agreement, as amended effective January 1, 2020, he is eligible to receive an initial monthly salary of NIS 80,000 and is eligible to receive an initial annual target bonus of 40% of his annual base salary. Mr. Maimon's employment agreement provides that the Company may terminate Mr. Maimon's employment without Cause (as defined in the agreement) with 60 days' prior notice, or pay in lieu of such notice. Mr. Maimon's employment agreement also provides for his use of a leased company car and reimbursement of certain car-related expenses or an equivalent monthly travel allowance in lieu of a lease car and payment for Mr. Maimon's lunch on each business day.

## [Table of Contents](#)

Pursuant to Mr. Maimon's employment agreement, if Mr. Maimon's employment is terminated by the Company without Cause or he resigns for Good Reason (as defined in the agreement), in each case, on or within 12 months following a Merger/Sale, then he shall be entitled to receive a cash amount equal to the sum of his annual base salary and his target annual bonus for the year of termination, and accelerated vesting of all unvested equity awards.

### ***Employment Agreement with Dr. Gary Gordon***

Pursuant to the terms of Dr. Gordon's employment agreement, as amended effective January 1, 2020, he is entitled to an initial base salary of \$375,000 and is eligible to receive an initial annual target bonus of up to 40% of his base salary. In connection with his commencement of employment on August 1, 2019, Dr. Gordon also received a one-time sign-on bonus of \$70,000 pursuant to his employment agreement. In the event Dr. Gordon is terminated by the Company for Cause (as defined in the agreement) prior to the second anniversary of his start date, he will be obligated to repay the full amount of the sign-on bonus, and in the event Dr. Gordon resigns without Good Reason (as defined in the agreement) following the first anniversary of his start date but before the second anniversary of his start date, he will be obligated to repay a prorated portion of the sign-on bonus based on the length of his employment with the Company.

Pursuant to Dr. Gordon's employment agreement, if Dr. Gordon's employment is terminated by the Company without Cause or he resigns for Justified Reason (as defined in the agreement), in each case, on or within 12 months following a Merger/Sale, then he shall be entitled to receive a cash amount equal to the sum of his annual base salary and his target annual bonus for the year of termination, and accelerated vesting of all unvested equity awards.

### **Director Compensation**

We do not provide directors who are also our employees with any additional compensation for their service as directors. Prior to our initial public offering in May 2020, we did not pay cash compensation to any of our non-employee directors for service on our board of directors. Certain of our non-employee directors have historically received options to purchase our common stock as compensation for their service. In connection with our initial public offering, we adopted a Non-Employee Director Compensation Program.

Under the Non-Employee Director Compensation program, each non-employee director receives the following amounts for their services on our board of directors:

- Upon the director's initial election or appointment to our board of directors that occurs after our initial public offering,
  - an option to purchase 8,750 shares of our common stock for each director other than the chair of the board of directors;
  - an option to purchase 17,500 shares of our common stock for the chair of the board of directors;
- If the director has served on our board of directors for at least six months as of the date of an annual meeting of stockholders and will continue to serve as a director immediately following such meeting,
  - an option to purchase 6,250 shares of our common stock for each director other than the chair of the board of directors;
  - an option to purchase 12,500 shares of our common stock for the chair of the board of directors;
- An annual director fee of \$25,000;
- If the director serves as chair of the board of directors or on a committee of our board of directors, an additional annual fee as follows:
  - Chair of the board of directors: \$20,000;



## [Table of Contents](#)

- Chair of the audit committee: \$10,000;
- Audit committee member other than the chair, \$5,000
- Chair of the compensation committee, \$10,000;
- Compensation committee member other than the chair, \$5,000;
- Chair of the nominating and corporate governance committee, \$10,000; and
- Nominating and corporate governance committee member other than the chair, \$5,000.

Director fees under the program will be payable in arrears in four equal quarterly installments not later than the fifteenth day following the final day of each calendar quarter, provided that the amount of each payment will be prorated for any portion of a quarter that a director is not serving on our board and no fee was be payable in respect of any period prior to our initial public offering.

Stock options granted to our non-employee directors under the program will have an exercise price equal to the fair market value of our common stock on the date of grant and will expire not later than ten years after the date of grant. The stock options granted upon a director's initial election or appointment will vest in 36 substantially equal monthly installments following the date of grant. The stock options granted annually to directors will vest in a single installment on the earlier of the day before the next annual meeting or the first anniversary of the date of grant. In addition, all unvested stock options will vest in full upon the occurrence of a change in control.

### **2020 Director Compensation Table**

The following table sets forth information concerning the compensation earned by our non-employee directors during the year ended December 31, 2020.

<u>Name</u>	<u>Fees Earned or Paid in Cash (\$)</u>	<u>Option Awards \$(1)</u>	<u>Total (\$)</u>
Vered Bisker-Leib, Ph.D., M.B.A.(2)	12,753	67,725	80,478
Murray A. Goldberg	26,082	39,125	65,207
Guy Harmelin, M.D.(3)	—	—	—
David Sidransky, M.D.	42,384	—	42,384
Todd Sone	21,384	—	21,384
Robert Spiegel, M.D., FACP	21,000	39,125	60,125

- (1) Amounts reflect the full grant-date fair value of stock awards and stock options granted during 2020 computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named individual. We provide information regarding the assumptions used to calculate the value of all option awards made to our non-employee directors in Note 9 to the consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2020.
- (2) Dr. Bisker-Leib was appointed to our board of directors effective August 18, 2020.
- (3) Dr. Harmelin resigned from our board of directors effective May 7, 2020.

## [Table of Contents](#)

The table below shows the aggregate numbers of option awards (exercisable and unexercisable) held as of December 31, 2020 by each non-employee director. None of our non-employee directors held any stock awards as of December 31, 2020.

<u>Name</u>	<u>Options Outstanding at Fiscal Year End</u>
Vered Bisker-Leib, Ph.D., M.B.A.	8,750
Murray A. Goldberg	30,000
Guy Harmelin, M.D.	—
David Sidransky, M.D.	—
Todd Sone	—
Robert Spiegel, M.D., F.A.C.P.	30,000

## Securities Authorized For Issuance under Equity Compensation Plans

<u>Plan Category:</u>	<u>Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants, and Rights</u>	<u>Weighted-Average Exercise Price of Outstanding Options, Warrants, and Rights</u>	<u>Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (2)</u>
Equity compensation plans approved by security holders (1)	695,674	\$ 6.07	387,736
Equity compensation plans not approved by security holders	—	—	—
<b>Total</b>	<b>695,674</b>	<b>\$ 6.07</b>	<b>387,736</b>

(1) Consists of the Ayala Pharmaceuticals, Inc. 2017 Stock Incentive Plan, as amended (the “2017 Plan”).

(2) The 2017 Plan provides for an annual increase on the first day of each calendar year beginning January 1, 2021 and ending on and including January 1, 2030, equal to the lesser of (A) 4% of the aggregate number of shares of common stock outstanding on the final day of the immediately preceding calendar year and (B) such smaller number of shares as is determined by the board of directors, provided that no more than 7,550,000 shares may be available for issuance pursuant to the exercise of incentive stock options.

## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information with respect to holdings of our common stock by (i) stockholders who beneficially owned more than 5% of the outstanding shares of our common stock, and (ii) each of our directors (which includes all nominees), each of our named executive officers and all directors and executive officers as a group as of April 16, 2021, unless otherwise indicated.

The number of shares beneficially owned by each stockholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which a person has sole or shared voting power or investment power. Applicable percentage ownership is based on 13,240,962 shares of common stock outstanding as of April 16, 2021. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of common stock subject to options, or other rights held by such person that are currently exercisable or will become exercisable within 60 days of April 16, 2021 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person.

Unless otherwise indicated, the address of each beneficial owner listed below is Oppenheimer 4, Rehovot 7670104, Israel. We believe, based on information provided to us, that each of the stockholders listed below has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

	<u>Number of Shares Beneficially Owned</u>	<u>Percentage of Shares Beneficially Owned</u>
<b>5% or Greater Stockholders</b>		
Israel Biotech Fund I, L.P. (1)	3,315,119	25.0%
aMoon Growth Fund Limited Partnership (2)	2,991,473	22.6%
Harel Insurance Company Ltd. (3)	2,163,834	16.3%
Entities affiliated with Redmile Group, LLC (4)	1,381,077	9.9%
Wellington Management Group LLP (5)	755,355	5.7%
Novartis Institutes for BioMedical Research, Inc. (6)	698,777	5.3%
<b>Named Executive Officers and Directors</b>		
Roni Mamluk, Ph.D. (7)	223,796	1.7%
Yossi Maimon (8)	66,047	*
Gary Gordon, M.D., Ph.D. (9)	45,281	*
Vered Bisker-Leib, Ph.D., M.B.A. (10)	1,641	*
Murray A. Goldberg (11)	25,313	*
David Sidransky, M.D.	250	*
Robert Spiegel, M.D., FACP (12)	25,313	*
Todd Sone	—	—
All executive officers and directors as a group (8 persons) (13)	<u>387,641</u>	<u>2.9%</u>

\* Less than one percent.

- (1) Based solely on a Schedule 13G filed with the SEC on February 8, 2021. Consists of 3,315,119 shares of common stock held by Israel Biotech Fund I, L.P. (“IBF I”). Israel Biotech Fund GP Partners, L.P. (“IBF”) is the sole general partner of IBF I. I.B.F. Management, Ltd. (“IBF Management”) is the sole general partner of IBF. IBF and IBF Management may be deemed to have sole voting and dispositive power with respect to the common stock held by IBF I. Dr. Robert Spiegel, a member of our board of directors and an advisor to IBF, Mr. Murray Goldberg, a member of our board of directors and an advisor to IBF, and Dr. David Sidransky, the

## Table of Contents

chairman of our board of directors managing partner of IBF and director of IBF Management, disclaim beneficial ownership over such shares, except to the extent of their pecuniary interest therein (as limited partners of IBF I and IBF). The address of IBF I, IBF and IBF Management is Ruhrberg Science Center, Bell Entrance, 4th Floor, 3 Pekeris Street, Rabin Science Park, Rehovot 7670212, Israel.

- (2) Based solely on a Schedule 13G filed with the SEC on February 8, 2021. Consists of 2,991,473 shares of common stock held by aMoon 2 Fund Limited Partnership (“aMoon”). aMoon 2 Fund G.P. Limited Partnership (“aMoon G.P.”) is the sole general partner of aMoon. aMoon General Partner Ltd. (“aMoon Ltd.”) is the sole general partner of aMoon G.P. Dr. Yair C. Schindel is the sole shareholder of aMoon Ltd. Thus, aMoon G.P., aMoon Ltd. and Dr. Yair C. Schindel may be deemed to have sole voting and dispositive power with respect to the common stock held by aMoon. Todd Sone, a member of our board of directors and a partner in aMoon, disclaims beneficial ownership over such shares, except to the extent of his pecuniary interest therein. The address of aMoon is 34 Yerushalaim Rd, Beit Gamla, 6th Floor, Ra’anana, 4350110, Israel.
- (3) Based on a Schedule 13G filed with the SEC on May 15, 2020 . Consists of 2,163,834 shares of common stock held by Harel Insurance Company Ltd. (“Harel”), a subsidiary of Harel Insurance Investments & Financial Services Ltd. Of the 2,163,834 shares of common stock, (i) 500,000 are held for members of the public through, among others, provident funds and/or mutual funds and/or pension funds and/or insurance policies and/or exchange traded funds, which are managed by subsidiaries of the Harel Holdings and Harel Insurance, each of which subsidiaries operates under independent management and makes independent voting and investment decisions, and (ii) 1,663,834 are beneficially held for Harel Insurance’s own account. Harel Insurance Investments & Financial Services Ltd. is a widely held public company listed on the Tel Aviv Stock Exchange. The address of Harel is 3 Abba Hillel Rd. Ramat Gan, Israel.
- (4) Based solely on a Schedule 13G/A filed with the SEC on March 2, 2021 and information known to us. Consists of 667,816 shares owned by certain private investment vehicles managed by Redmile Group, LLC, which shares may be deemed beneficially owned by Redmile Group, LLC as investment manager of such private investment vehicles. The reported securities may also be deemed beneficially owned by Jeremy C. Green as the principal of Redmile Group, LLC. Redmile Group, LLC 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. Redmile Group, LLC and Jeremy C. Green may also be deemed to beneficially own 1,799,999 shares issuable upon exercise of certain Warrants to purchase our common stock (the “Warrants”). Pursuant to the terms of the Warrants, a holder of a Warrant does not have the right to exercise any portion of the Warrant held by such holder, and the Company shall not effect any exercise of any Warrant, to the extent (but only to the extent) that after giving effect to such issuance after exercise, the holder (together with the holder’s affiliates, and any other persons acting as a group together with the holder or any of the holder’s affiliates), would beneficially own in excess of 9.99% (the “Beneficial Ownership Limitation”) of the number of shares of our common stock outstanding immediately after giving effect to the issuance of shares of common stock issued upon exercise of the Warrant (the “Beneficial Ownership Blocker”). The Beneficial Ownership Limitation may be changed at a holder’s election upon 61 days’ notice to the Issuer. Redmile Capital Offshore II Master Fund, Ltd.’s beneficial ownership is comprised of 279,933 shares and 654,588 shares of common stock issuable upon the exercise of Warrants directly held by Redmile Offshore II Master Fund, Ltd., subject to the Beneficial Ownership Limitation. Redmile Strategic Master Fund, LP’s beneficial ownership of common stock is comprised of 387,883 shares of common stock and 713,261 shares of common stock issuable upon the exercise of Warrants directly held by Redmile Strategic Master Fund, LP, subject to the Beneficial Ownership Limitation. The address for each entity is One Letterman Drive, Building D, Suite D3-300, The Presidio of San Francisco, San Francisco, California 94129.
- (5) Based solely on a Schedule 13G filed with the SEC on February 3, 2021. Consists of (i) 755,355 shares of our common stock held of record by Wellington Management Group LLP, with shared voting power over 723,362 shares and shared dispositive power over 755,355 shares, (ii) 755,355 shares of our common stock held of record by Wellington Group Holdings LLP, with shared voting power over 723,362 shares and shared dispositive power over 755,355 shares, (iii) 755,355 shares of our common stock held of record by Wellington Investment Advisors Holdings LLP, with shared voting power over 723,362 shares and shared dispositive power over 755,355 shares, and (iv) 723,362 shares of our common stock held of record by

## Table of Contents

Wellington Management Company, with shared voting power over 723,362 shares and shared dispositive power over 723,362 shares. Wellington Management Group LLP is the parent holding company of certain holding companies and the Wellington Investment Advisers are owned of record by clients of the Wellington Investment Advisers. Wellington Investment Advisors Holdings LLP controls directly, or indirectly through Wellington Management Global Holdings, Ltd., the Wellington Investment Advisers. Wellington Investment Advisors Holdings LLP is owned by Wellington Group Holdings LLP. Wellington Group Holdings LLP is owned by Wellington Management Group LLP. The address for Wellington Group Holdings LLP is c/o Wellington Management Company LLP, 280 Congress Street, Boston, MA 02210.

- (6) Based solely on a Schedule 13G filed with the SEC on February 5, 2021. Represents shares of our common stock held of record by Novartis Institutes for BioMedical Research, Inc. (“NIBRI”). Novartis AG is the publicly owned parent of NIBRI. Novartis NIBRI and Novartis AG share voting and dispositive power with regard to the Company’s securities held directly by NIBRI. The address of the principal business office of NIBRI is 250 Massachusetts Avenue, Cambridge, MA 02139 and of Novartis AG is Lichtstrasse 35, 4056 Basel, Switzerland.
- (7) Consists of (i) 145,346 shares of common stock, and (ii) 78,450 shares of common stock underlying stock options exercisable within 60 days of April 16, 2021.
- (8) Consists of (i) 8,520 shares of common stock, and (ii) 46,175 shares of common stock underlying stock options exercisable within 60 days of April 16, 2021.
- (9) Consists of (i) 8,520 shares of common stock, and (ii) 40,136 shares of common stock underlying stock options exercisable within 60 days of April 16, 2021.
- (10) Consists of 1,641 shares of common stock underlying stock options exercisable within 60 days of April 16, 2021.
- (11) Consists of 25,313 shares of common stock underlying stock options exercisable within 60 days of April 16, 2021.
- (12) Consists of 25,313 shares of common stock underlying stock options exercisable within 60 days of April 16, 2021.
- (13) Consists of (i) 173,988 shares of common stock, and (ii) 213,653 shares of common stock underlying stock options exercisable within 60 days of April 16, 2021.

## **DELINQUENT SECTION 16(A) REPORTS**

Section 16(a) of the Exchange Act requires our directors, officers (as defined under Rule 16a-1(f) under the Exchange Act) and stockholders who beneficially own more than 10% of any class of our equity securities registered pursuant to Section 12 of the Exchange Act (collectively, the “Reporting Persons”) to file initial statements of beneficial ownership of securities and statements of changes in beneficial ownership of securities with respect to our equity securities with the SEC. To our knowledge, based solely on our review of the copies of such forms filed with the SEC and upon written representations of the Reporting Persons received by us, we believe that there has been one late Form 4 filing reporting 8 transactions for David Sidransky.

## CERTAIN RELATIONSHIPS

The following are certain transactions, arrangements and relationships with our directors, executive officers and stockholders owning 5% or more of our outstanding common stock, or any member of the immediate family of any of the foregoing persons, since January 1, 2019, other than equity and other compensation, termination, change in control and other arrangements, which are described under “Executive and Director Compensation.”

### Preferred Stock Financings

#### Series B Preferred Shares

On December 19, 2018, we issued and sold to investors 3,097,343 shares of our Series B preferred stock at a purchase price of \$7.91 per share, for an aggregate consideration of approximately \$24.5 million. On February 18, 2019, we issued and sold to investors an additional 151,179 shares of our Series B preferred stock at a purchase price of \$7.91 per share, for an aggregate consideration of approximately \$1.2 million. On May 30, 2019, we issued and sold to investors an additional 502,152 shares of our Series B preferred stock at a purchase price of \$7.91 per share, for an aggregate consideration of approximately \$4.0 million.

The following table sets forth the aggregate number of shares of our capital stock acquired by beneficial owners of more than 5% of our capital stock in the financing transactions described above. Each share of our Series A preferred stock and Series B preferred stock identified in the following table will convert into 0.5 shares of common stock immediately prior to the closing of this offering.

<u>Participants</u>	<u>Series A Preferred Stock</u>	<u>Series B Preferred Stock</u>
<b>5% or Greater Stockholders(1)</b>		
Israel Biotech Fund I, L.P.	738,462	423,514
aMoon 2 Fund Limited Partnership	738,462	1,017,848
Harel Insurance Company Ltd.	615,385	423,514
Bristol-Myers Squibb Company(2)	1,125,929	—
Novartis Institutes for BioMedical Research, Inc.	—	1,264,222

- (1) Additional details regarding certain of these stockholders and their equity holdings are provided in this prospectus under the caption “Security Ownership of Certain Beneficial Owners and Management.”
- (2) Former holder of 5% or greater of our total outstanding common stock.

Some of our directors are associated with our principal stockholders as indicated in the table below:

<u>Director</u>	<u>Principal Stockholder</u>
David Sidransky	Israel Biotech Fund I, L.P.
Todd Sone	aMoon 2 Fund Limited Partnership
Murray Goldberg	Israel Biotech Fund I, L.P.
Robert Spiegel	Israel Biotech Fund I, L.P.

### Investors’ Rights Agreement

We entered into an Amended and Restated Investor Rights Agreement in December 2018 with the holders of our preferred stock, including entities with which certain of our directors are related. The agreement provides for certain rights relating to the registration of such holders’ common stock, including shares issuable upon conversion of preferred stock, and a right of first refusal to purchase future securities sold by us.

### **Indemnification Agreements**

We have entered into indemnification agreements with each of our directors and executive officers. These agreements, among other things, require us or will require us to indemnify each director (and in certain cases their related venture capital funds) and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys' fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person's services as a director or executive officer.

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

Our Board of Directors has adopted a written Related Person Transaction Policy, setting forth the policies and procedures for the review and approval or ratification of related person transactions. Under the policy, our finance team is primarily responsible for developing and implementing processes and procedures to obtain information regarding related persons with respect to potential related person transactions and then determining, based on the facts and circumstances, whether such potential related person transactions do, in fact, constitute related person transactions requiring compliance with the policy. If our finance team determines that a transaction or relationship is a related person transaction requiring compliance with the policy, our Chief Financial Officer is required to present to the Audit Committee all relevant facts and circumstances relating to the related person transaction. Our Audit Committee must review the relevant facts and circumstances of each related person transaction, including if the transaction is on terms comparable to those that could be obtained in arm's length dealings with an unrelated third party and the extent of the related person's interest in the transaction, take into account the conflicts of interest and corporate opportunity provisions of our Code of Business Conduct and Ethics, and either approve or disapprove the related person transaction. If advance Audit Committee approval of a related person transaction requiring the Audit Committee's approval is not feasible, then the transaction may be preliminarily entered into by management upon prior approval of the transaction by the chair of the Audit Committee subject to ratification of the transaction by the Audit Committee at the Audit Committee's next regularly scheduled meeting; provided, that if ratification is not forthcoming, management will make all reasonable efforts to cancel or annul the transaction. If a transaction was not initially recognized as a related person, then upon such recognition the transaction will be presented to the Audit Committee for ratification at the Audit Committee's next regularly scheduled meeting; provided, that if ratification is not forthcoming, management will make all reasonable efforts to cancel or annul the transaction. Our management will update the Audit Committee as to any material changes to any approved or ratified related person transaction and will provide a status report at least annually at a regularly scheduled meeting of the Audit Committee of all then current related person transactions. No director may participate in approval of a related person transaction for which he or she is a related person.



## **STOCKHOLDERS' PROPOSALS**

Stockholders who intend to have a proposal considered for inclusion in our proxy materials for presentation at our 2022 Annual Meeting of Stockholders pursuant to Rule 14a-8 under the Exchange Act must submit the proposal to our Secretary at our offices at Oppenheimer 4, Rehovot 7670104, Israel in writing not later than December 28, 2021.

Stockholders intending to present a proposal at the 2022 Annual Meeting of Stockholders, but not to include the proposal in our proxy statement, or to nominate a person for election as a director, must comply with the requirements set forth in our Amended and Restated Bylaws. Our Amended and Restated Bylaws require, among other things, that our Secretary receive written notice from the stockholder of record of their intent to present such proposal or nomination not earlier than the 120th day and not later than the 90th day prior to the anniversary of the preceding year's annual meeting. Therefore, we must receive notice of such a proposal or nomination for the 2022 Annual Meeting of Stockholders no earlier than February 10, 2022 and no later than March 12, 2022. The notice must contain the information required by the Amended and Restated Bylaws, a copy of which is available upon request to our Secretary. In the event that the date of the 2022 Annual Meeting of Stockholders is more than 30 days before or more than 60 days after June 10, 2022, then our Secretary must receive such written notice not earlier than the close of business on the 120th day prior to the 2022 Annual Meeting and not later than the close of business on the 90th day prior to the 2022 Annual Meeting or, if later, the close of business on 10th day following the day on which public disclosure of the date of such meeting is first made by us.

We reserve the right to reject, rule out of order, or take other appropriate action with respect to any proposal that does not comply with these or other applicable requirements.

## **OTHER MATTERS**

Our Board of Directors is not aware of any matter to be presented for action at the Annual Meeting other than the matters referred to above and does not intend to bring any other matters before the Annual Meeting. However, if other matters should come before the Annual Meeting, it is intended that holders of the proxies named on the Company's proxy card will vote thereon in their discretion.

## **SOLICITATION OF PROXIES**

The accompanying proxy is solicited by and on behalf of our Board of Directors, whose Notice of Annual Meeting is attached to this proxy statement, and the entire cost of our solicitation will be borne by us. In addition to the use of mail, proxies may be solicited by personal interview, telephone, e-mail and facsimile by our directors, officers and other employees who will not be specially compensated for these services. We will also request that brokers, nominees, custodians and other fiduciaries forward soliciting materials to the beneficial owners of shares held by the brokers, nominees, custodians and other fiduciaries. We will reimburse these persons for their reasonable expenses in connection with these activities.

Certain information contained in this proxy statement relating to the occupations and security holdings of our directors and officers is based upon information received from the individual directors and officers.

**AYALA'S ANNUAL REPORT ON FORM 10-K**

A copy of Ayala's Annual Report on Form 10-K for the fiscal year ended December 31, 2020, including financial statements and schedules thereto but not including exhibits, as filed with the SEC, will be sent to any stockholder of record on April 16, 2021 without charge upon written request addressed to:

Ayala Pharmaceuticals, Inc.  
Attention: Secretary  
Oppenheimer 4  
Rehovot 7670104, Israel

A reasonable fee will be charged for copies of exhibits. You also may access this proxy statement and our Annual Report on Form 10-K at [www.proxyvote.com](http://www.proxyvote.com). You also may access our Annual Report on Form 10-K for the fiscal year ended December 31, 2020 at [ir.ayalapharma.com](http://ir.ayalapharma.com).

**WHETHER OR NOT YOU PLAN TO ATTEND THE ANNUAL MEETING ONLINE, WE URGE YOU TO VOTE YOUR SHARES VIA THE TOLL-FREE TELEPHONE NUMBER OR OVER THE INTERNET, AS DESCRIBED IN THIS PROXY STATEMENT. IF YOU RECEIVED A COPY OF THE PROXY CARD BY MAIL, YOU MAY SIGN, DATE AND MAIL THE PROXY CARD IN THE ENCLOSED RETURN ENVELOPE. PROMPTLY VOTING YOUR SHARES WILL ENSURE THE PRESENCE OF A QUORUM AT THE ANNUAL MEETING AND WILL SAVE US THE EXPENSE OF FURTHER SOLICITATION.**

By Order of the Board of Directors

Yossi Maimon  
Chief Financial Officer, Secretary and Treasurer

Rehovot, Israel  
April 27, 2021

[Table of Contents](#)

AYALA PHARMACEUTICALS, INC.  
 OPPENHEIMER 4  
 REHOVOT, 7670104 ISRAEL

**VOTE BY INTERNET**

*Before The Meeting* - Go to [www.proxyvote.com](http://www.proxyvote.com)

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 p.m. Eastern Time on June 9, 2021. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

*During The Meeting* - Go to [www.virtualshareholdermeeting.com/AYLA2021](http://www.virtualshareholdermeeting.com/AYLA2021)

You may attend the meeting via the Internet and vote during the meeting. We recommend, however, that you vote before the meeting even if you plan to participate in the meeting, since you can change your vote during the meeting by voting when the polls are open. Have the information that is printed in the box marked by the arrow available and follow the instructions.

**VOTE BY PHONE - 1-800-690-6903**

Use any touch-tone telephone to transmit your voting instructions up until 11:59 p.m. Eastern Time on June 9, 2021. Have your proxy card in hand when you call and then follow the instructions.

**VOTE BY MAIL**

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

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

D50394-P51391

KEEP THIS PORTION FOR YOUR RECORDS  
 DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

<b>AYALA PHARMACEUTICALS, INC.</b>		<b>For All</b>	<b>Withhold All</b>	<b>For All Except</b>	To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.
<b>The Board of Directors recommends you vote FOR the following:</b>					
1. Election of Directors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	
<b>Nominees:</b>					
01) Murray A. Goldberg					
02) Robert Spiegel, M.D., FACP					
<b>The Board of Directors recommends you vote FOR the following proposal:</b>					
2. Ratification of the appointment of Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global, as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2021.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>For</b>	<b>Against</b>
<b>NOTE:</b> Such other business as may properly come before the meeting or any continuation, postponement, or adjournment thereof.					
Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.					
<input style="width: 95%;" type="text"/>		<input style="width: 95%;" type="text"/>			
Signature [PLEASE SIGN WITHIN BOX]	Date	Signature (Joint Owners)	Date		

**Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:**  
The Proxy Statement and 10-K are available at [www.proxyvote.com](http://www.proxyvote.com).

D50395-P51391

**AYALA PHARMACEUTICALS, INC.  
Annual Meeting of Stockholders  
June 10, 2021 10:00 AM Eastern Time  
This proxy is solicited by the Board of Directors**

The undersigned stockholder(s) hereby appoint(s) Roni Mamluk, Ph.D. and Yossi Maimon, CPA, M.B.A., or either of them, as proxies, each with the power to appoint her or his substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this proxy card, all of the shares of common stock of AYALA PHARMACEUTICALS, INC. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 10:00 AM, Eastern Time on June 10, 2021, virtually at [www.virtualshareholdermeeting.com/AYLA2021](http://www.virtualshareholdermeeting.com/AYLA2021), and any continuation, postponement, or adjournment thereof.

Such proxies are authorized to vote in their discretion (x) for the election of any person to the Board of Directors if any nominee named herein becomes unable to serve or for good cause will not serve, (y) on any matter that the Board of Directors did not know would be presented at the Annual Meeting of Stockholders by a reasonable time before the proxy solicitation was made, and (z) on such other business as may properly be brought before the meeting or any continuation, postponement, or adjournment thereof.

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

Continued and to be signed on reverse side