

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

SCHEDULE 14A

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

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

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

Enzo Biochem, Inc.

(Name of Registrant as Specified in Its Charter)

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

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NOTICE OF 2019 ANNUAL MEETING OF SHAREHOLDERS
To be held on January 31, 2020

To All Shareholders of Enzo Biochem, Inc.:

NOTICE IS HEREBY GIVEN that the 2019 Annual Meeting of Shareholders of Enzo Biochem, Inc., a New York corporation (the "Company"), will be held at The Yale Club of New York City, 50 Vanderbilt Avenue, New York, NY 10017, on January 31, 2020, at 9:00 a.m., New York City time (including any adjournments, postponements or continuations thereof, the "Annual Meeting"), for the following purposes:

1. To elect Barry W. Weiner and Bruce A. Hanna, Ph.D., to the Company's Board of Directors (the "Board") as Class II Directors for a term of three (3) years or until their respective successors have been duly elected and qualified;
2. To approve, by a nonbinding advisory vote, the compensation of the Company's Named Executive Officers;
3. To ratify the Company's appointment of EisnerAmper LLP to serve as the Company's independent registered public accounting firm for the Company's fiscal year ending July 31, 2020;
4. To approve an amendment to the Company's By-Laws to implement majority voting in uncontested director elections; and
5. To transact such other business as may properly come before the Annual Meeting.

The accompanying proxy statement (including all annexes attached thereto, the "Proxy Statement") provides detailed information about the matters to be considered at the Annual Meeting. As you may be aware, Harbert Discovery Fund, LP and Harbert Discovery Co-Investment Fund I, LP (together with certain affiliates, "Harbert") have provided notice to the Company of their intent to nominate two candidates for election as Class II Directors at the Annual Meeting. You may receive solicitation materials from Harbert, including a proxy statement and blue proxy card. We urge you to disregard such materials. We are not responsible for the accuracy of any information provided by or relating to Harbert or its nominees contained in solicitation materials filed or disseminated by or on behalf of Harbert or any other statements Harbert or its representatives may make.

The Board does NOT endorse either of Harbert's nominees and unanimously recommends that you vote "FOR" the election of each of the director nominees proposed by the Board on the **WHITE** proxy card. The Board strongly urges you not to sign or return any proxy card sent to you by Harbert. If you have previously submitted a proxy card sent to you by Harbert, you can revoke that proxy over the Internet or by telephone by following the instructions to vote on the enclosed **WHITE** proxy card or by completing, signing and dating the enclosed **WHITE** proxy card and mailing it in the postage pre-paid envelope provided until the Annual Meeting. Only your latest dated proxy will count. Any proxy may be revoked at any time prior to its exercise at the Annual Meeting as described in the accompanying Proxy Statement.

It is extremely important that your shares be represented and voted at the Annual Meeting. Whether or not you plan to attend the Annual Meeting, please vote as soon as possible. We urge you to date, sign and return the WHITE proxy card in the envelope provided to you, or to use the telephone or Internet method of voting described on your WHITE proxy card, even if you plan to attend the Annual Meeting, so that if you are unable to attend the Annual Meeting, your shares can be voted. Voting now will not limit your right to change your vote or to attend the Annual Meeting. If you should be present at the Annual Meeting and desire to vote in person, you may withdraw your proxy. If your shares are held in the name of a broker, bank or other holder of record, follow the voting instructions you received from the holder of record in order to vote your shares. Please note that in order to be permitted entrance to the Annual Meeting you will be asked to present proof that you are a shareholder of the Company as well as valid government-issued picture identification, such as a driver's license or passport. The use of cameras, recording devices and other electronic devices (including mobile phones) will be prohibited at the Annual Meeting.

Please carefully read the enclosed Proxy Statement, which explains the proposals to be considered by and acted upon by you at the Annual Meeting.

The Board has fixed the close of business on December 3, 2019 as the record date for the determination of holders of record of the Company's common stock entitled to notice of, and to vote at, the Annual Meeting. A list of shareholders of record of the Company as of the record date will remain open for inspection during the Annual Meeting until the closing of the polls thereat.

We appreciate your continued interest in the Company. We look forward to greeting as many of our shareholders as possible at the Annual Meeting. If you have any questions or require any assistance with voting your shares, or if you need additional copies of the proxy materials, please contact Investor Relations at (212) 583-0100 or our proxy solicitor, Kingsdale Advisors, at:

Kingsdale Advisors
(888) 518-1554 (toll-free in North America)
(416) 867-2272 (outside of North America)
email: ENZ@kingsdaleadvisors.com

December 5, 2019

By Order of the Board of Directors,

/s/ Barry W. Weiner
Barry W. Weiner
President, Chief Financial Officer, Principal
Accounting Officer, Treasurer and Director

ALL HOLDERS OF RECORD OF THE COMPANY'S COMMON STOCK (WHETHER THEY INTEND TO ATTEND THE ANNUAL MEETING OR NOT) ARE STRONGLY ENCOURAGED TO COMPLETE, SIGN, DATE AND RETURN PROMPTLY THE WHITE PROXY CARD ENCLOSED WITH THE ACCOMPANYING PROXY STATEMENT.

**IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS
FOR THE SHAREHOLDER MEETING TO BE HELD ON JANUARY 31, 2020**

This Notice of Annual Meeting of Shareholders, the accompanying Proxy Statement, the Company's 2019 Annual Report on Form 10-K and Form 10-K/A for the fiscal year ended July 31, 2019, and form of **WHITE** proxy card, and any amendments thereto, are available free of charge at <http://www.enzo.com/corporate/investor-information/enzo-sec-filings>. Information on our website does not constitute part of the Company's proxy solicitation materials.

Shareholders may also obtain a copy of these materials by writing to Enzo Biochem, Inc., 527 Madison Avenue, New York, New York 10022, Attention: Investor Relations. Upon payment of a reasonable fee, shareholders may also obtain a copy of the exhibits to our Annual Report on Form 10-K and Form 10-K/A for our fiscal year ended July 31, 2019. Any request for such materials should be delivered to the Company before January 24, 2019 to facilitate timely delivery.

For information on how to obtain directions to be able to attend the Annual Meeting and vote in person, please write to the Company's principal corporate office at 527 Madison Avenue, New York, New York 10022, Attention: Investor Relations or call (212) 583-0100 requesting such information.

THE BOARD UNANIMOUSLY RECOMMENDS VOTING "FOR" THE ELECTION OF THE BOARD'S NOMINEES UNDER PROPOSAL 1, "FOR" PROPOSAL 2, "FOR" PROPOSAL 3 AND "FOR" PROPOSAL 4 USING THE ENCLOSED WHITE PROXY CARD. THE BOARD URGES YOU NOT TO SIGN, RETURN OR VOTE ANY PROXY CARD THAT MAY BE SENT TO YOU BY HARBERT EVEN AS A PROTEST VOTE, AS ONLY YOUR LATEST DATED PROXY CARD WILL BE COUNTED.

Kingsdale Advisors is assisting us with our effort to solicit proxies. Therefore, requests for the above materials can also be made to Kingsdale Advisors through the following channels: (1) by calling (888) 518-1554 (toll-free in North America); (2) by calling (416) 867-2272 (outside of North America); or (3) by emailing ENZ@kingsdaleadvisors.com. Additionally, if you have any questions or require assistance in authorizing a proxy or voting your shares of our common stock or in obtaining any of the above materials, please contact Kingsdale Advisors through one of the three channels listed above. We are not aware of any other business, or any other nominees for election as directors, that may properly be brought before the Annual Meeting.

IF YOU ARE A RECORD HOLDER OF SHARES, OR AN OWNER WHO OWNS SHARES IN "STREET NAME" AND OBTAIN A "LEGAL" PROXY FROM YOUR BROKER, BANK, TRUSTEE OR NOMINEE, YOU STILL MAY ATTEND THE ANNUAL MEETING AND VOTE YOUR SHARES OR REVOKE YOUR PRIOR VOTING INSTRUCTIONS.

Regardless of the number of shares of our common stock that you own, your vote will be very important. Thank you for your continued support, interest and investment in Enzo Biochem, Inc.

TABLE OF CONTENTS

	<u>Page</u>
<u>INFORMATION ABOUT THE ANNUAL MEETING</u>	3
<u>PROPOSAL 1 ELECTION OF DIRECTORS</u>	14
<u>CLASS II DIRECTOR NOMINEES TO SERVE UNTIL THE 2022 ANNUAL MEETING, IF ELECTED:</u>	14
<u>DIRECTORS WHO ARE CONTINUING IN OFFICE:</u>	15
<u>Class I: Term to Expire at the 2021 Annual Meeting in 2022</u>	15
<u>Class III: Term to Expire at the 2020 Annual Meeting in 2021</u>	15
<u>SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT</u>	19
<u>AUDIT COMMITTEE REPORT</u>	26
<u>CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS</u>	27
<u>CODE OF BUSINESS CONDUCT AND ETHICS</u>	27
<u>COMPENSATION OF DIRECTORS</u>	28
<u>COMPENSATION OF EXECUTIVE OFFICERS</u>	28
<u>COMPENSATION COMMITTEE REPORT</u>	46
<u>COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION</u>	46
<u>PROPOSAL 2 ADVISORY VOTE ON THE COMPANY'S NAMED EXECUTIVE OFFICER COMPENSATION</u>	47
<u>PROPOSAL 3 RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM</u>	48
<u>PROPOSAL 4 APPROVAL OF AN AMENDMENT TO THE COMPANY'S BY-LAWS TO IMPLEMENT MAJORITY VOTING IN UNCONTESTED DIRECTOR ELECTIONS</u>	49
<u>OTHER MATTERS</u>	51
<u>SHAREHOLDER PROPOSALS</u>	53



PROXY STATEMENT

2019 ANNUAL MEETING OF SHAREHOLDERS

To be held on January 31, 2020

This proxy statement (including all annexes attached hereto, this "Proxy Statement") and the accompanying **WHITE** proxy card are being furnished to shareholders of Enzo Biochem, Inc. ("Enzo", "Enzo Biochem" or the "Company"), in connection with the solicitation of proxies by the Board of Directors of the Company (the "Board") for the 2019 Annual Meeting of Shareholders to be held at The Yale Club of New York City, 50 Vanderbilt Avenue, New York, NY 10017, on January 31, 2020 at 9:00 a.m., New York City time (including any adjournments, postponements or continuations thereof, the "Annual Meeting") for the purposes stated in the accompanying Notice of Annual Meeting. This Proxy Statement is dated December 5, 2019 and the accompanying **WHITE** proxy card are first being mailed to shareholders on or about December 6, 2019.

We have elected to provide access to our proxy materials both by sending you this full set of proxy materials, including a Notice of Annual Meeting and a **WHITE** proxy card, and by notifying you of the availability of our proxy materials on the Internet. The Notice of Annual Meeting, Proxy Statement, **WHITE** proxy card and Annual Report to Shareholders for the Company's fiscal year ended July 31, 2019 on Form 10-K and Form 10-K/A (together, the "2019 Annual Report") upon availability will be posted free of charge at <http://www.enzo.com/corporate/investor-information/enzo-sec-filings>.

The purposes of the Annual Meeting are to:

1. Elect Barry W. Weiner and Bruce A. Hanna, Ph.D., to the Company's Board as Class II Directors for a term of three (3) years or until their respective successors have been duly elected and qualified;
2. Approve, by a nonbinding advisory vote, the compensation of the Company's Named Executive Officers;
3. Ratify the Company's appointment of EisnerAmper LLP to serve as the Company's independent registered public accounting firm for the Company's fiscal year ending July 31, 2020;
4. Approve an amendment to the Company's By-Laws to implement majority voting in uncontested director elections; and
5. Transact such other business as may properly come before the Annual Meeting.

Under our governing documents, no other business may be raised by shareholders at the Annual Meeting unless proper and timely notice has been given to us by the shareholders seeking to bring such business before the meeting. As of the date of this Proxy Statement, the Board knows of no business other than that set forth above to be transacted at the Annual Meeting, but if other matters requiring a vote do arise, it is the intention of the persons named in the **WHITE** proxy card, to whom you are granting your proxy and to whom such proxy confers discretionary authority to vote on any unanticipated matters, to vote in accordance with their best judgment on such matters.

YOUR VOTE IS VERY IMPORTANT. As you may know, Harbert Discovery Fund, LP and Harbert Discovery Co-Investment Fund I, LP have provided notice to the Company of their intent to nominate a slate of two nominees (the "Harbert Nominees") for election as Class II Directors at the Annual Meeting. The Board does NOT endorse either Harbert Nominee and unanimously recommends that you vote "FOR" the election of each of the nominees proposed by the Board on the WHITE proxy card. The Board further urges you to disregard and discard any and all proxy cards provided to you by Harbert.

INFORMATION ABOUT THE ANNUAL MEETING

Solicitation

Q: Who is soliciting my vote?

A: In this Proxy Statement, the Board is soliciting your vote on the matters before the Annual Meeting. For more information on the participants in the Board's solicitation, please see "Participants in the Company's Solicitation" on page 51 of this Proxy Statement.

Q: Why did you send me this Proxy Statement?

A: We sent you this Proxy Statement and the enclosed **WHITE** proxy card because as a shareholder of the Company, the Board is soliciting your proxy to vote at the Annual Meeting. We request that you promptly use the enclosed **WHITE** proxy card to vote, by telephone, Internet or mail, whether or not you plan to attend the Annual Meeting.

THE BOARD UNANIMOUSLY RECOMMENDS VOTING "**FOR**" THE ELECTION OF THE BOARD'S NOMINEES UNDER PROPOSAL 1, "**FOR**" PROPOSAL 2, "**FOR**" PROPOSAL 3 AND "**FOR**" PROPOSAL 4 USING THE ENCLOSED **WHITE** PROXY CARD. THE BOARD URGES YOU NOT TO SIGN, RETURN OR VOTE ANY PROXY CARD THAT MAY BE SENT TO YOU BY HARBERT EVEN AS A PROTEST VOTE, AS ONLY YOUR LATEST DATED PROXY CARD WILL BE COUNTED.

Q: What is a proxy?

A: A proxy is your legal designation of another person to vote on your behalf. You are giving the individual(s) appointed by the Board as proxy the authority to vote your shares in the manner you indicate. The Board has designated Dov Perlysky and Barry W. Weiner as the Company's proxies for the Annual Meeting.

Q: Who is Harbert and what are they proposing?

A: Harbert Discovery Fund, LP, a Delaware limited partnership ("Harbert Discovery"), and Harbert Discovery Co-Investment Fund I, LP, a Delaware limited partnership ("Harbert Discovery Co-Investment") provided notice to the Company of their intent to nominate two director candidates for election at the Annual Meeting in opposition to the two director candidates nominated by your Board, on their own behalf and on behalf of Harbert Discovery Fund GP, LLC, a Delaware limited liability company ("Harbert Discovery GP"), Harbert Discovery Co-Investment Fund I GP, LLC, a Delaware limited liability company ("Harbert Discovery Co-Investment GP"), Harbert Fund Advisors, Inc., an Alabama corporation ("HFA"), and Harbert Management Corporation, an Alabama corporation and the managing member of Harbert Discovery GP, the managing member of Harbert Discovery Co-Investment GP, and the indirect parent of HFA ("HMC"; and together with Harbert Discovery, Harbert Discovery Co-Investment, Harbert Discovery GP, Harbert Discovery Co-Investment GP, and HFA, "Harbert"). You may receive proxy solicitation materials from Harbert. The Company is not responsible for the accuracy of any information provided by or relating to Harbert or its nominees contained in proxy materials filed or disseminated by or on behalf of Harbert or any other statements that Harbert may make.

The Board does not endorse either of the Harbert Nominees and unanimously recommends that you vote "**FOR**" the election of each of the nominees recommended by the Board on the enclosed **WHITE** proxy card. The Board of Directors strongly urges that you **do not sign or return any blue proxy card** sent to you by Harbert. Voting to "withhold" with respect to either of the Harbert Nominees on a blue proxy card sent to you by Harbert is not the same as voting "**FOR**" the Board's nominees because a vote to "withhold" with respect to any of the Harbert Nominees on Harbert's blue proxy card will revoke any **WHITE** proxy card you may have previously submitted. To support the Board's nominees, you should vote "**FOR**" the Board's nominees on the **WHITE** proxy card and disregard, and not return, any blue proxy card sent to you by Harbert. If you have previously voted using a blue proxy card sent to you by Harbert, you can subsequently revoke that vote by signing, dating and returning the enclosed **WHITE** proxy card in the postage-paid envelope provided, or by following the instructions on the **WHITE** proxy card to vote by telephone or by Internet. Only your latest dated proxy will count. Any proxy may be revoked at any time prior to its exercise at the Annual Meeting as described in this Proxy Statement.

Voting Information

Q: Who can vote at the Annual Meeting?

A: Only shareholders of record of the Company's common stock, par value \$0.01 per share (the "Common Stock") as of the close of business on December 3, 2019 (the "Record Date") are entitled to vote at the Annual Meeting. On the Record Date, there were 47,556,807 shares of our Common Stock outstanding and entitled to vote.

Q: How many shares must be present to conduct the Annual Meeting?

A: We must have a "quorum" present in person or by proxy to hold the Annual Meeting. A quorum is a majority of the outstanding shares entitled to vote as of the Record Date. Abstentions and broker non-votes, if any, will be counted for the purpose of determining the existence of a quorum.

Q: What matters are to be voted upon at the Annual Meeting?

A: Four proposals are scheduled for a vote:

Proposal 1: Election of Barry W. Weiner and Bruce A. Hanna, Ph.D., the Company's nominees, as Class II Directors of the Board;

Proposal 2: Approval, on an advisory basis, of the compensation of the Company's Named Executive Officers;

Proposal 3: Ratification of the selection of EisnerAmper LLP as our independent registered public accounting firm for the fiscal year ending July 31, 2020; and

Proposal 4: Approval of an amendment to the Amended and Restated By-Laws of the Company (the "By-Laws") to implement majority voting in uncontested director elections.

As of the date of this Proxy Statement, our Board does not know of any other business to be presented at the Annual Meeting. If other business is properly brought before the Annual Meeting, the persons named on the enclosed **WHITE** proxy card will vote on these other matters in their discretion.

Q: What are my voting options?

A: Proposal 1: You may either (i) vote “**FOR**” the nominees to the Board, (ii) withhold authority to vote for any nominee you specify or (iii) withhold authority to vote for the nominees as a group.

Proposal 2: You may vote “**FOR**” or “**AGAINST**” or abstain from voting.

Proposal 3: You may vote “**FOR**” or “**AGAINST**” or abstain from voting.

Proposal 4: You may vote “**FOR**” or “**AGAINST**” or abstain from voting.

Q: How does the Board recommend that I vote?

A: The Board recommends that you vote:

Proposal 1: “**FOR**” the election of Barry W. Weiner and Bruce A. Hanna, Ph.D., who are the Class II Director nominees of the Company;

Proposal 2: “**FOR**” the proposal to approve on an advisory basis the compensation of the Company’s Named Executive Officers;

Proposal 3: “**FOR**” the proposal to ratify the selection of EisnerAmper LLP as our independent registered public accounting firm for the fiscal year ending July 31, 2020; and

Proposal 4: “**FOR**” the proposal to amend the By-Laws to implement majority voting in uncontested director elections.

Q: How do I vote my shares?

A: Shareholders of Record. Shareholders of record may vote their shares or submit a proxy to have their shares voted by one of the following methods:

- *By Internet* – Log on through the Internet at www.voteproxy.com and follow the instructions provided.
- *By Telephone* – Call toll-free 1-800-PROXIES (1-800-776-9437) in the United States or 1-718-921-8500 from foreign countries from any touch-tone telephone and follow the instructions provided.
- *By Mail* – You may submit your proxy by signing, dating and mailing your **WHITE** proxy card in the enclosed postage-paid envelope to AST Financial, 6201 15th Avenue, Brooklyn, NY 11219, Attention: Proxy Operations.
- *In Person* – You may attend the Annual Meeting and vote in person by completing a ballot. Attending the Annual Meeting without completing a ballot will not count as a vote. If you choose to vote in person, you must bring proof of identification to the Annual Meeting. You are encouraged to sign, date and return the **WHITE** proxy card in the enclosed postage-paid envelope regardless of whether or not you plan to attend the Annual Meeting.

Beneficial Owners. If you are the beneficial owner of your shares (i.e. you hold your shares in “street name” through an intermediary such as a bank, broker or other nominee), please refer to the instructions on the enclosed **WHITE** voting instruction form to instruct your bank, broker or other nominee as to how to vote your shares or submit a proxy to have your shares voted.

Due to the contested nature of this election, your vote is extremely important. Your bank, broker or other nominee will not be able to vote your shares at the Annual Meeting unless you provide them instructions on how to vote your shares. You should instruct your bank, broker or other nominee how to vote your shares by following the directions provided by your bank, broker or other nominee. Alternatively, you may obtain a “legal proxy” from your bank, broker or other nominee and bring it with you to hand in with a ballot in order to be able to vote your shares at the Annual Meeting. If you choose to vote at the Annual Meeting, you must bring the following: (a) proof of government-issued identification and (b) a signed “legal proxy” from the shareholder of record (i.e. your bank, broker or other nominee) giving you the right to vote the Common Stock.

Q: May I vote at the Annual Meeting?

A: Yes, you may vote your shares at the Annual Meeting if you attend in person and are the shareholder of record. Even if you plan to attend the Annual Meeting in person, we recommend that you also submit your **WHITE** proxy card or voting instruction form as described above, or as directed by your broker if you hold your shares through a broker, so that your vote will be counted if you later decide not to attend the Annual Meeting in person. Votes at the Annual Meeting will be taken by written ballot. Prior to the closing of the polls at the Annual Meeting, we will distribute a written ballot to any shareholder of record who attends the Annual Meeting and wishes to vote thereat in person.

Q: What is the difference between holding shares as a “shareholder of record” and as a “beneficial owner”?

A: *Shareholders of Record:* If your shares are registered in your name with our transfer agent, American Stock Transfer & Trust Company, you are the “shareholder of record” of those shares and this Notice of Annual Meeting and Proxy Statement and any accompanying documents have been provided directly to you by us.

Beneficial Holders: In contrast, if you purchased your shares through a brokerage or other financial intermediary, the brokerage or other financial intermediary will be the “shareholder of record” of those shares. Generally, when this occurs, the brokerage or other financial intermediary will automatically put your shares into “street name,” which means that the brokerage or other financial intermediary will hold your shares in its name or another nominee’s name and not in your name, but will keep records showing you as the real or “beneficial owner.” If you hold shares beneficially in street name, this Notice of Annual Meeting and Proxy Statement and any accompanying documents have been forwarded to you by your broker, bank or other holder of record. You are therefore urged to contact the person responsible for your account and give them instructions for how to complete a proxy card representing your shares so that it can be timely returned on your behalf. You also should confirm in writing your instructions to the person responsible for your account and provide a copy of those instructions to us so that we can attempt to ensure that your instructions are followed. If you wish instead to vote in person at the Annual Meeting, you must obtain a valid proxy from your broker, bank or other nominee.

Q: How do I vote if my bank or broker holds my shares in “street name”?

A: If you hold shares beneficially in street name, you may vote by submitting the enclosed voting instruction form. Telephone and Internet voting may be available—please refer to the voting instruction card provided by your broker.

Q: What should I do if I receive more than one proxy card or other set of proxy materials from the Company?

A: If you hold your shares in multiple accounts or registrations, or in both registered and street name, you will receive a **WHITE** proxy card for each account. Please sign, date and return all **WHITE** proxy cards you receive from the Company. If you choose to vote by phone or by Internet, please vote once for each **WHITE** proxy card you receive. Only your latest dated proxy for each account will be voted.

Q: How many votes do I have?

A: Each share of Common Stock that you own as of the close of business on the Record Date entitles you to one vote on each matter voted upon at the Annual Meeting. As of the close of business on the Record Date, there were 47,556,807 shares of our Common Stock outstanding and entitled to vote at the Annual Meeting.

Q: May I change my vote?

A: *Shareholders of Record:* Yes, you may change your vote or revoke your proxy before the vote at the Annual Meeting by: (i) submitting a written notice of such revocation to the President of the Company so that it is received no later than 5:00 p.m. (New York City time) on January 30, 2020; (ii) submitting a duly signed proxy card bearing a later date than the previously signed and dated proxy card to the President of the Company so that it is received no later than 5:00 p.m. (New York City time) on January 30, 2020; or (iii) attending the Annual Meeting and voting in person thereat the shares represented by such proxy card. All such later-dated proxy cards or written notices revoking a proxy card should be sent to Kingsdale Advisors Inc., 745 Fifth Avenue, 5th Floor, New York, NY 10151, Attention: Lydia Mulyk.

Beneficial Holders: If you hold shares in street name, you must contact the firm that holds your shares to change or revoke any prior voting instructions. Attendance at the meeting will not by itself revoke a previously granted proxy.

Q: How are my shares voted if I submit a proxy card but do not specify how I want to vote?

A: If you submit a properly executed proxy card but do not specify how you want to vote, your shares will be voted **FOR** the election of the Company's nominees for director; **FOR** advisory approval of the compensation of the Company's Named Executive Officers; **FOR** the ratification of the selection of EisnerAmper LLP as our independent registered public accounting firm for the fiscal year ending July 31, 2020; and **FOR** the amendment to the By-Laws to implement majority voting in uncontested director elections. If you hold your shares beneficially, such as through a broker, and not of record, see the question immediately below.

Q: Will my shares be voted if I don't provide instructions to my broker?

A: A "broker non-vote" occurs when a beneficial holder does not provide instructions to a broker, bank or other nominee and such broker, bank or other nominee lacks discretionary voting power to vote shares with respect to a particular proposal. In uncontested situations, under New York Stock Exchange ("NYSE") rules, brokers are permitted to exercise discretionary voting authority on "routine" matters, but beneficial shareholders must provide voting instructions with respect to non-routine matters. However, the rules of the NYSE governing brokers' discretionary authority do not permit brokers to exercise discretionary authority regarding any of the proposals to be voted on at a shareholder meeting involving a contested election where brokers receive competing proxy materials. As a result, given that we expect a contested election at the Annual Meeting, we do not expect there to be any broker non-votes at the Annual Meeting. In the event that the election of directors becomes uncontested, brokers may be permitted to exercise voting authority on "routine" matters.

Your vote is important and we strongly encourage you to vote the **WHITE** proxy card by following the instructions provided on the enclosed voting instruction form. Please vote promptly.

Q: What vote is required to elect the directors?

A: In accordance with New York law and the By-Laws, directors are elected by a plurality of the votes cast at the shareholder meeting. This means that the two director candidates receiving the highest number of **FOR** votes will be elected. A properly executed proxy card marked **WITHHOLD** and broker non-votes, if any, with respect to the election of a director nominee will be counted for purposes of determining if there is a quorum at the Annual Meeting, but will not be considered to have been voted **FOR** or **AGAINST** any director nominee. Withhold votes and broker non-votes, if any, will have no effect on the outcome of the election. This year, two directors are up for election.

Q: What vote is required to approve, on an advisory basis, the compensation of the Company's Named Executive Officers?

A: This matter is being submitted to enable shareholders to approve, on an advisory basis, the compensation of the Company's Named Executive Officers. In order to be approved on an advisory basis, this proposal must receive the **FOR** vote of a majority of the votes cast on the matter at the meeting. Abstentions and broker non-votes, if any, will have no effect on this proposal.

Q: What vote is required to ratify the selection of EisnerAmper LLP as the Company's independent registered public accounting firm for the fiscal year ending July 31, 2020?

A: For approval of this proposal, the proposal must receive the **FOR** vote of a majority of the votes cast on the matter at the meeting. Abstentions and broker non-votes, if any, will have no effect on this proposal.

Q: What vote is required to approve the amendment to the By-Laws to implement majority voting in uncontested director elections?

A: As provided in the By-Laws, an amendment to the By-Laws must receive the **FOR** vote of a majority of the total votes present in person or represented by proxy and entitled to vote at the Annual Meeting. Abstentions will have the same effect as a vote against this proposal. Broker non-votes will have no effect on the outcome of the proposal.

Q: Who will count the votes?

A: Votes will be counted by an independent inspector of election appointed for the Annual Meeting by the Chairman of the Annual Meeting.

Q: Do shareholders have any appraisal or dissenters' rights on the matters to be voted on at the Annual Meeting?

A: No, shareholders of the Company will not have rights of appraisal or similar dissenters' rights with respect to any of the matters identified in this Proxy Statement to be acted upon at the Annual Meeting.

Q: Is cumulative voting permitted for the election of directors?

A: No, shareholders do not have cumulative voting rights in the election of directors.

Q: What do I need for admission to the Annual Meeting?

A: Attendance at the Annual Meeting will be limited to record and beneficial holders of Common Stock as of the Record Date, individuals holding a valid proxy from a record holder, and other persons authorized by the Company. If you are a shareholder of record, your name will be verified against the list of shareholders of record prior to your admittance to the Annual Meeting. You should be prepared to present photo identification for admission. If you hold your shares in street name, you will need to provide proof of beneficial ownership on the Record Date, such as a brokerage account statement showing that you owned Common Stock as of the Record Date, a copy of a voting instruction form provided by your broker, bank or other nominee, or other similar evidence of ownership as of the Record Date, as well as your government-issued photo identification, for admission. If you are a proxy holder for a holder of record of Common Stock as of the Record Date, then you must also bring the validly executed proxy naming you as the proxy holder, signed by the shareholder of record who owned such shares of Common Stock as of the Record Date. If you do not provide photo identification or comply with the other procedures described above upon request, you will not be admitted to the Annual Meeting. For security reasons, you and your bags will be subject to search prior to your admittance to the Annual Meeting.

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

A: We will announce results promptly once they are available and will report final results in a filing with the Securities and Exchange Commission ("SEC") on Form 8-K.

Q: What is "householding" and how does it work?

A: Some brokers and other nominee record holders may be participating in the practice of "householding" this Proxy Statement and other proxy materials. This means that only one copy of this Proxy Statement and other proxy materials may have been sent to multiple shareholders in a shareholder's household. The Company will promptly deliver additional copies of the Proxy Statement and other proxy materials to any shareholder who contacts (i) the Company's principal corporate office at 527 Madison Avenue, New York, New York 10022, Attention: Investor Relations or at (212) 583-0100 requesting such additional copies or (ii) Kingsdale Advisors, the Company's proxy solicitor, at (888) 518-1554. If a shareholder is receiving multiple copies of the Proxy Statement and other proxy materials at the shareholder's household and would like to receive only a single copy of the Proxy Statement and other proxy materials for a shareholder's household in the future, such shareholder should contact their broker, other nominee record holder or the Company's investor relations department to request the future mailing of only a single copy of the Company's Proxy Statement and other proxy materials.

Q: Who is paying the costs of this solicitation?

A: The cost of the Board's solicitation related to this Proxy Statement will be paid by the Company.

Q: Has the Company received notice from one or more shareholders that they intend to nominate director candidates at the Annual Meeting?

A: Harbert has nominated a slate of two candidates for election as Class II Directors at the Annual Meeting. The Board **DOES NOT** endorse the Harbert Nominees and unilaterally recommends that you vote "**FOR**" the election of each of the nominees proposed by the Board by marking, signing, dating and promptly returning the enclosed **WHITE** proxy card. The Harbert Nominees are **NOT** endorsed by the Board.

You may receive proxy solicitation materials from Harbert, including an opposition proxy statement and proxy card. **The Board recommends that you disregard them along with any blue proxy card you may receive.** We are not responsible for the accuracy of any information provided by or relating to Harbert or their nominees contained in any proxy solicitation materials filed or disseminated by, or on behalf of, Harbert or any other statements that Harbert may otherwise make. If you have already voted using the blue proxy card provided by Harbert, you have the right to change your vote by completing, signing and dating the enclosed **WHITE** proxy card and mailing it in the postage pre-paid envelope provided, or by voting by telephone or via the Internet by following the instructions provided on the enclosed **WHITE** proxy card. Only the latest dated proxy card you submit will be counted. If you vote "withhold" on the Harbert Nominees using the proxy card provided by Harbert, your vote will not be counted as a vote for the Board's nominees, but will result in the revocation of any previous vote you may have cast on the Company's **WHITE** proxy card. If you wish to vote pursuant to the recommendation of the Board, you should disregard any blue proxy card that you receive and vote the **WHITE** proxy card. **If you have any questions or need assistance voting, please call Kingsdale Advisors, our proxy solicitor, at (888) 518-1554 (toll-free in North America) or at (416) 867-2272 (outside of North America).**

If you receive multiple Proxy Statements or **WHITE** proxy cards, your shares are likely registered differently or are in more than one account, such as individually and also jointly with your spouse. Please vote each and every **WHITE** proxy card or **WHITE** voting instruction form you receive. Since Harbert has submitted an opposing slate of director candidates, we will likely conduct multiple mailings prior to the Annual Meeting date to ensure shareholders have our latest proxy information and materials to vote. We will send you a new **WHITE** proxy card with each mailing, regardless of whether you have previously voted. Only the latest dated proxy you submit will be counted. **If you wish to vote as recommended by the Board, then you should only submit WHITE proxy cards.**

Q: Who can help answer my questions?

A: Enzo Biochem stockholders who have questions about matters to be voted on at the Annual Meeting or who desire additional copies of this Proxy Statement or additional proxy or voting instruction cards should contact:

Enzo Biochem, Inc.
527 Madison Avenue
New York, New York 10022
(212) 583-0100
Attention: Investor Relations

Or



Kingsdale Advisors
(888) 518-1554 (toll-free in North America)
(416) 867-2272 (outside of North America)
email: ENZ@kingsdaleadvisors.com

BACKGROUND TO THE SOLICITATION

In addition to the Company's normal course Investor Relations program, for the past three years, the Company has conducted regular outreach to its top shareholders as part of its commitment to be responsive to shareholder concerns. Based on shareholder feedback it received, the Compensation Committee made changes to the structure of the compensation program, resulting in significant support for the Company's say-on-pay vote at the 2018 annual shareholder meeting. Since that time, the Company's shareholder engagement has become increasingly focused on Board and governance matters rather than compensation topics. As a result, the Board's regular reviews of Board and governance practices have more greatly emphasized the feedback that has been received on these topics.

As part of the aforementioned Investor Relations efforts, the Company engaged with shareholders on a range of topics over the course of the year, which included extensive engagement with Harbert at their request.

Between October 2018 and March 2019, the Company and Harbert had several phone calls and in-person meetings with Harbert to discuss the Company's history, its strategy and the financial results for the first quarter and second quarter of the Company's fiscal year.

On January 14, 2019, James O'Brien, then Executive Vice President of the Company took Mr. Lucas on a tour of the Company's laboratory.

On April 8, 2019, Harbert filed a Schedule 13D with the SEC, disclosing that Harbert beneficially owned 6.92% of the Company's outstanding Common Stock.

On May 7, 2019, Mr. Barry Weiner, President and CFO, and Dr. Elazar Rabbani, Ph.D., CEO and Chairman of the Board, met with Mr. Kenan Lucas and Mr. Zachary Turnage of Harbert to discuss Harbert's views regarding the Company.

On May 28, 2019, Mr. Weiner spoke telephonically with Mr. Lucas and Mr. Turnage. On the call, Mr. Lucas and Mr. Turnage demanded that (i) two non-identified existing independent directors resign and be replaced with two candidates selected by Harbert and (ii) Mr. Lucas be granted Board observer status so that he could participate in Board meetings without the right to vote. Mr. Lucas made no suggestion regarding the business prospects of the Company. Prior to this call Harbert had not raised the topic of Board representation. When Mr. Weiner inquired about the identity of Harbert's nominees and which independent directors Harbert would like to replace, Harbert indicated it did not have a preference as to which directors would be replaced and refused to share the names but continued to demand Board representation. Harbert also requested that the Company include a proposal to declassify its Board at the upcoming annual meeting. Mr. Weiner indicated that he would share Harbert's demands with the full Board, which he subsequently did.

On June 13, 2019, Mr. Lucas had a conversation with Mr. Weiner. During this call Mr. Lucas insisted on a response to Harbert's demands made on the May 28 call. When Mr. Weiner again requested the identities of his nominees to facilitate the Board's review of his demands, Mr. Lucas refused to do so.

On June 24, 2019, Mr. Lucas sent an email to Mr. Weiner, copying Dr. Bruce Hanna, Ph.D., the Board's Lead Independent Director, repeating its demands. The next day, Mr. Lucas sent another email to Mr. Weiner. Mr. Lucas again demanded a Board observer position to "ensure that the thoughts and concerns of your shareholders are focused on by the Board."

On June 25, 2019, Dr. Hanna emailed Mr. Lucas offering to schedule a call after the July 4 holiday. Dr. Hanna was traveling for work and unable to devote the time necessary to prepare for and hold such a call prior to such date. Mr. Lucas demanded a conversation within the next two days and asserted that waiting two weeks would not be conducive to working cooperatively.

On July 8, 2019, Dr. Hanna and Mr. Lucas had a telephone conversation relating to Harbert's demands. In this conversation, Mr. Lucas again did not provide the names of his nominees.

On July 9, 2019, the Board held a special meeting to discuss and evaluate Harbert's demands based on the information made available to them by Harbert. The Board also discussed the previous day's conversation between Dr. Hanna and Mr. Lucas and a potential response.

On July 10, 2019, Mr. Lucas emailed Dr. Hanna as a follow up to the July 8 call to which Dr. Hanna responded, noting that the Board had called a special meeting to discuss the Harbert demands and that a written response was being prepared.

On July 12, 2019, Dr. Hanna emailed Mr. Lucas informing Mr. Lucas that the Board had evaluated and would not agree to Harbert's demands. Dr. Hanna specifically communicated the Board's belief that it would not be prudent for the Board to request resignations from two of its current independent directors in order to appoint to the Board two unnamed individuals selected by Harbert.

On July 25, 2019, Mr. Lucas responded to Dr. Hanna's July 12 email, copying Mr. Weiner and including the resumes of the Harbert Nominees. This was the first time that Harbert disclosed the names of the Harbert Nominees to the Company despite repeated prior requests.

On July 30, 2019, Dr. Hanna emailed Mr. Lucas stating that Dr. Hanna was in receipt of the resumes of the Harbert Nominees and that the Board would review. Mr. Lucas responded on the same day and reiterated Harbert's demand for immediate change to the Board while threatening that Harbert may take other action.

Between July 30, 2019 and September 17, 2019, the Board and Nominating/Governance Committee began to evaluate the candidacy of the Harbert Nominees, including by comparing the skills and experience of the Harbert Nominees against the skills and experience of other potential candidates for the Board in light of the Board's current and expected future needs. During this time, the Company did not receive any further communications from Harbert.

On September 17, 2019, Harbert delivered a formal notice indicating an intent to nominate Mr. Peter J. Clemens, IV and Mr. Fabian Blank for election at the Annual Meeting. Harbert also issued a press release, launched a “campaign” website, and mailed a letter to shareholders attacking the Company. Harbert’s letter characterized the Board’s actions as “forc[ing] [Harbert] to pursue” a proxy battle because of the Company’s alleged failure to engage in “substantive, private discussions” with Harbert despite the fact that the Company had engaged in consistent private dialogue with Harbert over several of the previous months.

On September 30, 2019, Harbert sent a demand letter (the “Shareholder Demand Letter”) to the Company, requesting access to certain stockholder lists and other records of the Company as of the date of the Shareholder Demand Letter and at certain times until the Company’s upcoming Annual Meeting.

On October 6, 2019, a representative of Sidley Austin LLP (“Sidley”), the Company’s outside counsel, emailed a response to the Shareholder Demand Letter to Schulte Roth & Zabel LLP (“Schulte”), Harbert’s outside counsel. Sidley expressed the Company’s willingness to make certain corporate records available, subject to the signing and return of a customary non-disclosure agreement (the “NDA”).

On October 6, 2019, Mr. Blank sent an email to Mr. Weiner, copying Mr. Clemens, introducing himself to Mr. Weiner for the first time. In this email, Mr. Blank gave a short review of his and Mr. Clemens’ qualifications for the Board and asked to meet with Mr. Weiner.

On October 7, 2019, at the Company’s regularly scheduled Board meeting, the Board the discussed current status of communications with Harbert and the potential candidacy of the Harbert Nominees.

On October 8, 2019, Mr. Weiner replied to Mr. Blank’s October 6 email, notifying Mr. Blank and Mr. Clemens that the email had been relayed to Dr. Rabbani and Dr. Hanna. Later that day, Dr. Rabbani emailed Harbert’s Nominees notifying them that the Board was interested in interviewing Mr. Blank and Mr. Clemens in order to make an informed decision about their candidacy and that Sidley would coordinate the logistics.

On October 9, 2019, a Sidley representative sent an interview invitation and the Company’s director questionnaire to Mr. Lucas, Harbert’s nominees, and Schulte.

On October 10, 2019, Mr. Lucas emailed Dr. Rabbani, objecting to the “inserti[on] [of] attorneys into the discussion” and completion of the director questionnaire on behalf of Harbert’s nominees. As a result of Mr. Lucas’s objection and after consulting with members of the Board, Dr. Rabbani instructed his assistant to email Mr. Lucas to notify him that she instead would be handling logistics for the interviews and that she would canvas the Board for availability. Dr. Rabbani’s assistant also noted that the Company would waive the requirement to complete the director questionnaire before these initial interviews.

On October 14, 2019, Dr. Rabbani's assistant emailed Mr. Lucas, with a copy to Dr. Rabbani, offering to interview Mr. Clemens and Mr. Blank to help the Board evaluate their candidacy, stating that the Board members' calendars were being checked for availability. Mr. Lucas confirmed receipt of such email.

On October 16, 2019, Dr. Rabbani's assistant emailed Mr. Lucas to inform them that the Board had confirmed its availability to interview Harbert's two director candidates on November 4 and November 5.

From October 16 through November 5, the Company continued to hold time on the calendar to interview the Harbert Nominees on November 4 and 5. However, despite Mr. Lucas's previous interest in having the Company interview the Harbert Nominees in order for the Board to make an informed decision about their candidacy, Mr. Lucas never responded to the Company's October 16 email and the Harbert Nominees did not show up on the offered interview dates. During this period and until November 14, the Company did not receive any communication from Harbert.

On November 14, 2019, Mr. Lucas emailed Dr. Rabbani, asserting that he had purportedly requested on numerous occasions via phone to continue Harbert's engagement with the Company but that they had not received any response. This email demanded a response within 24 hours. Dr. Rabbani responded the next day, stating that the Company's phone records showed no phone calls or phone messages from Mr. Lucas. Dr. Rabbani also offered to have another meeting with Harbert in response to Harbert's request.

On November 15, 2019, Harbert filed a preliminary proxy statement.

On November 20, 2019, the Company filed its preliminary proxy statement.

On December 2, 2019, Dr. Rabbani received an email from Mr. Lucas requesting a phone call with Dr. Rabbani on December 6. Dr. Rabbani responded and agreed to speak with Mr. Lucas at such time.

On December 5, 2019, the Company filed this definitive proxy statement.

**PROPOSAL 1
ELECTION OF DIRECTORS**

Board Nominee for Election at the Annual Meeting.

The Board has three staggered classes of directors, each of which serves for a term of three years. At the Annual Meeting, the Board's Class II Directors will be elected to hold offices for a term of three years or until their successors are elected and qualified. Unless otherwise instructed, the shares represented by validly submitted proxy cards will be voted "FOR" the election of the below-listed Board nominees to serve as Class II Directors of the Company. The below-listed nominees have consented to being named in this Proxy Statement and to serve as Class II Directors of the Company if elected. Management has no reason to believe that the below-listed Board nominees will not be candidates or will be unable to serve as Class II Directors. However, in the event that one or both of the below-listed Board nominees should become unable or unwilling to serve as Class II Directors, the proxy cards will be voted for the election of such alternate person as shall be designated by the Class I and Class III Directors currently on the Board. If any alternate person is designated by the Class I and Class III Directors currently on the Board to serve as Class II Director-nominees, the Company will publicly notify shareholders by press release and will promptly distribute to shareholders revised proxy materials (including a revised **WHITE** proxy card) that (i) identifies such substitute nominee(s), (ii) discloses whether such substitute nominee(s) consented to being named in the revised proxy statement and to serve as a director of the Company if elected, and (iii) includes certain other disclosures required by applicable federal proxy rules and regulations with respect to such substitute nominee(s).

The total cumulative length of time that any member of the Board who is not an officer or employee of the Company (an "Outside Director") may serve on the Board is limited to a maximum of three, three-year terms, whether consecutively or in total, plus any portion of an earlier three-year term that such Outside Director may have been appointed to serve. The term limit set forth above may be extended for up to a maximum of one additional term if such individual is re-nominated by the unanimous agreement of the Board.

Biographical Information for Nominees

**CLASS II DIRECTOR NOMINEES TO SERVE UNTIL
THE 2022 ANNUAL MEETING, IF ELECTED:**

Name	Age	Year First Became A Director
Barry W. Weiner	69	1972
Bruce A. Hanna, Ph.D.	76	2017

BARRY W. WEINER is the Company's President, Chief Financial Officer, Principal Accounting Officer as well as a director and founder of the Company. He has served as the Company's President since 1996, and previously held the position of Executive Vice President. Before his employment with Enzo Biochem, he worked in several managerial and marketing positions at the Colgate Palmolive Company. Mr. Weiner is a member of the New York Biotechnology Association. He received his Bachelor of Arts degree in Economics from New York University and his Master of Business Administration in Finance from Boston University.

We believe that Mr. Weiner's qualifications to serve on our Board are demonstrated by his deep knowledge of our businesses and the industries in which we are involved, along with his experience in finance, management and marketing, including the identification of acquisition targets, business development and partnering and raising capital.

BRUCE A. HANNA, Ph.D., has been a director of the Company since January 2017. He is currently a member of the Company's Audit, Compensation and Nominating/Governance Committees and is the chairman of the Nominating/Governance Committee. He has served as a Clinical Professor of Pathology and Clinical Professor of Microbiology at the New York University School of Medicine since 1979 and Adjunct Professor of Science at New York University College of Dentistry since 2010. From 2006 to 2015, he served on the ASM International Committee and WHO Global Committee; from 2000 to 2012, he served as the Editor of the Clinical Microbiology Review; from 1982 to 2010, he was a director of Clinical Microbiology and Immunology; and from 2008 to 2010 he was Interim director of Pathology, Bellevue Hospital Center. Dr. Hanna earned a Bachelor of Science in Biology from Saint Bonaventure University, a Masters in Science in Microbiology from Northeastern University and a Ph.D. in Microbiology from Saint John's University. Dr. Hanna's post-doctorate work in Clinical Microbiology was at Mt. Sinai Hospital.

We believe that Dr. Hanna's qualifications to serve on our Board are demonstrated by his professional background, experience in the healthcare field, including his academic background and technical experience.

THE BOARD UNANIMOUSLY RECOMMENDS THAT YOU VOTE "FOR" THE ELECTION OF THE ABOVE-NAMED BOARD NOMINEES TO SERVE AS CLASS II DIRECTORS OF THE COMPANY.

The persons named as proxies intend to vote the proxies **"FOR"** the election of Mr. Weiner and Dr. Hanna unless you indicate on the proxy card a vote to **"WITHHOLD"** your vote with respect to either nominee. If for some reason any director nominee is unable to serve, or for good cause will not serve if elected, the persons named as proxies may vote for a substitute nominee recommended by the Board. If any substitute nominees are designated, we will file an amended proxy statement that, as applicable, identifies the substitute nominees, discloses that such nominees have consented to being named in the revised proxy statement and to serve if elected, and includes certain biographical and other information about such nominees required by SEC rules.

DIRECTORS WHO ARE CONTINUING IN OFFICE:

Class I: Term to Expire at the 2021 Annual Meeting in 2022

Name	Age	Year First Became a Director
Gregory M. Bortz	50	2010
Dov Perlysky	57	2012

Class III: Term to Expire at the 2020 Annual Meeting in 2021

Name	Age	Year First Became a Director
Elazar Rabbani, Ph.D.	76	1976

DIRECTORS, EXECUTIVE OFFICERS AND KEY EMPLOYEES

The current directors, executive officers and key employees of the Company and its subsidiaries are identified in the table below.

Name	Age	Year Became a Director, Executive Officer or Key Employee	Position
Elazar Rabbani, Ph.D.	76	1976	Chairman of the Board, Chief Executive Officer and Secretary
Barry W. Weiner	69	1977	President, Chief Financial Officer, Principal Accounting Officer, Treasurer and Director
Dieter Schapfel, M.D.	56	2014	Chief Medical Director, Enzo Clinical Labs
Kara Cannon	51	2018	Corporate Vice President, Commercial Operations
Bruce A. Dey	61	2014	Vice President of Sales, Enzo Clinical Labs
Gregory M. Bortz	50	2010	Director
Dov Perlysky	57	2012	Director
Bruce A. Hanna, Ph.D.	76	2017	Director

(1) Director term expires at the Annual Meeting.

Biographical Information Regarding Directors, Executive Officers and Key Employees

ELAZAR RABBANI, Ph.D., is an Enzo Biochem founder and has served as the Company's Chairman of the Board and Chief Executive Officer since its inception in 1976 and as Secretary since November 25, 2009. Dr. Rabbani has authored numerous scientific publications in the field of molecular biology, in particular, nucleic acid labeling and detection. He is also the lead inventor of many of the Company's pioneering patents covering a wide range of technologies and products.

Dr. Rabbani received his Bachelor of Arts degree from New York University in Chemistry and his Ph.D. in Biochemistry from Columbia University. He is a member of the American Society for Microbiology.

We believe that Dr. Rabbani's qualifications to serve on our Board are demonstrated by his extensive knowledge of our industry and his accomplishments over the last 42 years, including building our intellectual property estate and the commercialization of technology, which has generated significant revenues for the Company.

DIETER SCHAPFEL, M.D., is the Chief Medical director for Enzo Clinical Labs and has been employed with the Company since 2012, initially as a consulting pathologist. Dr. Schapfel served as Medical Director of Pathology at Southside Hospital–North Shore/Long Island Jewish Health System from 2006 to 2012. He served as a staff pathologist at Huntington Hospital from January 2004 to June 2006. Dr. Schapfel served as director of Pathology and Medical Affairs and the College of American Pathologists director of Pathology, Dublin, Ireland and Farmingdale, New York for Icon Laboratories from February 2002 to October 2003. Dr. Schapfel is a graduate of the State University of New York at Stony Brook, College of Medicine, where he also served his residency. He is a diplomat of the American Board of Pathology with certification in Anatomic and Clinical Pathology and is also a diplomat of The National Board of Medical Examiners.

KARA CANNON is Corporate Vice President of Commercial Operations and has been employed with the Company since 2011. She is responsible for strategic and tactical marketing, sales, manufacturing and general management of the operations. Ms. Cannon previously held executive positions at Pall Corporation, where she focused on commercial operations within the areas of diagnostics, biotechnology and biosciences. She has also held marketing and technical positions at Dynal Biotech (now ThermoFisher Scientific). She has had extensive experience in the marketing and selling of innovative platforms for the diagnostics markets, as well as the development and execution of strategic plans for the growth and sustainability of diagnostic-related businesses. Ms. Cannon holds a BA from Franklin and Marshall College.

BRUCE A. DEY is Vice President, Sales & Marketing for Enzo Clinical Labs and joined on December 6, 2003. Mr. Dey has over 31 years of experience developing sales and commercial operations in the laboratory services industry. Prior to joining Enzo Clinical Labs, Mr. Dey served as Vice President, Sales & Marketing for CDS Laboratories from 1989 to 2001, which was acquired by Quest Diagnostics in November 2001. He began his career with SmithKline Beecham Clinical Laboratories. Mr. Dey earned a Bachelor of Science in Economics and a Master of Business Administration from The State University of New York at Albany.

GREGORY M. BORTZ has been a director of the Company since January 2010. He is currently a member of the Company's Audit, Compensation and Nominating/Governance Committees and has been the chairman of the Audit Committee since November 2010. Mr. Bortz became Enzo's Lead Independent Director in 2017. Mr. Bortz is the founder of the CREO group of companies ("CREO") and serves as CREO's managing partner. CREO's interests include a combination of private equity and hedge fund investments. On the private equity side, CREO is currently investing through its third fund, CREO Capital Partners Fund III, L.P. Under Mr. Bortz's leadership, CREO has achieved successful exits from several private equity investments. CREO's success is driven by its strategy of acquiring middle market companies at reasonable prices, strengthening and improving their operations and balance sheets and adding scale through selective, accretive mergers and acquisitions. Mr. Bortz serves as a board member of the companies in CREO's private equity portfolio. In addition, Mr. Bortz serves as the Chief Investment Officer of the CREO Select Opportunities Fund, a hedge fund that focuses on investing in public fixed income and equity securities.

From October 2000 to February 2005, Mr. Bortz was Senior Vice President in the Investment Banking Division, of Lehman Brothers, Inc., an international investment bank. During his tenure at Lehman Brothers, Mr. Bortz was involved in numerous public and private debt and equity offerings, mergers and acquisitions and restructurings. Prior to joining Lehman Brothers, Mr. Bortz held the position of Vice President of Investment Banking at Credit Suisse First Boston, an international investment bank, from January 1998 to October 2000. Mr. Bortz also previously held the position of Manager at the accounting firm of Ernst and Young (1994–1997) and Senior at the public accounting firm of Arthur Andersen (1993–1994), both in those firms' respective audit groups. Mr. Bortz was qualified as a chartered accountant in England and Wales as well as in South Africa. He graduated with honors from the University of Cape Town with a Bachelors of Business Science in Finance and holds a Postgraduate Diploma in Accounting from that same institution.

We believe that Mr. Bortz's qualifications to serve on our Board are demonstrated by his more than 24 years of accounting, auditing, financial and investment banking experience, as well as his experience as a board member of CREO's portfolio companies.

DOV PERLYSKY has been a director of the Company since September 2012. He is currently a member of the Company's Audit, Compensation and Nominating/Governance Committees. Mr. Perlysky became the chairman of the Compensation Committee in 2017. Mr. Perlysky has been a member of the Board of Directors of Pharma-Bio Serv, Inc. since 2004, Highlands State Bank since 2010 and News Communications since 2007. Mr. Perlysky has also been the managing member of Neshet, LLC, a private investment firm, since 2000 and a director of Engex, Inc., a closed-end mutual fund, since 1999. From 1998 until 2002, Mr. Perlysky was a vice president in the private client group of Laidlaw Global Securities, a registered broker-dealer. Mr. Perlysky received his Bachelor of Science in Mathematics and Computer Science from the University of Illinois in 1985 and his Master of Science in Management Studies from the J.L. Kellogg School of Management of Northwestern University in 1991.

We believe that Mr. Perlysky's qualifications to serve on our Board are demonstrated by his professional background, experience in the healthcare field (including his director position at Pharma-Bio Serv, Inc.), other current and past board positions and finance background, making him well qualified as a member of our Board.

Family Relationships

There are no family relationships of first cousins or closer, among the Company's directors and executive officers, by blood marriage or adoption, except that Dr. Elazar Rabbani and Barry W. Weiner are brothers-in-law.

Director Independence

Messrs. Gregory M. Bortz, Dov Perlysky and Dr. Bruce A. Hanna, Ph.D., qualify as “independent directors” under the criteria established by the NYSE.

THE BOARD UNANIMOUSLY RECOMMENDS THAT YOU VOTE “FOR” THE ELECTION OF MR. WEINER AND DR. HANNA TO SERVE AS CLASS II DIRECTORS OF THE COMPANY.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Set forth below is information, as of December 3, 2019 concerning stock ownership of all persons known by the Company to own beneficially 5% or more of the shares of Common Stock of the Company, the executive officers named in the “Summary Compensation Table” as “Named Executive Officers,” all current directors and the Board’s Class II Director-nominees, and all current directors, executive officers and key employees of the Company as a group, based upon the number of outstanding shares of Common Stock as of the close of business on December 3, 2019.

The percentages in the “Percent of Class” column are calculated in accordance with the rules of the SEC, under which a person may be deemed to be the beneficial owner of shares if that person has or shares the power to vote or dispose of those shares or has the right to acquire beneficial ownership of those shares within 60 days (for example, through the exercise of an option or warrant). The shares shown in the table as beneficially owned by certain individuals may include shares owned by certain members of their respective families. Because of these rules, more than one person may be deemed to be the beneficial owner of the same shares. The inclusion of the shares shown in the table is not necessarily an admission of beneficial ownership of those shares by the person indicated. Except as otherwise indicated, each of the persons named has sole voting and investment power with respect to the shares shown.

Title of Class	Name of Beneficial Owner	Amount and Nature of Beneficial Ownership ⁽¹⁾	Percent of Class ⁽²⁾
Common Stock	Elazar Rabbani, Ph.D.	1,954,679 ⁽³⁾	4.0%
Common Stock	Barry W. Weiner	1,390,472 ⁽⁴⁾	2.8%
Common Stock	Dieter Schapfel, M.D.	107,836 ⁽⁵⁾	*
Common Stock	Kara Cannon	72,971 ⁽⁶⁾	*
Common Stock	Bruce A. Dey	65,364 ⁽⁷⁾	*
Common Stock	Gregory M. Bortz	353,209 ⁽⁸⁾	*
Common Stock	Dov Perlysky	840,018 ⁽⁹⁾	1.7%
Common Stock	Bruce A. Hanna, Ph.D.	142,796 ⁽¹⁰⁾	*
Common Stock	Harbert Management Corp	5,620,681 ⁽¹¹⁾	11.8%
Common Stock	Evermore Global Advisors LLC	4,007,851 ⁽¹²⁾	8.4%
Common Stock	Wellington Management Group LLP	3,576,530 ⁽¹³⁾	7.5%
Common Stock	Renaissance Technologies, LLC	3,299,563 ⁽¹⁴⁾	6.9%
Common Stock	BlackRock Fund Advisors	3,241,497 ⁽¹⁵⁾	6.8%
Common Stock	All directors, executive officers and key employees as a group (8 persons)	4,927,344 ⁽¹⁶⁾	10.1%

* Represents beneficial ownership of less than 1%.

- (1) Except as otherwise noted in the footnotes to the table, all shares of Common Stock are beneficially owned and the sole investment and voting power is held by the persons named, and such persons’ address is c/o Enzo Biochem, Inc., 527 Madison Avenue, New York, New York 10022.
- (2) For directors, executive officers and key employees, based upon 48,926,892 shares of Common Stock of the Company considered outstanding as of the close of business on the Record Date. Common Stock not outstanding but deemed beneficially owned by virtue of the right of an individual to acquire shares within 60 days from the date hereof is treated as outstanding when determining the amount and percentage of Common Stock owned by directors and executive officers individually and as a group.
- (3) Includes (i) 289,615 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof, (ii) 5,308 shares of Common Stock held in the name of Dr. Rabbani as custodian for certain of his children, (iii) 18,794 shares of Common Stock held in the name of Dr. Rabbani’s wife as custodian for certain of their children, and (iv) 38,208 shares of Common Stock held in the Company’s 401(k) plan.
- (4) Includes (i) 248,989 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof, (ii) 3,638 shares of Common Stock that Mr. Weiner holds as custodian for certain of his children, and (iii) 38,215 shares of Common Stock held in the Company’s 401(k) plan. (5) Includes 46,000 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof, and (ii) 9,010 shares of Common Stock held in the Company’s 401(k) plan. This individual is considered a key employee.
- (5) Includes 93,000 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof, and (ii) 13,668 shares of Common Stock held in the Company’s 401(k) plan. This individual is considered a key employee.
- (6) Includes 62,333 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof, and (ii) 10,638 shares of Common Stock held in the Company’s 401(k) plan. This individual is considered a key employee.
- (7) Includes (i) 29,333 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof, and (ii) 36,031 shares of Common Stock held in the Company’s 401(k) plan. This individual is considered a key employee.
- (8) Includes 259,510 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof.
- (9) Includes (i) 259,510 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof, (ii) 30,000 shares owned by Laya Perlysky (Mr. Perlysky’s wife) in an IRA account of which Mr. Perlysky disclaims beneficial ownership, (iii) 18,250 shares owned by Irwin Dov Perlysky IRA, (iv) 109,237 shares owned directly by RSD 2012 GRAT, of which Mr. Perlysky is the trustee of which Mr. Perlysky disclaims beneficial ownership; (v) 45,000 shares owned by Sky Ventures LLC, of which Mr. Perlysky is the manager, (vi) 38,353 shares owned directly by Mr. Perlysky, (vii) 325,875 shares owned by Kinder Investments LLP, (viii) 6,981 shares owned by Krovim LLC, (ix) 3,225 shares owned by MidAtlantic Capital LLC, (x) 3,139 shares owned directly by Laya Perlysky of which Mr. Perlysky disclaims beneficial ownership, and (xi) 448 shares owned by LDP Family Partnership LP of which Mr. Perlysky disclaims beneficial ownership.
- (10) Includes 127,796 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof. Includes 43,632 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof.
- (11) The address of Harbert Management Corp. is 2100 Third Avenue North, Suite 600, Birmingham, AL 35203. This information is based solely on a Schedule 13F filed on September 30, 2019.
- (12) The address of Evermore Global Advisors, LLC is 89 Summit Avenue, Summit NJ 07901. This information is based solely on a Schedule 13F filed on September 30, 2019.
- (13) The address of Wellington Management Group LLP is 280 Congress Street, Boston, MA 02210. This information is based solely on a Schedule 13F filed on September 30, 2019.
- (14) The address of Renaissance Technologies, LLC is 800 Third Avenue, New York, NY 10022. This information is based solely on a Schedule 13F filed on September 30, 2019.
- (15) The address of BlackRock Fund Advisors is 400 Howard St., San Francisco, CA 94105. This information is based solely on a Schedule 13F filed on September 30, 2019.
- (16) Includes 1,370,085 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof.

CORPORATE GOVERNANCE

Corporate Governance Review and Shareholder Engagement

Our Board and management are committed to responsible corporate governance to ensure that the Company is managed for the long-term benefit of its shareholders. To that end, for the past three years the Company has conducted regular outreach to its top shareholders as part of its commitment to be responsive to shareholder concerns. In 2018, we engaged with 68% of our top 25 shareholders that collectively own over 58% of our Common Stock. During the past year, as in prior years, the Board and management have reviewed and updated, as appropriate, the Company's corporate governance policies and practices, including the By-Laws, incorporating feedback received during the course of its engagements, which have become more focused on Board and governance matters over the past year. In an effort to further its commitment to responsible corporate governance, the Board:

- is recommending to shareholders the approval at the Annual Meeting of an amendment to the By-Laws to implement majority voting in uncontested director elections, as described further in Proposal 4;
- adopted a Diversity Policy with respect to the evaluation of director nominees; and
- amended its Lead Independent Director Charter to strengthen the duties of the Lead Independent Director role.

Corporate Governance Policies and Practices

The Company has a variety of policies and practices to foster and maintain responsible corporate governance, including the following:

Corporate Governance Guidelines—The Board adopted Corporate Governance Guidelines, which collect in one document many of the corporate governance practices and procedures that had evolved over the years. These guidelines address the duties of the Board, director qualifications and selection process, Board operations, Board committee matters and continuing education. The guidelines also provide for annual self-evaluations by the Board and its committees. The Board reviews these guidelines on an annual basis. The guidelines are available on the Company's website at www.enzo.com and in print by contacting Investor Relations at (212) 583-0100.

Corporate Code of Business Conduct and Ethics—The Company has a Code of Business Conduct and Ethics that applies to all of the Company's employees, officers and members of the Board. The Code of Business Conduct and Ethics is available on the Company's website at www.enzo.com and in print by contacting Investor Relations at (212) 583-0100.

Board Committee Charters—Each of the Company's Audit, Compensation and Nominating/Governance Committees has a written charter adopted by the Board that establishes practices and procedures for such committee in accordance with applicable corporate governance rules and regulations. The charters are available on the Company's website at www.enzo.com and in print by contacting Investor Relations at (212) 583-0100.

Diversity Policy—As part of the Company's commitment to improved governance and in connection with the Company's shareholder engagement program, the Board adopted a diversity policy this year. The Nominating/Governance Committee shall consider diversity in its evaluation of candidates for Board membership in accordance with this policy. To reflect this policy, the Nominating/Governance Committee seeks to include diverse candidates in all director searches, taking into account diversity of age, gender, race, culture, business experience, education, skills, character and judgment, including by affirmatively instructing any search firm retained to assist the Nominating/Governance Committee in identifying director candidates, to seek to include diverse candidates from traditional and nontraditional candidate groups.

Director Term Limits—The total cumulative length of time an Outside Director may serve on the Board is limited to a maximum of three, three-year terms, whether consecutively or in total, plus any portion of an earlier three-year term that such Outside Director may have been appointed to serve. The term limit set forth above may be extended for a maximum of one additional term if such individual is re-nominated by the unanimous agreement of the Board.

Lead Independent Director Charter—As part of the Company’s ongoing commitment to improved governance and in connection with the Company’s shareholder engagement program, the Company amended the Lead Independent Director Charter this year to strengthen the duties of the Lead Independent Director role. The duties of the Lead Independent Director, as set forth in the amended Lead Independent Director Charter, among other things, are to:

- develop the agendas for and serve as chairman of the executive sessions of the independent directors of the Company;
- serve as principal liaison between the independent directors of the Company and the Chairman of the Board and between the independent directors and senior management;
- approve the agendas for Board meetings;
- call meetings of the independent directors;
- approve the appropriate schedule of Board meetings; advise the Chairman of the Board as to the quality, quantity and timeliness of the information submitted by the Company’s management that is necessary or appropriate for the independent directors to effectively and responsibly perform their duties;
- ensure that independent directors have adequate opportunities to meet and discuss issues in executive sessions without management present; if the Chairman of the Board is unable to attend a Board meeting, act as chairman of such Board meeting;
- ensure that he or she is available for consultation and direct communication with major Shareholder, if requested, and act as a contact for other interested persons;
- share with other directors, as he or she deems appropriate, letters and other communications and contact that he or she receives;
- and perform such other duties as the Board shall from time to time delegate.

In addition, the Lead Independent Director may require information relating to any matter be distributed to the Board. Gregory M. Bortz has served as Lead Independent Director since January 2017. The Lead Director role was established in October 2005.

The Lead Independent Director Charter, as amended, is available on the Company’s website at www.enzo.com, and in print by contacting Investor Relations at (212) 583-0100.

Director Independence

Requirements—The Board believes that a majority of its members should be independent, non-employee directors. The Board adopted the following “Director Independence Standards,” which are consistent with criteria established by the NYSE, to assist the Board in making these independence determinations:

No director can qualify as independent if he or she has a material relationship with the Company outside of his or her service as a director of the Company. A director is not independent if, within the preceding three years:

- the director was an employee of the Company;
- an immediate family member of the director was an executive officer of the Company;
- a director was affiliated with or employed by a present or former internal or external auditor of the Company;
- an immediate family member of a director was affiliated with or employed in a professional capacity by a present or former internal or external auditor of the Company;

- a director, or an immediate family member of the director, received more than \$120,000 per year in direct compensation from the Company, other than director and committee fees and pension or other forms of deferred compensation for prior services (provided such compensation is not contingent in any way on continued service);
- the director, or an immediate family member of the director, was employed as an executive officer of another company where any of the Company's executives served on that company's compensation committee of the board of directors;
- the director was an executive officer or employee, or an immediate family member of the director was an executive officer, of another company that made payments to, or received payments from, the Company for property or services in an amount which, in any single fiscal year, exceeded the greater of \$1 million or two percent (2%) of such other company's consolidated gross revenues;
- the director, or an immediate family member of the director, was an executive officer of another company that was indebted to the Company, or to which the Company was indebted, where the total amount of either company's indebtedness to the other was five percent (5%) or more of the total consolidated assets of the Company he or she served as an executive officer; or
- the director, or an immediate family member of the director, was an officer, director or trustee of a charitable organization where the Company's annual discretionary charitable contributions to the charitable organization exceeded the greater of \$1 million or two percent (2%) of that organization's consolidated gross revenues.

The Board has reviewed all material transactions and relationships among each director, and any member of his or her immediate family, and the Company, its senior management and its independent auditors. Based on this review and in accordance with its independence standards outlined above, the Board has affirmatively determined that all of the non-employee directors are independent as such term is defined by the NYSE.

Board Leadership Structure and Role in Risk Oversight

Elazar Rabbani, Ph.D., has been the Company's Chairman of the Board and Chief Executive Officer since the Company's inception in 1976. The Company believes that having one person, particularly Dr. Rabbani with his deep industry and executive management experience, his extensive knowledge of the operations of the Company and his own history of innovation and strategic thinking, to serve as both Chief Executive Officer and Chairman is the best leadership structure for the Company. The Board believes this demonstrates to employees, customers and shareholders that the Company is under strong leadership with a single person setting the tone and having primary responsibility for managing the Company's operations. This unity of leadership promotes strategy development and execution, timely decision-making and effective management of Company resources. The Company believes that it has been well served by this structure.

As described above, three of the Company's five directors are independent. In addition, all of the directors on each of the Audit Committee, Compensation Committee and Nominations and Corporate Governance Committee are independent directors and each of these committees is led by a committee chair. The committee chairs set the agendas for their committees and report to the full Board. All of the independent directors are highly accomplished and experienced business people in their respective fields, have demonstrated leadership in significant enterprises and are familiar with board processes. The Company's independent directors bring experience, oversight and expertise from outside the Company and industry, while Dr. Rabbani, as the Company's Chairman and Chief Executive Officer, and Mr. Weiner, as President and Chief Financial Officer, bring Company-specific experience and expertise.

Additionally, the Company has had a Lead Independent Director since October 2005, whose duties, among other things, are to approve the agendas for all Board meetings, call and lead the executive sessions of the independent directors of the Company, be available for engagement with major shareholders, serve as liaison between the independent directors of the Company on one hand and the Chairman of the Board and senior management on the other hand, advise the Chairman of the Board as to the quality, quantity and timeliness of the information submitted by the Company's management to the independent directors; and perform such other duties as the Board shall from time to time delegate.

While the Board is responsible for overseeing the Company's risk management, the Board has delegated many of these functions to the Audit Committee. Under its charter, the Audit Committee is responsible for discussing the Company's major financial risk exposures, the guidelines and policies by which risk assessment and management is undertaken, and the steps management has taken to monitor and control risk exposure with management and the independent auditors. In addition to the Audit Committee's work in overseeing risk management, the full Board regularly engages in discussions regarding the most significant risks that the Company is facing and how those risks are being managed. The Board also receives risk management updates directly from the Company's senior management and from the chair of the Audit Committee. In addition, the Chairman and Chief Executive Officer's extensive knowledge of the Company and experience in the industries in which we operate uniquely qualifies him to lead the Board in assessing the whole panoply of risks the Company faces. The Board believes that the work undertaken by the Audit Committee, the full Board and the Chairman and Chief Executive Officer, enables the Board to effectively oversee the Company's risk management function. Gregory M. Bortz has served as Lead Independent Director since January 2017.

Board Nomination Policies and Procedure

Nomination Procedure—The Nominating/Governance Committee is responsible for identifying, evaluating and recommending candidates for election to the Board, with due consideration for recommendations made by other Board members, the Chief Executive Officer and other sources, including shareholders. The total cumulative length of time that any Outside Director may serve on the Board is limited to a maximum of three three-year terms, whether consecutively or in total, plus any portion of an earlier three-year term that such Outside Director may have been appointed to serve. The term limit set forth above may be extended for a maximum of one additional term if such individual is re-nominated by the unanimous agreement of the Board. The Nominating/Governance Committee also considers the appropriate balance of experience, skills and characteristics desirable among the members of the Board to maintain a diverse Board. The independent members of the Board review the Nominating/Governance Committee candidates and nominate candidates for election by the Company shareholders. The Nominating/Governance Committee will consider candidates for election to the Board recommended by shareholders of the Company. The procedures for submitting shareholder recommendations are explained below under "Shareholder Proposals" on page 53.

Directors must also possess the highest personal and professional ethics, integrity and values and be committed to representing the long-term interests of all shareholders. Board members are expected to diligently prepare for, attend and participate in Board and applicable committee meetings. Each Board member is expected to ensure that other existing and future commitments do not materially interfere with the member's service as a director.

The Nominating/Governance Committee also reviews whether a potential candidate will meet the Company's independence standards and any other director or committee membership requirements imposed by law, regulation or NYSE rules.

The Nominating/Governance Committee will consider, among other factors, the following to evaluate recommended nominees:

- the Board's current composition, including expertise, diversity, balance of management and non-management directors;
- independence and other qualifications required or recommended by applicable laws, rules and regulations (including NYSE requirements) and the Company's policies and procedures; and
- the general qualifications of potential nominees, including, but not limited to: personal integrity, loyalty to the Company and concern for its success and welfare; experience with strategy and policy setting; high-level leadership experience in business; breadth of knowledge about issues affecting the Company; an ability to work effectively with others; sufficient time to devote to the Company; and freedom from conflicts of interest.

Director candidates recommended to the Committee are subject to full Board approval and subsequent election by the shareholders. The Board is also responsible for electing directors to fill vacancies on the Board that occur due to retirement, resignation, expansion of the Board or other reasons between the annual meetings of shareholders. The Nominating/Governance Committee may retain a recruitment firm, from time to time, to assist in identifying and evaluating director candidates. When a firm is used, the committee provides specified criteria for director candidates, tailored to the needs of the Board at that time, and pays the firm a fee for these services. Suggestions for director candidates are also received from Board members, management, shareholders and may be solicited from professional associations as well.

Board Committees

All members of each of the Company's three standing committees—Audit, Compensation and Nominating/Governance—are required to be comprised of independent directors in accordance with NYSE criteria. See below for a description of the responsibilities of the Board's standing committees.

Executive Sessions of Non-Management Directors

The Board and each of the Audit, Compensation and Nominating/Governance Committees periodically hold meetings of only the independent directors or committee members without management present.

Board Access to Independent Advisors

The Board as a whole, and each of the Board committees separately, has authority to retain and terminate such independent consultants, counselors or advisors to the Board as each shall deem necessary or appropriate.

Communications with the Board

Direct Communications—Any interested party desiring to communicate with the Board or with any director regarding the Company may write to the Board or the Secretary c/o Elazar Rabbani, Office of the Secretary, Enzo Biochem, Inc., 527 Madison Avenue, New York, New York 10022. The Office of the Secretary will forward all such communications to the director(s). Interested parties may also submit an email by filling out the email form on the Company's website at www.enzo.com. Moreover, any interested party may contact the non-management directors of the Board and/or the Lead Director.

Annual Meeting—The Company encourages its Outside Directors to attend the annual meeting of shareholders each year. Mr. Perlysky and Dr. Hanna attended the Annual Meeting of Shareholders held in January 2019.

Meetings of the Board and its Committees

During the fiscal year ended July 31, 2019, there were seven formal meetings of the Board, and several informal meetings. None of the directors attended less than 75% of the meetings of the Board (including committee meetings). Currently, the Board has a Nominating/Governance Committee, an Audit Committee and a Compensation Committee. The Nominating/Governance Committee had one formal meeting, the Audit Committee had four formal meetings and the Compensation Committee had two formal meetings. Each of the committees also had informal meetings.

The Audit Committee was established by and among the Board for the purpose of overseeing the accounting and financial reporting processes of the Company and audits of the financial statements of the Company in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The Audit Committee is authorized to review proposals of the Company's auditors regarding the annual audit, recommend the engagement or discharge of the auditors, review recommendations of such auditors concerning accounting principles and the adequacy of internal controls and accounting procedures and practices, review the scope of the annual audit, approve or disapprove each professional service or type of service other than standard auditing services to be provided by the auditors, and review and discuss the audited financial statements with the auditors. The current members of the Audit Committee are Messrs. Bortz and Perlysky and Dr. Hanna. Mr. Bortz has been the Chairman since November 2010. The Board has determined that each of the Audit Committee members is independent, as defined in the NYSE's listing standards and applicable SEC Rules. The Board has further determined that Mr. Bortz is an "audit committee financial expert" as such term is defined under Item 407(d)(5)(ii) of Regulation S-K promulgated under the Exchange Act, and that each director is financially literate as required under the NYSE listing standards.

The Compensation Committee has the power and authority to (i) establish a general compensation policy for the officers and employees of the Company, including to establish and at least annually review executive officers' salaries and non-equity incentive compensation plan program and levels of officers' participation in the benefit plans of the Company, (ii) prepare any reports that may be required by the regulations of the SEC or otherwise relating to officer compensation, (iii) approve any increases in directors' fees, (iv) grant stock options and/or other equity instruments authorized by senior executives for non-executive officers and (v) exercise all other powers of the Board with respect to matters involving the compensation of employees and the employee benefits of the Company as shall be delegated by the Board to the Compensation Committee. The current members of the Compensation Committee are Messrs. Bortz and Perlysky and Dr. Hanna. The Board has determined that each member of the Compensation Committee is independent, as defined in the NYSE listing standards. Mr. Perlysky has been the Chairman of the Compensation Committee since January 2017.

The Nominating/Governance Committee has the power to recommend to the Board prior to each annual meeting of the shareholders of the Company: (i) the appropriate size and composition of the Board; and (ii) nominees: (1) for election to the Board for whom the Company should solicit proxies; (2) to serve as proxies in connection with the annual meeting of shareholders; and (3) for election to all committees of the Board other than the Nominating/Governance Committee. The Nominating/Governance Committee will consider nominations from the shareholders, provided that they are made in accordance with the By-Laws. When evaluating prospective director candidates, the Nominating/Governance Committee conducts individual evaluations against the criteria stated in the committee's Nominating and Corporate Governance guidelines. All director candidates, regardless of the source of their nomination, are evaluated using the same criteria. The current members of the Nominating/Governance Committee are Dr. Hanna and Messrs. Bortz and Perlysky. Dr. Hanna has been the Chairman since January 2017.

AUDIT COMMITTEE REPORT

In connection with the preparation and filing of the Company's Annual Report on Form 10-K for its fiscal year ended July 31, 2019:

1. The Audit Committee reviewed and discussed the audited financial statements and related footnotes with management and EisnerAmper LLP, the current independent registered public accounting firm. Management represented to the Audit Committee that the Company's financial statements were prepared in accordance with U.S. generally accepted accounting principles ("GAAP");
2. The Audit Committee discussed with the independent registered public accountants matters required to be discussed under the Public Company Accounting Oversight Board (the "PCAOB") Auditing Standard No. 16;
3. The Audit Committee reviewed the written disclosures and the letter from the independent registered public accountants required by the applicable requirements of the PCAOB, as may be modified or supplemented, regarding the independent registered public accounting firm's communication with the Audit Committee concerning independence and discussed with EisnerAmper LLP their independence;
4. The Audit Committee discussed with the Company's independent registered public accountants the overall scope and plans for its audit. The Audit Committee met with the independent registered public accountants with and without management present, to discuss the results of their examinations, their evaluations of the Company's internal controls, and the overall quality (and not merely the acceptability) of the Company's accounting principles and financial reporting, the reasonableness of significant estimates and judgments, and the disclosures in the Company's financial statements, including the disclosures relating to critical accounting policies. The Audit Committee held four formal meetings during the fiscal year ended July 31, 2019 with the independent registered public accounting firms; and
5. Based on the review and discussions referred to above, the Audit Committee recommended to the Board that the audited financial statements be included in the Company's Annual Report on Form 10-K for the fiscal year ended July 31, 2019 for filing with the SEC. We also selected EisnerAmper LLP as the independent registered public accounting firm for fiscal 2020. The Board is recommending that shareholders ratify that selection at the Annual Meeting.

Submitted by the members of the Audit Committee on October 15, 2019:

Gregory M. Bortz, Chairman
Dov Perlisky
Dr. Bruce A. Hanna, Ph.D.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires the Company's executive officers, directors and persons who beneficially own more than 10% of a registered class of the Company's equity securities (collectively, "Reporting Persons") to file with the SEC initial reports of ownership and reports of changes in ownership of Common Stock and other equity securities of the Company within two business days. Such executive officers, directors and greater than 10% beneficial owners are required by SEC regulation to furnish the Company with copies of all Section 16(a) forms filed by such Reporting Persons. Based solely on a review of the copies of such forms furnished to us and on written representations that no Form 5 was required to be filed, we believe that, during the fiscal year ended July 31, 2019, all of our directors and executive officers timely complied with the Section 16(a) filing requirements.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

It is the responsibility of the Nominating/Governance Committee to consider questions of possible conflicts of interest of directors and of the Company's senior executives, which includes the consideration of all transactions required to be disclosed pursuant to the SEC's related person disclosure requirements. In addition, the Board has a Related Persons Policy which states that all related person transactions shall be in the best interests of the Company and, unless different terms are specifically approved or ratified by disinterested members of the Board, must be on terms that are (i) no less favorable to the Company than would be obtained in a similar transaction with an unaffiliated third party under the same or similar circumstances, or (ii) generally available to substantially all employees of the Company. In addition, if any non-material or material related person transaction relates to any executive officer or director, it must be reviewed by the Nominating/Governance Committee who shall determine whether the transaction is in compliance with the Company's Related Person Policy.

Enzo Clinical Labs, Inc., a subsidiary of the Company ("Enzo Lab"), leases a facility located in Farmingdale, New York from Pari Management Corporation ("Pari"). Pari is owned equally by Elazar Rabbani, Ph.D., the Chairman and Chief Executive Officer of the Company; Shahram K. Rabbani, a former officer and former director of the Company; and Barry Weiner, the President, Chief Financial Officer and a director of the Company, and his wife. The lease originally commenced on December 20, 1989, was amended and extended in October 2015 and now terminates on March 31, 2027. During the fiscal year ended July 31, 2019, Enzo Lab paid approximately \$1,849,000 to Pari with respect to such facility and future payments are subject to cost of living adjustments.

The non-interested members of the Board, at the time of the execution of the lease and each extension, reviewed and approved the transaction in accordance with the Company's procedures for reviewing related party transactions. The Nominating/Governance Committee obtained a third-party appraisal to determine the value of the lease. Based on that appraisal, the Company, which has guaranteed Enzo Lab's obligations to Pari under the lease, believes that the existing lease terms are as favorable to the Company as it would be to an unaffiliated party.

CODE OF BUSINESS CONDUCT AND ETHICS

The Company has adopted a Code of Business Conduct and Ethics (as such term is defined in Item 406 of Regulation S-K). The Code of Business Conduct and Ethics is available on the Company's website at www.enzo.com, and in print by contacting Investor Relations at (212) 583-0100. The Code of Business Conduct and Ethics applies to the Company's employees, officers and members of the Board. The Code of Business Conduct and Ethics has been designed to deter wrongdoing and to promote:

- Honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
- Full, fair, accurate, timely and understandable disclosure in reports and documents that the Company files with, or submits to, the SEC and in other public communications made by the Company;
- Compliance with applicable governmental laws, rules and regulations;
- The prompt internal reporting or violations of the Code of Business Conduct and Ethics to an appropriate person or persons identified in the Code of Business Conduct and Ethics; and
- Accountability for adherence to the Code of Business and Conduct and Ethics.

COMPENSATION OF DIRECTORS

Each Outside Director of the Company receives an annual director's fee of \$30,000. The Lead Independent Director receives an additional annual director's fee of \$25,000. Each Outside Director who serves on a Board committee also receives an annual fee of \$7,500. The Chairman of the Audit Committee receives an additional annual fee of \$20,000 and the Chairman of the Compensation Committee and the Chairman of the Nominating/Governance Committee each receive an additional annual fee of \$10,000. The Outside Directors receive either stock options or restricted stock units following the Annual Meeting, provided such person is a director of the Company at such time. The annual number of stock options or restricted stock units that the Outside Directors will be granted will not exceed a fair market value of \$100,000 at the time of grant. Either the stock options or restricted stock units shall be subject to a two-year vesting period; provided that at the time any non-employee director ceases to be a director of the Company (other than due to such director's resignation), such non-employee director's stock options and restricted stock units shall become fully vested at such time. The equity instruments are granted at the Black-Scholes value in the case of options, or at the market price of the Common Stock on the date of grant in the case of restricted stock units and have a term of up to five (5) years. The Company reimburses directors for their travel and related expenses in connection with attending meetings of the Board and Board-related activities.

Director Compensation Table

The following table sets forth the information concerning compensation earned during our fiscal year ended July 31, 2019 by all non-employee directors:

Name	Fees Earned or Paid in Cash	Stock Options Awards ⁽¹⁾	Change in Pension Value and Non-Qualified Deferred Compensation Earnings	All Other Compensation	Total
Gregory M. Bortz <i>Lead Director</i>	\$97,500	\$100,000	—	—	\$197,500
Dov Perlysky <i>Director</i>	\$62,500	\$100,000	—	—	\$162,500
Bruce A. Hanna, Ph.D. <i>Director</i>	\$62,500	\$100,000	—	—	\$162,500

(1) Represents the grant fair value on the respective grant date for the fiscal year ended July 31, 2019, in accordance with accounting authoritative guidance. The assumptions used in calculating these amounts are set forth in Notes 1 and 11 to the Company's consolidated financial statements for the fiscal year ended July 31, 2019, included in the Company's Form 10-K filed with the SEC on October 15, 2019. As of July 31, 2019, each non-Employee Director serving during the fiscal year ended July 31, 2019 had the following number of outstanding options: Mr. Bortz – 306,813; Mr. Perlysky – 306,813; and Dr. Hanna – 175,099.

COMPENSATION OF EXECUTIVE OFFICERS

Compensation Discussion and Analysis

The Compensation Committee of our Board oversees our executive compensation program. In this role, the Compensation Committee reviews and approves all compensation decisions relating to our Named Executive Officers. The Compensation Committee also reviews and approves all equity awards for all employees except for annual amounts pre-approved for granting by the Chief Executive Officer or President for non-officers or new employees in connection with employment offers.

The Company strives to apply a uniform philosophy to compensation for all of its employees. This philosophy is based on the premise that the achievements of the Company result from the combined and coordinated efforts of all employees working toward common objectives.

The Company's performance for fiscal 2019 was one of significant operational accomplishments as described below and used to assess management's achievement of its strategic goals.

- Enzo's vertically integrated research and development program, harnessing the collective benefits of its laboratory and diagnostic operations, continued to deliver substantial technological advances as we continue our evolution from research-based operations to a fully integrated diagnostic company. By leveraging its broad intellectual property portfolio and manufacturing expertise, Enzo is able to create novel products and platforms with the potential to be transformative to diagnostic products and services. These solutions bring together both scientific and IT developments.

- In September 2019, Enzo Clinical Labs, Inc. received New York State Department of Health approval for its AMPIPROBE® HBV viral load monitoring assay for Hepatitis B virus (HBV) based on performance versus an FDA-approved competitive product. Enzo's growing portfolio in the viral load monitoring market includes previous New York State Department of Health approval for a viral load monitoring assay for Hepatitis C virus (HCV) and a viral load monitoring assay under development for human immunodeficiency virus (HIV). The Company's expanding menu allows Enzo to provide one of the most comprehensive panels for sexually transmitted infections (STI) testing, a rapidly growing healthcare segment where reported common STIs in the United States have increased for the 5th consecutive year.
- Approval of the HBV assay follows the July 2019 announcement of New York State Department of Health approval for Gonorrhea and Chlamydia tests for extra-genital specimens, and the announcement that Enzo was creating a direct to consumer testing business for STIs. Furthermore, the Company is developing an additional test for HPV testing in multiple sample types.
- The Company was issued 74 patents worldwide during fiscal year 2019. Notably, the Company was issued U.S. Patent No. 10,323,272 entitled "Nucleic acid probes for in situ hybridization" on June 18, 2019, which is directed to a new probe technology that allows for significantly more cost-effective, simple and scalable processes across the multi-billion dollar diagnostic testing, drug development and academic research marketplaces. The probes can be used to detect clinically relevant genomic targets with high sensitivity in cell samples and biopsy tissue. Compared to competitive probes, Enzo's novel probe will lower cost, decrease complexity, save time and avoid disruptions of sample integrity.
- In fiscal year 2019, Enzo's Life Sciences and laboratory divisions invested approximately \$10 million in strategic growth initiatives such as developing a Good Manufacturing Practice (GMP) Lab, expanding strategic salesforce and marketing practices, and ramping up R&D and Lab Developed Test initiatives. This investment is already resulting in cost reductions for the laboratory and diagnostics operations. Currently, approximately \$4M of the Company's revenue is associated with strategic growth initiatives and the number of clinical labs we service has increased by over 15%.
- Over the past 5 years, Enzo has systematically introduced its technology onto its clinical production floor through LDTs validated by the New York State Department of Health. Over this period, Enzo has run over 100,000 of these Enzo LDTs, resulting in savings of over \$5M by substituting third-party vendor tests with Enzo's own internally developed tests. Enzo expects the annual savings from these tests to increase in the next fiscal year to \$3M and to \$5M in the following year.
- Partnerships with specialty labs to expand our service test menu for wider variety offering to our core client base.
- Enzo has continued to systematically expand its payor network both regionally and nationally. Within 2019, Enzo payor expansion included Harvard Pilgrim, Progyny and Blue Cross Blue Shield within the New England area.
- Efficiency programs to drive costs out of the operations with a focus on process improvements and departmental reorganization.

The Company anticipates commercialization from the developments of its strategic initiatives to begin over the next year. The significant implementation steps include:

- Validation through clinical trials of Enzo's fully automated, high-throughput instrumentation including sample collection and sample processing and reagents systems both for New York State and FDA.
- Development and launch of a direct-to-consumer business to more efficiently offer clinical testing in several segments including the rapidly expanding STI testing market. Rates of sexually transmitted diseases reached an all-time high in 2018 (2.5 million diagnosed) according to the CDC. This trend continues.

- Development of a custom services business focused on drug discovery and development.
- Approval of additional assays to expand Enzo's test menu.
- Completion of buildout of its expanded campus footprint providing additional space for warehousing and production.
- Expansion of sales and marketing, logistics and IT efforts to grow national reference laboratory accounts.
- Partnerships and collaborations with potential strategic and institutional partners to enhance commercialization and market penetration of Enzo's high technology platforms and products.
- Continuation of the efficiency program.

The Company's financial performance for fiscal 2019 included:

- Total revenues were \$81.2 million compared to \$101.0 million in the prior year. Products and royalties revenue was \$30.1 million compared to \$29.9 million in the prior year. Clinical services revenues were \$51.1 million, compared to \$71.1 million in the prior year, a decrease of \$20.0 million or 28% due to reduced reimbursement payments, insurance company claims rejections and changes to medical and procedural requirements for genetic testing by payors.
- Consolidated gross margins were 29% compared with 40% in the prior year. Products gross margin was 54% compared to 51% in the prior year period. Clinical services gross margins were 14% compared to 35% a year ago. Gross margins in the current year were negatively impacted by lower revenue from clinical services as noted above.
- Operating expenses totaled \$50.4 million, down 4% compared to \$52.8 million a year ago. The decrease reflected lower legal fee expenses of \$3.0 million compared to \$5.1 million in the prior year. Selling and general administrative expenses ("SG&A") as well as R&D expenses were lower year over year.
- GAAP net income amounted to \$2.5 million, or \$0.05 per diluted share, compared to a net loss of (\$10.3) million, or (\$0.22) per share, a year earlier. EBITDA was \$4.5 million, compared to an EBITDA loss of (\$9.1) million a year ago.
- Total cash, cash equivalents and restricted cash as of July 31, 2019 were \$60.9 million. Cash provided by operations was \$4.8 million during fiscal 2019 and cash used for investing activities, principally purchase of our new facility and capital expenditures, was \$8.1 million.

As a result of the Company's financial and operational performance, total shareholder return ("TSR") for the three periods ended July 31, 2019 was (16.1%), which puts us in the 6th percentile of our peer group.

In order to better align management compensation with shareholder interest, in fiscal 2019 similar to prior years, the Compensation Committee has added performance-vested equity awards that could, over time and along with stock options, represent up to 50% of each executive officer's long-term incentive. The details of this new compensation-related element are described below.

Say-on-Pay Feedback from Shareholders –

For the past three years, the Company has conducted regular outreach on compensation and governance-related matters to its top shareholders. At our 2018 Annual Meeting of Shareholders, 86% of the shares that were voted were cast in favor of our say-on-pay proposal. As part of our continued commitment towards shareholder engagement and our responsiveness to shareholder concerns, in 2018 we engaged in these discussions with approximately 60% of our top 25 shareholders that own over 57% of our outstanding shares. While our engagements this year have become more focused on Board and governance matters, compensation matters were discussed in some of these conversations. As a whole, we continued to receive positive feedback regarding the evolution of our compensation program and the incorporation of prior shareholder feedback received regarding our compensation program. Other comments from shareholders are as follows:

- Investors supported the decision of the Compensation Committee to include performance-vested equity for fiscal 2018 that along with stock options that could over time comprise up to 50% of long-term incentive grant value of our Named Executive Officers, despite the fact that performance-vested equity awards are not used in any significant degree in our peer group.
- Investors generally supported the long-term focus of our executive compensation program, and in fact noted that the non-equity-based compensation of our executive officers was low compared to our peer group.
- Shareholders appreciated the successful patent defense program and commented that management should be recognized for the economic benefit to the Company.

The feedback of our shareholders and the operating performance of the Company were significant factors that impacted fiscal 2019 executive compensation. The market price of the Common Stock decreased during fiscal 2019 resulting in a one-year shareholder return of (22.7%). Even though the Company experienced strong performance, the Compensation Committee kept executive base pay salary in fiscal 2019 essentially the same compared to fiscal 2018. The Company's three-year annualized total shareholder return was (16.1%) for the period ending fiscal year 2019 putting us in the 6th percentile of our peer group.

Objectives and Philosophy of Our Executive Compensation Program

The primary objectives of the Compensation Committee with respect to executive compensation are to:

- align executives' incentives with the creation of shareholder value;
- align executive compensation with our corporate business objectives and performance;
- promote the achievement of key strategic and financial performance objectives through cash and equity incentives; and
- align executive compensation with comparable companies in our industry sectors to attract, retain and motivate the best possible executive talent.

The Compensation Committee views base salary, cash bonus and long-term incentives as the elements of a compensation mixture, which aligns the Company's goals with the elements of compensation of the broader peer group. We award long-term incentive compensation in the form of stock, stock options or restricted stock awards that vest over time. We believe this practice helps to retain our executives and aligns their interests with those of our shareholders by allowing them to participate in the longer term success of our Company as reflected in stock price appreciation. We believe that the use of both time and performance-vested stock, stock options and restricted stock minimizes the likelihood of risky behavior and risky decision-making that would be influenced by opportunities for short-term gains.

To achieve these objectives, the Compensation Committee evaluates senior management, with input from our Chief Executive Officer, with the goal of setting compensation at levels that are competitive with our industry competitors who compete with us for executive talent. The Compensation Committee also conducts an annual evaluation of the Chief Executive Officer in addition to senior management evaluations. Our Compensation Committee considers key financial, strategic and operational objectives including, but not limited to: design and implementation of the Company's strategic plan, award of new patents, intellectual property protection, advancement of strategic alliances, operational efficiencies, M&A activity, licensing, new product introductions, provider contracts, investor relations, corporate governance and our financial and operational performance, as quantified by measures at the consolidated level and for each of the operating segments.

The Compensation Committee each year re-evaluates and uses a peer group of publicly traded companies, which they believe have business life cycles, revenues, market capitalizations, products, research and development investment levels and/or number/capabilities of employees that are roughly comparable to ours and, which the Compensation Committee believes we compete with for executive talent. The Compensation Committee has retained Gallagher as an independent compensation consultant. The Company's senior management, with the assistance of Gallagher, compiled a list of peer companies. Since 2005, Gallagher has analyzed the executive compensation programs of these companies and issued reports to the Compensation Committee – most recently in November 2018. Gallagher advised the Compensation Committee during the fiscal 2018 compensation process that the total executive compensation was below the median of executive compensation of the Company's peer group. For fiscal 2018, the Compensation Committee kept fiscal 2018 compensation at or near the prior year levels and used the fiscal 2017 market review to confirm that compensation was below the median of market range.

The peer companies for fiscal 2019 were selected primarily based on their participation in the medical device services, and biotechnology research-related industries and were comparable to us with respect to size, market capitalization and revenue based upon information available. We also considered their similarity in organizational and operational complexity and stage of development where practicable. We believe the size of the peer group, 17 entities, is appropriate in light of the diverse nature of our industries and industry and sector volatility. For fiscal 2019, the peer group is the same as fiscal 2018. The companies that were included in the most recent peer group this year are as follows:

- Array BioPharma, Inc.
- Fluidigm Corp.
- Harvard Bioscience, Inc.
- Invitae Corp.
- Luminex Corp.
- Meridian Biosciences, Inc.
- Merrimack Pharmaceuticals, Inc.
- Momenta Pharmaceuticals, Inc.
- Nanostring Technologies, Inc.
- Natera, Inc.
- Neogenomics, Inc.
- OraSure Technologies, Inc.
- Oxford Immunotec Global PLC
- Pacific Biosciences of California
- Quidel Corp.
- Repligen Corp.
- Spectrum Pharmaceuticals, Inc.

We compete with many other companies for executive personnel. The Compensation Committee generally targets total compensation for executives to be no higher than the 50th percentile of total compensation paid to similarly situated executives of the companies in the peer group.

The Compensation Committee may adjust compensation levels, upon consideration of the relevant drivers relating to the life sciences, clinical diagnostics or therapeutics industries we operate in, with respect to an executive's individual experience and performance level and the overall performance of the Company.

The Compensation Committee met two times in fiscal 2019 in order to review and approve our compensation for Named Executive Officers and non-employee directors, and approve equity awards for all employees. The results of the Compensation Committee activities were reported to the Board.

Awarded Pay Aligned with Stockholder Value

The Company's stock price has been and may continue to be extremely volatile. This volatility is due in part to regulatory, legal and other events and factors whose impact on our business is often unrelated to our operating performance. The current value of outstanding equity awards can fluctuate considerably over time, falling well above or below the target or reported value of the awards at the time of grant. To help ensure our total compensation program is aligned with performance, our compensation committee regularly reviews the awarded value of pay in the context of the overall compensation program and continuing performance of the Company. "Awarded value" of pay includes base pay, non-equity incentive plan compensation and stock award value.

We believe that the compensation of our Named Executive Officers is appropriate and aligned with the interests of our stockholders. Specifically, a substantial portion of total compensation for our Named Executive Officers is attributable to stock options and, beginning in 2018, performance vested equity awards, the realizable value of which will depend upon an increase in our stock price (and thereby an increase in stockholder value) following the date of grant. We believe that stock options are one of the most effective tools available for aligning executive interests with those of our stockholders. We also grant stock units to our Named Executive Officers subject to performance-based vesting conditions tied to attaining goals that our Compensation Committee believes are key to creating value for our stockholders, which encourages stock ownership by, and retention of, our Named Executive Officers.

Chief Executive Officer Pay for Performance

A portion of Dr. Rabbani's compensation is variable, performance-based compensation that we consider to be "at risk" because it is dependent on the success of our Company. At-risk compensation includes long-term equity-based awards, including performance-vested equity, the value of which depends on sustained, long-term increases in the price of our Common Stock, and annual incentive cash bonuses, which require attaining meaningful performance goals established by our board of directors with the intent of driving short-term value creation for our stockholders.

We have also examined Dr. Rabbani's awarded pay relative to our selected peer group. Dr. Rabbani's three-year total awarded pay for 2017 – 2019 is the lowest amount relative to our selected peer group.

Components of our Executive Compensation Program

The primary elements of our executive compensation program are:

- base salary;
- time-based stock options awards;
- performance-based equity awards;
- non-equity incentive plan compensation;
- benefits and other compensation; and
- severance and change in control benefits.

Base Salary

Base salary levels recognize the experience, skills, knowledge and responsibilities of each executive's position within the Company.

Exclusive of the base salaries that are contractual, base salaries are reviewed annually by the Compensation Committee, and may be adjusted from time to time to realign salaries with market levels and our peer group after taking into account individual responsibilities, performance, experience and cost of living. Base salaries also may be increased for merit reasons, based on the executive's success in meeting or exceeding individual performance objectives, promoting our core values and demonstrating leadership abilities.

The base salaries of the two founders, Dr. Elazar Rabbani, our Chairman of the Board, Chief Executive Officer, Secretary and Director and Mr. Barry Weiner, our President, Chief Financial Officer, Principal Accounting Officer, Treasurer and Director are set in accordance with the terms of executed employment agreements with each individual. Pursuant to the terms of their respective employment agreements, Dr. Rabbani and Mr. Weiner were at a base annual salary of \$611,000 and \$542,000, respectively.

The base salary for Mr. O'Brien for fiscal 2019 was \$317,000, which was unchanged from fiscal 2018. The base salary of Dr. Schapfel was increased from \$323,077 to \$330,000 for fiscal 2019. Mr. Dey's base salary decreased in fiscal 2019 from \$448,565 to \$324,765, due to lower commission related to a decrease in Clinical Services revenue. The base salary for Ms. Kara Cannon was increased from \$198,462 to \$220,000.

Non-Equity Incentive Compensation

The Company adopted a "Pay for Performance" Plan (the "Plan") for the Named Executive Officers and key management personnel to align incentive pay with performance as set forth with the individual based on their role with the Company. The performance goals for the Named Executive Officers and the annual performance awards are determined and approved by the Compensation Committee annually. The Plan provides for performance measures based on financial and non-financial measures and rewards for achievement for targets attained and/or improvements realized.

The weights on financial performance measures vary for corporate and divisional officers from 30% to 60% and include product and services revenue growth, planned improvement in margins (divisional only), profitability and cash flows, with adjustments for non-recurring, uncontrollable events impacting revenues, expenses or cash flow beyond the control of management and certain legal expenses over the prior fiscal year. The Compensation Committee chose these measures for fiscal 2018 and 2019 because they believe they are aligned with our core operating performance for fiscal 2018 and 2019, which focused on the business improvement over the prior year.

The weights on non-financial performance measures are between 20% and 30% and include strategic, operational and individual goals. Strategic and operational measures for fiscal 2019, depending on whether a corporate or divisional Named Executive Officer, include among others, business and technology advancement, advancement of partnering arrangements and litigation proceedings, customer satisfaction, process and infrastructure improvements, implementation of cost reductions, quality assurance and employee satisfaction. Individual performance measures, which are 30% of target goals, include communication, leadership and process improvement. The measures provide for Threshold, Target and Maximum awards and are based on various ranges of performance. The accomplishments of the Company as set forth on pages 28-29 were used to assess the achievement with these target goals.

For the fiscal year ended July 31, 2019, the Compensation Committee considered the following non-equity incentive plan awards ranges for the Named Executive Officers and Dieter Schapfel, M.D., Kara Cannon and Bruce A. Dey ("Key Employees"):

Name	Calculated payouts under non-equity incentive plan awards ⁽¹⁾		
	Threshold (\$)	Target (\$)	Maximum (\$)
Elazar Rabbani, Ph.D.	458,250	611,000	675,100
Barry W. Weiner	406,500	542,000	596,200
Dieter Schapfel, M.D.	52,800	66,000	99,000
Kara Cannon	48,000	60,000	90,000
Bruce A. Dey	—	—	—

(1) See the "Summary Compensation Table" below for the actual amounts awarded to the Named Executive Officers and Key Employees.

The corporate financial measures applicable to the Chief Executive Officer and President, exclusive of adjustments (none in fiscal 2019) and third-party royalties income (none in fiscal 2019), include revenue, operating loss improvement and Adjusted EBITDA improvement, which are equally weighted and averaged for the final results. The measures used for fiscal 2019 for the Named Executive Officers and corresponding payouts are as follows:

	Threshold	Target	Maximum	Achieved
	(in millions)			
Financial Performance Measures—Revenue				
Corporate Revenues—trade and service	\$80.2	\$100.3	\$110.3	\$81.2
Payout—Revenue	50%	100%	150%	51%
Financial Performance Measures—Profit & Adjusted EBITDA				
Corporate operating loss improvement	\$ 2.3	\$ 2.9	\$ 3.2	\$14.6
Adjusted EBITDA improvement	\$ 1.4	\$ 1.8	\$ 2.0	\$13.6
Payout—Profits & Adjusted EBITDA	80%	100%	150%	116%

In connection with the Plan, Dr. Rabbani was eligible for a maximum bonus of 110% of his base salary for the fiscal year ended July 31, 2019. Dr. Rabbani was below target performance for his three financial goals and at target performance for his non-financial goals and was awarded a bonus of \$500,000 which represented 82% of his base pay. In reviewing the Chief Executive Officer's performance, the Compensation Committee recognized Dr. Rabbani's broad contributions in the achievements listed above in his role as Chairman of the Board, including oversight of and increases to our technology platform and scientific product development, recruitment of new members of executive and scientific management, setting strategy for business development, implementing process improvement directly impacting financial performance and integration and realignment of our operating sites and oversight and protection of intellectual property, including outstanding patent litigation matters.

In connection with the Plan, Mr. Weiner was eligible for a bonus of 110% of his base salary for the fiscal year ended July 31, 2019. Mr. Weiner was below target performance for his three financial goals and at target performance for his non-financial goals and was awarded a bonus of \$375,000 which represented 69% of his base pay. The Compensation Committee recognized Mr. Weiner's contributions in strategic planning, financial management, including our Company's financial position and liquidity, corporate governance, communication efforts with our shareholders, investors and outside analysts, managing relationships with investment bankers for equity raise opportunities, oversight of the finance group and compliance with the Company's Section 404 Sarbanes-Oxley requirements, role in recruitment of new management personnel and divisional management and leadership role among the divisional executives.

In connection with the Plan, Mr. James M. O'Brien was eligible for a bonus of 35% of his base salary. The Compensation Committee reviewed the recommendation from our CEO with respect to Mr. O'Brien's performance in meeting the non-financial objectives including, enhancing our financial reporting internally and to the Board and the Audit Committee, participation in and achievements in the project to reduce operating and corporate costs, including third-party contracts insurance program, benefit plans and professional fees, monitoring internal controls and Section 404 Sarbanes-Oxley requirements, recruiting staff to the finance group and leadership role among our finance group and, specifically in 2019, directly managed financing and equity activities. Mr. James M. O'Brien was below target performance for his three financial goals and exceeded threshold performance for his three non-financial goals and was awarded a bonus of \$75,000 which represented 24% of his base pay. Mr. O'Brien's employment with the Company was terminated on November 3, 2019, however he will be providing consulting services to the Company on an as needed basis.

In connection with the Plan, Dieter Schapfel, M.D., was eligible for a bonus of 20% of his base salary under the Plan. The Compensation Committee reviewed the recommendation from our Chief Executive Officer with respect to Dr. Schapfel's performance in meeting the non-financial objectives listed above, in expanding our platform technologies through the approval of new assays, validating three new platform technologies, process improvements contributing to cost savings in clinical production and his contributions to operational excellence, as evidenced by the high degree of regulatory compliance in laboratory operations. Dr. Schapfel was below threshold performance for his four financial goals and exceeded target performance for his three non-financial goals and was awarded a bonus of \$60,000 which represented 18% of his base pay.

In connection with the Plan, Kara Cannon was eligible for a bonus of 30% of base salary under the Plan. The Compensation Committee reviewed the recommendation from our Chief Executive Officer with respect to Kara Cannon's performance in meeting the non-financial objectives including, realigning the operations to support the new streamlined company structure, recruitment of new commercial staff to more aggressively drive our revenue and commercialization efforts, participation in and achievements in the project to reduce operating costs and increase overall operational efficiencies, drive Enzo's strategy to transition development and commercialization efforts around clinically relevant assays and products, develop industry partners and launch new products and assays to broaden our offering in for industrial markets and was awarded a bonus of \$60,000 which represented 27% of her base pay.

Mr. Bruce A. Dey is not eligible for a bonus under the Plan given the commission structure he participates in as Vice President of Sales for Enzo Clinical Labs.

Stock Options and Stock Awards

The Compensation Committee awards either stock options or stock as the primary vehicle for long-term incentives to our executives, including our Named Executive Officers. We believe that equity awards provide our executives with a strong link to our long-term performance, create an ownership culture and help to align the interests of our Named Executive Officers and our shareholders. Equity awards are intended as both a reward for contributing to the long-term success of our Company and an incentive for future performance.

Equity awards, in the form of stock options, restricted stock and/or stock award units vest ratably over a two or three year period with 50% or 33%, respectively of the award vesting 12 months after the Named Executive Officer's start date or the annual anniversary of the award grant and the remainder of the awards vesting annually over the remaining period. The vesting feature of our equity awards is intended to further our goal of executive retention by providing an incentive to our Named Executive Officers to remain in our employ during the vesting period. Equity awards are awarded under the 2011 Incentive Plan approved by the shareholders.

In the most recent fiscal year, the Compensation Committee granted time-based stock options to the Named Executive Officers. The number of time-based awards granted was based on strategic, financial and individual performance.

Performance Stock Units

To better align the long-term interests of the Named Executive Officers with growing U.S. practices, beginning in fiscal 2018 and including 2019, the Compensation Committee granted long-term equity incentive awards in the form of time based stock options and performance-based restricted stock units ("Performance Stock Units" or "PSUs"). Time-based awards continue to be based on achievement of short-term growth objectives such as implementation of strategic business objectives, reporting of improved financial results and the attainment of individual goals. The PSUs earned will be determined over a three-year performance period. The primary performance metrics will be Revenue and Adjusted EBITDA growth, as determined by the Compensation Committee. Payouts based on Revenue and Adjusted EBITDA goals will be modified based on TSR performance relative to Enzo's peer group.

The fiscal 2019 grant value is comprised of stock options and PSUs, with the goal over time being equally weighted between the two incentive awards. One PSU is convertible into one share of Common Stock.

The fiscal 2019 – 2021 PSU award provides for the conversion of the PSUs into shares of our Common Stock at the end of a three-year period based on the achievement of average Revenue growth and Adjusted EBITDA growth goals over that period, as follows:

Fiscal 2019-2021 PSUs	Threshold	Target	Maximum
Three-Year Average Revenue Growth	2%	5%	8%
Three-Year Average Adjusted EBITDA Growth	5%	15%	25%
Percent of Target Payout	50%	100%	150%

For results between these levels, the number of shares will be determined by interpolation. There will be no payout for results below the threshold level. Each performance measure is separately determined and equally weighted. The definition of Adjusted EBITDA provides for adjustments during the performance period for the impact of acquisitions or dispositions of businesses and legal settlements.

Payouts as determined by the growth performance of Revenue and Adjusted EBITDA will be adjusted based on the three-year relative TSR. The number of PSUs determined by the financial growth results will be multiplied by a modifier ranging from 80% to 120% (the "TSR Modifier"), depending on the Company's TSR percentile for the performance period relative to the TSR of the other companies in the Enzo peer group for the performance period. The number of shares that can be earned is capped at 150% of the target number of PSUs awarded.

Vesting of the PSUs, if any, will occur following the determination of performance subsequent to the conclusion of the three year performance period. Named Executive Officers must be employed with the Company at the completion of the three year performance period.

On January 3, 2019, the Named Executive Officers and Key Employees were issued performance stock units as a component of their total compensation package as follows:

<u>Name</u>	<u>Performance Stock Units Granted</u>
Elazar Rabbani, Ph. D.	25,000
Barry W. Weiner	20,000
Dr. Dieter Schapfel	10,500
Kara Cannon	10,500
Bruce A. Dey	4,000

Determination of Named Executive Officers and Key Employees Equity Awards

The Compensation Committee believes this use of equity appropriately balances the competitive base salaries and annual performance-based cash bonus opportunities. The annual goals focus management on the shorter-term objectives, while the time-vesting stock options (which only have value if the Company's share price increases) provide a longer term incentive and alignment with shareholder interest. Moreover, PSUs are aligned with long-term shareholder interest as these PSUs cliff vest based on the Company's financial performance following the conclusion of the three year performance period.

The Compensation Committee makes annual equity awards based on a target dollar amount. While this results in an uncertain share usage, it results in a predictable expense for the Company and allows the committee to tailor the value of the awards more precisely to reflect the Company's business direction, compensation philosophies, objectives and design. The Compensation Committee determines the target dollar amount for stock-based awards to the Named Executive Officers and Key Employees on a discretionary basis and takes into account, among other factors, the recommendations of the President, the Chief Executive Officer and Gallagher, together with our compensation benchmarks, individual accomplishments, importance of retention, prior equity awards and current equity holdings, burn rates, seniority and internal pay equity considerations.

The actual number of shares of Common Stock subject to an option granted is determined by dividing the dollar amount allocated to the grant by the Black-Scholes value of the shares on the date of grant. The Compensation Committee has not applied a discount to the value of these shares to reflect the forfeiture restrictions associated with service-based vesting. The Base Stock and Performance Stock are exercisable into shares of the Company's Common Stock with an exercise price equal to the closing price of the Common Stock on the NYSE on the grant date and expire five (5) years from the date of grant.

In determining the size of equity awards to our Named Executive Officers and Key Employees, our Compensation Committee considers comparable equity awards of executives in our compensation peer group, our Company-level operating and stock performance, the applicable Named Executive Officer's and Key Employee's performance, the amount of equity previously awarded to the executive, the vesting schedule of such previous awards and the recommendations of management and Gallagher to the Compensation Committee. For the fiscal years ended July 31, 2019, 2018 and 2017, average equity compensation as a percentage of total compensation for all Named Executive Officers and Key Employees was 10%, 10% and 12%, respectively.

Equity awards are granted annually in conjunction with the review of a Named Executive Officer's and Key Employee's individual performance. The Compensation Committee reviews all components of the Named Executive Officer's and Key Employee's compensation when determining annual equity awards to ensure that a Named Executive Officer's and Key Employee's total compensation conforms to our overall philosophy and objectives.

On January 3, 2019, the Named Executive Officers and Key Employees were issued stock options as a component of their total compensation package as follows:

Name	Stock Options Issued	Exercise Price	Market Value at Time of Issuance
Elazar Rabbani, Ph. D.	128,000 ⁽¹⁾	\$2.80	\$135,296
Barry W. Weiner	115,000 ⁽¹⁾	\$2.80	\$121,555
Dr. Dieter Schapfel	52,000 ⁽²⁾	\$2.80	\$56,316
Kara Cannon	52,000 ⁽²⁾	\$2.80	\$56,316
Bruce A. Dey	18,000 ⁽²⁾	\$2.80	\$19,494

(1) Each option award vests in equal amounts on the first and second anniversaries of the award grant.

(2) Each option award vests in equal amounts on the first, second and third anniversaries of the award grant.

Dr. Schapfel's, Mr. Dey's and Ms. Cannon's stock option awards were based on their financial and non-financial performance to the Company. The market value at the time of issuance is determined based on the Black-Scholes model.

Tax and Accounting Considerations; Tax Deductibility

Federal tax laws impose requirements in order for compensation payable to the Chief Executive Officer and certain executive officers to be fully deductible. The Company believes it has taken appropriate actions to maximize its income tax deduction. Section 162(m) of the International Revenue Code (the "Code") generally precludes a public corporation from taking a deduction for compensation in excess of \$1,000,000 for its Chief Executive Officer, Chief Financial Officer or any of its three other highest-paid executive officers (besides the Chief Executive Officer or Chief Financial Officer).

Annually, the Company reviews all compensation programs and payments to determine the tax impact on the Company as well as on the executive officers. In addition, the Company reviews the impact of its programs against other considerations, such as accounting impact, shareholder alignment, market competitiveness, effectiveness and perceived value to employees. Because many different factors influence a well-rounded, comprehensive executive compensation program, some compensation may not be deductible under Section 162(m) of the Code. The Company will continue to monitor developments and assess alternatives for preserving the deductibility of compensation payments and benefits to the extent reasonably practicable, consistent with its compensation policies and as determined to be in the best interests of the Company and its shareholders.

Our annual base salary, a portion of cash incentive compensation and time-based restricted stock units are generally subject to the deduction limitations in Section 162(m) of the Code. For 2019 all direct compensation is expected to be tax deductible. To maintain flexibility in compensating executive officers in view of the overall objectives of our compensation program, the Compensation Committee has not adopted a policy requiring that all compensation be tax deductible.

Risk Considerations in Our Compensation Program

We do not believe our compensation policies and practices encourage or support excessive risk-taking by our executive officers or key managers. We establish compensation practices that we believe provide an appropriate level of incentive-based compensation, in combination with non-incentive-based compensation, to encourage our executive officers and key managers to act in the long-term best interests of the Company and our shareholders. These practices include:

- Awarding annual incentive bonuses based on an assessment of short-term performance against financial and non-financial measures;
- Benchmarking annual incentive bonuses against an appropriate peer group of companies;

- Providing the Compensation Committee with discretion in approving annual non-equity incentive awards, with respect to non-financial targets, which affords the committee the opportunity to reduce payments if it determines excessive risk was taken to achieve bonus targets;
- Granting time-vested equity that generally vests over a two or three year period which provides incentives for our executive officers to act in the long-term best interests of the Company; and
- The introduction of PSUs, which have a three-year performance period and provide added long-term focus.

Summary Compensation Table

The following table sets forth summary information concerning compensation awarded to, paid to or earned by each of the following persons: (i) our Chairman of the Board, Chief Executive Officer and Secretary, (ii) our President, Chief Financial Officer, Principal Accounting Officer and Treasurer, (iii) our other executive officers (the “Named Executive Officers”) and (iv) Key Employees for each of the fiscal years ended July 31, 2019, 2018 and 2017.

Name and Principal Position	Year	Base Pay Salary ⁽¹⁾	Option Awards ⁽²⁾	Performance Stock Units Award ⁽³⁾	Non-Equity Incentive Plan Compensation ⁽⁴⁾	All Other Compensation ⁽⁵⁾	Total
Elazar Rabbani, Ph.D. Chairman of the Board	2019	\$611,000	\$135,296	\$70,000	\$500,000	\$175,648	\$1,491,944
	2018	\$611,000	\$137,340	\$44,200	\$500,000	\$184,132	\$1,476,672
Chief Executive Officer and Secretary	2017	\$585,802	\$180,150	—	\$575,000	\$191,044	\$1,531,996
Barry W. Weiner President, Chief Financial Officer, Principal Accounting Officer, Treasurer and Director	2019	\$542,000	\$121,555	\$56,000	\$375,000	\$173,822	\$1,268,377
	2018	\$542,000	\$122,080	\$35,360	\$375,000	\$172,435	\$1,246,875
	2017	\$519,629	\$156,130	—	\$425,000	\$163,069	\$1,263,828
James M. O'Brien ⁽⁶⁾ Executive Vice President of Finance	2019	\$317,000	\$56,316	\$29,400	\$75,000	\$28,802	\$506,518
	2018	\$317,000	\$56,490	\$17,680	\$75,000	\$28,552	\$494,722
	2017	\$311,554	\$74,250	—	\$85,000	\$26,564	\$497,368
Dieter Schapfel, M.D. Chief Medical Director, Enzo Clinical Labs	2019	\$330,000	\$56,316	\$29,400	\$60,000	\$13,282	\$488,998
	2018	\$323,077	\$56,490	\$17,680	\$60,000	\$12,829	\$470,076
	2017	\$310,704	\$66,825	—	\$60,000	\$12,552	\$450,081
Kara Cannon Corporate Vice President Commercial Operations	2019	\$220,000	\$56,316	\$29,400	\$60,000	\$12,802	\$378,518
	2018	\$198,462	\$56,490	\$17,680	\$60,000	\$9,457	\$342,089
	2017	\$193,108	\$49,500	—	\$60,000	\$3,135	\$305,743
Bruce A. Dey Vice President of Sales, Enzo Clinical Labs	2019	\$324,765	\$19,494	\$11,200	—	\$23,434	\$378,893
	2018	\$448,565	\$16,140	\$8,840	—	\$22,951	\$496,496
	2017	\$519,435	\$24,750	—	—	\$22,632	\$566,817

(1) Base salaries set as of January 1 each year.

(2) Represent the fair market value of incentive stock option awards granted to Named Executive Officers and Key Employees on the date of grant, calculated in accordance with FASB ASC Topic 718 for all awards of stock options granted during the relevant fiscal year. Assumptions used in the calculation of these amounts are included in Note 11 to the Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended July 31, 2019.

(3) Represents the grant date fair value of performance stock units granted in the applicable year, calculated in accordance with ASC 718. The amount included in 2019 for the performance stock unit awards are calculated based on the closing market price of the Company's Common Stock and the probable satisfaction of the performance conditions for such awards as of the date of grant. Assuming the highest level of performance is achieved for the 2019 performance share unit awards, the maximum value of these awards at the grant date would be as follows: Dr. Rabbani-\$105,000; Mr. Weiner-\$84,000; Mr. O'Brien-\$44,100; Dr. Schapfel-\$44,100; Mr. Dey-\$10,800; and Ms. Cannon-\$44,100. Assumptions used in the calculation of these amounts are included in Note 11 to the Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended July 31, 2019.

(4) Represents awards accrued under the Pay for Performance Plan for the years ended July 31, 2019, 2018 and 2017.

(5) See the “All Other Compensation” chart for additional information.

(6) Mr. O'Brien's employment with the Company was terminated on November 3, 2019.

All Other Compensation

The following table contains information regarding each component of “All Other Compensation” in the Summary Compensation Table to the Named Executive Officers and Key Employees for the fiscal years ended July 31, 2019, 2018 and 2017.

Name	Year	401(K) ⁽¹⁾	Life Insurance ⁽²⁾⁽³⁾	Medical and Disability Insurance ⁽⁴⁾	Personal Use of Auto ⁽⁵⁾	Total All Other Compensation
Elazar Rabbani, Ph.D.	2019	\$12,250	\$138,972	\$16,176	\$8,250	\$175,648
	2018	\$12,000	\$138,972	\$14,138	\$19,022	\$184,132
	2017	\$12,000	\$144,342	\$12,309	\$22,393	\$191,044
Barry W. Weiner	2019	\$12,250	\$128,723	\$8,049	\$24,800	\$173,822
	2018	\$12,000	\$128,723	\$7,012	\$24,800	\$172,435
	2017	\$12,000	\$133,859	\$6,157	\$11,053	\$163,069
James M. O'Brien ⁽⁶⁾	2019	\$12,250	\$552	—	\$16,000	\$28,802
	2018	\$12,000	\$552	—	\$16,000	\$28,552
	2017	\$12,000	\$552	—	\$14,012	\$26,564
Dieter Schapfel, M.D.	2019	\$12,250	\$1,032	—	—	\$13,282
	2018	\$12,000	\$829	—	—	\$12,829
	2017	\$12,000	\$552	—	—	\$12,552
Kara Cannon	2019	\$12,250	\$552	—	—	\$12,802
	2018	\$9,000	\$457	—	—	\$9,457
	2017	\$2,775	\$360	—	—	\$3,135
Bruce A. Dey	2019	\$12,250	\$1,584	—	\$9,600	\$23,434
	2018	\$12,000	\$1,351	—	\$9,600	\$22,951
	2017	\$12,000	\$1,032	—	\$9,600	\$22,632

(1) Represents Company matches under our 401(k) plan.

(2) Represents premiums of term policies of which the Named Executive Officers or other party is the beneficiary.

(3) Includes the contractual payment for life insurance reimbursement for Dr. Rabbani and Mr. Weiner of \$105,212 and \$100,623, respectively.

(4) Represents incremental medical and disability benefits costs.

(5) Represents the personal use of Company-provided auto or car allowance.

(6) Mr. O'Brien's employment with the Company was terminated on November 3, 2019.

Outstanding Equity Awards at Fiscal Year End—July 31, 2019

The following table sets forth summary information regarding the outstanding equity awards made to the Named Executive Officers and Key Employees at July 31, 2019.

Name	Options Awards				Performance Stock Awards	
	Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options ⁽¹⁾	Option Exercise Price	Options Expiration Date	Equity Incentive Plan; Number of Unearned Shares, Units or Other Rights That Have Not Vested ⁽²⁾	Equity Incentive Plan Awards; Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ⁽³⁾
Elazar Rabbani, Ph.D.	45,615	—	\$3.40	1/21/2020	25,000 ⁽⁴⁾	\$97,750
	60,000	—	\$4.35	3/14/2021	10,000 ⁽⁵⁾	\$39,100
	75,000	—	\$7.07	1/5/2022		
	45,000	45,000	\$4.42	7/31/2023		
	—	128,000	\$2.80	1/3/2024		
Barry W. Weiner	36,489	—	\$3.40	1/21/2020	20,000 ⁽⁴⁾	\$78,200
	50,000	—	\$4.35	3/14/2021	8,000 ⁽⁵⁾	\$31,280
	65,000	—	\$7.07	1/5/2022		
	40,000	40,000	\$4.42	7/31/2023		
	—	115,000	\$2.80	1/3/2024		
James M. O'Brien	5,000	—	\$3.40	1/21/2020	10,500 ⁽⁴⁾⁽⁶⁾	\$41,055
	17,333	—	\$4.35	3/14/2021	4,000 ⁽⁵⁾⁽⁶⁾	\$15,640
	20,000	10,000	\$7.07	1/5/2022		
	11,667	23,333	\$4.42	7/31/2023		
	—	52,000	\$2.80	1/3/2024		

Dieter Schapfel, M.D.	10,000	—	\$3.40	1/21/2020	10,500 ⁽⁴⁾	\$41,055
	27,000	—	\$4.35	3/14/2021	4,000 ⁽⁵⁾	\$15,640
	18,000	9,000	\$7.07	1/5/2022		
	11,667	23,333	\$4.42	7/31/2023		
	—	52,000	\$2.80	1/3/2024		
Kara Cannon	3,333	—	\$3.40	1/20/2020	10,500 ⁽⁴⁾	\$41,055
	10,000	—	\$4.35	3/13/2021	4,000 ⁽⁵⁾	\$15,640
	13,333	6,667	\$7.07	1/5/2022		
	11,667	23,333	\$4.42	7/31/2023		
	—	52,000	\$2.80	1/3/2024		
Bruce A. Dey	10,000	—	\$4.35	3/14/2021	4,000 ⁽⁴⁾	\$15,640
	6,667	3,333	\$7.07	1/5/2022	2,000 ⁽⁵⁾	\$7,820
	3,333	6,667	\$4.42	7/31/2023		
	—	18,000	\$2.80	1/3/2024		

- (1) Each option award vests in equal amounts on the first, second and third anniversaries of the award which was January 21, 2015 for the options granted at \$3.40 per share, March 14, 2016 for the options granted at \$4.35 per share, January 5, 2017 for the options granted at \$7.07 per share, July 31, 2018 for the options granted at \$4.42 per share and January 3, 2019 for the options granted at \$2.80 per share. For Dr. Elazar Rabbani and Barry Weiner, options vest in equal amounts on the first and second anniversary dates.
- (2) The number of unearned PSUs in this column is based on the Company's performance during the 2019 and 2018 fiscal year and equals the target number of PSUs that may be earned based on the Company's Revenue and Adjusted EBITDA during the 2018 through 2020 and 2019 through 2021 fiscal year period after applying the maximum relative TSR Modifier.
- (3) Calculated using the closing market price of the Company's Common Stock on July 31, 2019, \$3.91.
- (4) Represents PSUs granted on January 3, 2019 that will vest, subject to the achievement of threshold performance goals for the 2019-2022 performance period, on January 3, 2022.
- (5) Represents PSUs granted on July 31, 2018 that will vest, subject to the achievement of threshold performance goals for the 2018-2021 performance period, on July 31, 2021.
- (6) Mr. O'Brien's employment with the Company terminated on November 3, 2019.

Options Exercised and Stock Vested

The following table sets forth the options exercised by the Named Executive Officers and Key Employees during the fiscal year ended July 31, 2019. No restricted stock vested for any Named Executive Officers or Key Employees during the fiscal year ending July 31, 2019.

Name	Number of Shares		Stock Awards	
	Acquired/Exercised on Vesting		Value Realized On Vesting/Exercised ⁽¹⁾	
Elazar Rabbani Ph.D.	41,634	\$	18,735	
Barry W. Weiner	33,305	\$	14,987	
James M. O'Brien	—		—	
Dieter Schapfel, M.D.	—		—	
Kara Cannon	—		—	
Bruce A. Dey	10,000	\$	15,329	

- (1) The value realized is the difference between the closing market price on the exercise date and the exercise price of the option, multiplied by the total number of shares exercised.

Employment Agreements

Mr. Barry Weiner and Dr. Elazar Rabbani (each, an "Executive") are parties to employment agreements with the Company, effective May 4, 1994, as subsequently amended (the "Employment Agreements"). Each Executive also receives a non-equity incentive plan bonus - the amount of which shall be determined by the Compensation Committee and/or the Board based on approved financial and non-financial objectives. Each Employment Agreement provides that, in the event of termination of employment by the Executive for "good reason," or a termination of employment by the Company without "cause", change in control or nonrenewal, as such terms are defined in the Employment Agreement, each Executive shall be entitled to receive: (i) a lump sum in an amount equal to three years of the Executive's base annual salary; (ii) a lump sum in an amount equal to the annual bonus paid by the Company to the Executive for the last fiscal year of the Company ending prior to the date of termination multiplied by three; (iii) insurance coverage for the Executive and his dependents, at the same level and at the same charges to the Executive as immediately prior to his termination, for a period of three (3) years following his termination from the Company; (iv) all accrued obligations, as defined therein; and (v) with respect to each incentive pay plan (other than stock option or other equity plans) of the Company in which the Executive participated at the time of termination, an amount equal to the amount the Executive would have earned if he had continued employment for three additional years. If the Executive is terminated by reason of his disability, he shall be entitled to receive, for three years after such termination, his base annual salary less any amounts received under a long-term disability plan. If the Executive's employment with the Company is terminated by reason of his death, his legal representatives shall receive the balance of any remuneration due him under the terms of his Employment Agreement. The Employment Agreements were amended on January 5, 2017 and automatically renew for successive two-year periods unless notice is given to the Company within 180 days of the end of such successive term.

Mr. Bruce A. Dey, Dr. Dieter Schapfel and Ms. Kara Cannon are “at will” employees and are parties to certain change in control provisions with the Company which is deemed customary practice for their respective positions, as more fully discussed below. Prior to his departure in November 2019, Mr. James M. O’Brien was also an “at will” employee. Mr. O’Brien was a party to a severance arrangement from his initial employment arrangement, but did not receive any payments pursuant to such arrangement in connection with his departure.

Benefits and All Other Compensation

We maintain broad-based benefits that are provided to all employees, including health and dental insurance, group life insurance and a 401(k) plan. Named Executive Officers and Key Employees are eligible to participate in our employee benefit plans. The annual Company match for our Named Executive Officers and other employees is up to \$12,250, if over 50 years old, or limited to 50% of the maximum contribution made.

Certain of our Named Executive Officers may be entitled to benefits that are not otherwise available to all of our employees, including supplemental health, life insurance and disability benefits. We do not provide post-retirement health coverage to our Named Executive Officers or our employees. Our health and insurance plans are substantially the same among all management levels at the Company. Dr. Rabbani and Mr. Weiner are provided life insurance benefits in connection with their total compensation arrangements.

In particular circumstances, we may provide relocation allowances when executives first join us. The purpose of this program is to attract talented executives outside our geographic area. Certain Named Executive Officers and Key Employees are provided use of a Company-owned vehicle for business and personal use or provided a car allowance.

Severance and Change in Control Benefits

Pursuant to Employment Agreements entered into with Dr. Rabbani and Mr. Barry Weiner, these executives are entitled to specified benefits in the event of the termination of their employment under specified circumstances, including termination for good reason, termination for cause, and termination following a change of control of our Company (as defined in each executive’s Employment Agreement). Mr. James O’Brien was also entitled to specified benefits in the event of certain terminations of his employment, but the payment of such benefits was not triggered in connection with his departure in November 2019. We have provided more information about these benefits, along with estimates of their value under various circumstances, within the below table.

Based on market trends, we believe these benefits help us compete for executive talent. We believe our severance and change in control benefits are in line with severance packages offered to executives by the companies identified in our peer group.

Our practice in the case of change in control benefits has been structured to trigger only in the event of a termination of the executive without cause or by the executive for good reason during a specified period before or after the change in control.

Potential Payments upon Termination or Change in Control

The following table contains information regarding each component of potential payments upon termination or change in control for the Named Executive Officers and Key Employees as of July 31, 2019. See the above section captioned "Employment Agreements" for a summary of the termination and change in control terms.

Name	Acceleration of Vesting	Severance Pay ⁽¹⁾	Continuation of Benefits	Tax Gross-Up	Total
Elazar Rabbani, Ph.D.					
Termination without cause or by Executive for "good reason"	\$142,080	\$3,648,636	\$734,315	—	\$4,525,031
Change in control transaction without termination	—	—	—	—	—
Change in control transaction with termination	\$142,080	\$3,648,636	\$734,315	\$1,805,320	\$6,330,352
Barry W. Weiner					
Termination without cause or by Executive for "good reason"	\$127,650	\$3,052,869	\$703,568	—	\$3,884,087
Change in control transaction without termination	—	—	—	—	—
Change in control transaction with termination	\$127,650	\$3,052,869	\$703,568	\$1,586,513	\$5,470,600
James M. O'Brien⁽²⁾					
Termination without cause or by Executive for good reason	—	—	—	—	—
Change in control transaction without termination	—	—	—	—	—
Change in control transaction with termination	\$57,720	—	—	—	\$57,720
Dieter Schapfel, M.D.					
Termination without cause or by Executive for "good reason"	—	—	—	—	—
Change in control transaction without termination	—	—	—	—	—
Change in control transaction with termination	\$57,720	—	—	—	\$57,720
Kara Cannon					
Termination without cause or by Executive for "good reason"	—	—	—	—	—
Change in control transaction without termination	—	—	—	—	—
Change in control transaction with termination	\$57,720	—	—	—	\$57,720
Bruce A. Dey					
Termination without cause or by Executive for "good reason"	—	—	—	—	—
Change in control transaction without termination	—	—	—	—	—
Change in control transaction with termination	\$19,980	—	—	—	\$19,980

(1) The amounts listed in this column do not include accrued amounts such as accrued salary or vacation.

(2) Mr. O'Brien's employment with the Company was terminated on November 3, 2019.

Chief Executive Officer Pay Ratio –

As required by Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act, and Item 402(u) of Regulation S-K, we are providing the following information regarding the annual total compensation of our median employee and the annual total compensation of Dr. Rabbani, our Chairman, President and Chief Executive Officer.

For fiscal 2019, the annual total compensation of the employee identified as our median employee (excluding Dr. Elazar Rabbani) was \$45,014. The annual total compensation of Dr. Rabbani was \$1,491,944. Based on this information, for fiscal 2019, the ratio of the annual total compensation of Dr. Rabbani to the median of the annual total compensation of all employees is 33 to 1.

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

To identify the median of all our employees, as well as to determine the annual total compensation of the median employee, the methodology and the material assumptions, adjustments and estimates that we used were as follows: we determined that, as of July 31, 2019, our employee population consisted of approximately 460 individuals worldwide (432 U.S. and 28 non-U.S.), including full-time and part-time employees but not any individuals paid by a third party. We selected July 31, 2019, which is within the last three months of our fiscal 2019, as the date upon which we would identify the median employee to allow sufficient time to identify the median employee given the global scope of our operations.

To identify the median employee from our employee population, we collected actual base salary, bonus or commission paid and any overtime paid during the 12-month period ending July 31, 2019.

COMPENSATION COMMITTEE REPORT

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis in this proxy report with management. Based on its review and discussion with management, the Compensation Committee recommended to our Board that the Compensation Discussion and Analysis be included in this proxy statement and also be incorporated by reference in our Annual Report on Form 10-K and Form 10-K/A for the fiscal year ended July 31, 2019.

Dov Perlisky, Chairman
Gregory M. Bortz
Bruce A. Hanna, Ph.D.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

No member of the Compensation Committee has a relationship that would constitute an interlocking relationship with the Company's executive officers or other directors.

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

The following table sets forth information regarding our existing equity compensation plans as of July 31, 2019:

Plan Category	(A) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights ⁽¹⁾	(B) Weighted Average Exercise Price of Outstanding Options	(C) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (A)) ⁽²⁾
Equity compensation plans approved by security holders	2,352,667	\$4.53	1,223,000
Equity compensation plans not approved by security holders	—	—	—
Total	2,352,667	\$4.53	1,223,000

(1) Shares to be issued upon exercise of options or restricted stock awards under the 2011 Incentive Plan.

(2) Shares available for grant under the 2011 Incentive Plan.

INSURANCE FOR INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Company has in effect with AIG Insurance and others, under a policy effective February 26, 2019 and expiring on February 26, 2020, insurance covering all of its Directors and officers and certain other employees of the Company against certain liabilities and reimbursing the Company for obligations which it incurs as a result of its indemnification of such directors, officers and employees. Such insurance has been obtained in accordance with the provisions of Section 726 of the Business Corporation Law of the State of New York. The annual premium is \$323,890.

This report has been provided by the Board of Directors of the Company.

Elazar Rabbani, Ph.D.
Barry W. Weiner
Gregory M. Bortz
Dov Perlisky
Bruce A. Hanna, Ph.D.

PROPOSAL 2
ADVISORY VOTE ON THE COMPANY'S NAMED EXECUTIVE OFFICER COMPENSATION

The Exchange Act, and more specifically, Section 14A of the Exchange Act, which was added under the Dodd-Frank Wall Street Reform and Consumer Protection Act enacted in July 2010, requires that we provide stockholders with the opportunity to vote to approve, on a nonbinding advisory basis, the compensation of our Named Executive Officers as disclosed in this Proxy Statement in accordance with the SEC's rules (commonly referred to as "Say-on-Pay").

At our 2011 and 2017 annual meeting of stockholders, a majority of our stockholders who voted supported an annual vote on our executive compensation and, in response, our Compensation Committee determined to hold an annual vote on the matter. As such, the next shareholder advisory vote on executive compensation will occur at the Company's 2020 Annual Meeting.

Our compensation program for Named Executive Officers is intended to link compensation to performance; to provide competitive compensation levels to attract, retain and reward executives; and to align management's interests with those of our clients and stockholders. The compensation provided to the Named Executive Officers is dependent on the Company's financial, operational and strategic performance and the Named Executive Officer's individual performance. It is intended to drive creation of long-term shareholder value.

We encourage stockholders to read the "Compensation Discussion and Analysis" section of this Proxy Statement, the 2019 Summary Compensation Table and the other related tables and disclosure for a detailed description of the fiscal year 2019 compensation of our Named Executive Officers. The Compensation Committee and the Board believe that the policies and procedures articulated in the "Compensation Discussion and Analysis" are effective in achieving our goals and that the compensation of our Named Executive Officers reported in this Proxy Statement appropriately reflects our results during the fiscal year.

The vote on this resolution is not intended to address any specific element of compensation; rather, the advisory vote relates to the overall compensation of our Named Executive Officers. This vote is advisory, which means that it is not binding on the Company, the Board or the Compensation Committee of the Board. However, we value the opinion of our stockholders and the Board and the Compensation Committee will review the voting results and will take into account the outcome of the vote when considering future compensation decisions for the Named Executive Officers.

Accordingly, we ask our stockholders to vote on the following resolution:

"RESOLVED, that the Company's stockholders approve, on a nonbinding advisory basis, the compensation paid to the Company's Named Executive Officers, as disclosed in the Company's Proxy Statement for the 2019 Annual Meeting of Stockholders pursuant to the compensation disclosure rules of the SEC, including the Compensation Discussion and Analysis, the Summary Compensation table and the related compensation tables and narrative discussion."

THE BOARD UNANIMOUSLY RECOMMENDS THAT YOU VOTE "FOR" APPROVING THE NAMED EXECUTIVE OFFICER COMPENSATION AS DISCLOSED IN THIS PROXY STATEMENT PURSUANT TO THE COMPENSATION DISCLOSURE RULES OF THE SEC.

PROPOSAL 3
RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee of the Board has selected and the Board has appointed EisnerAmper LLP, an independent registered public accounting firm (“EisnerAmper”), to audit the Company’s financial statements for the fiscal year ending July 31, 2020. The Company is submitting its selection of EisnerAmper for ratification by the shareholders at the Annual Meeting. A representative of EisnerAmper is expected to be present at the Annual Meeting, will have the opportunity to make a statement and is expected to be available to respond to appropriate questions. EisnerAmper has served as our independent registered public accounting firm since April 19, 2013.

Although the selection and appointment of an independent registered public accounting firm is not required to be submitted to a vote of shareholders, the Board deems it desirable to obtain the shareholders’ ratification and approval of this appointment. If the appointment is not ratified by shareholders, then the adverse vote will be considered as an indication to the Audit Committee that it should consider selecting another independent registered public accounting firm for the following fiscal year, but the Audit Committee is not required to do so. Even if the appointment is ratified, the Audit Committee, in its discretion, may select a new independent registered public accounting firm at any time during the year if it believes that such a change would be in the Company’s best interest.

In making its recommendation to ratify the appointment of EisnerAmper as the Company’s independent registered public accounting firm for the fiscal year ending July 31, 2020, the Audit Committee has considered whether the services provided by EisnerAmper are compatible with maintaining the independence of EisnerAmper.

Principal Accountant Fees and Services

EisnerAmper billed the Company for services for fiscal 2019 and 2018, as set forth in the table below. The fees listed are aggregate fees for services performed for the year—regardless of when the fee was actually billed.

	FY 2019	FY 2018
Audit Fees	\$548,318	\$550,900
Audit-related Fees	38,681	38,752
Tax Fees	—	—
All Other Fees	—	—
Total	\$586,999	\$589,652

Audit Fees—Consists of fees for professional services necessary to perform an audit or review in accordance with the Public Company Accounting Oversight Board, including services rendered for the audit of our annual financial statements (including services incurred with rendering an opinion under Section 404 of the Sarbanes-Oxley Act of 2002) and quarterly reviews of the Company’s interim financial statements.

Audit-Related Fees—EisnerAmper performed certain Audit services for an employee benefit plan for the years ended December 31, 2019 and 2018, for which the Company is the plan sponsor; these fees were \$38,681 and \$38,752, respectively.

Tax Fees—There were no tax fees for fiscal years 2019 and 2018.

All Other Fees—There were no other fees for fiscal years 2019 and 2018.

Pre-Approval Policies and Procedures—The Audit Committee has adopted a policy that requires advance approval of all audit, audit-related, tax services and other services performed by the independent registered public accounting firm. The policy provides for pre-approval by the Audit Committee of specifically defined audit and non-audit services.

Unless the specific service has been previously pre-approved with respect to that year, the Audit Committee must approve the permitted service before the independent auditor is engaged to perform it. The Audit Committee has delegated to the Chair of the Audit Committee authority to approve permitted services, provided that the Chair reports any decisions to the Audit Committee at its next scheduled meeting.

THE BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” PROPOSAL 3 RELATING TO THE RATIFICATION OF THE COMPANY’S APPOINTMENT OF EISNERAMPER TO SERVE AS THE COMPANY’S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING JULY 31, 2020.

PROPOSAL 4

APPROVAL OF THE AMENDMENT TO THE BY-LAWS TO IMPLEMENT MAJORITY VOTING IN UNCONTESTED DIRECTOR ELECTIONS

The Board proposes and recommends that shareholders approve an amendment to the By-Laws for the election of directors by an affirmative vote of the majority of the votes cast in uncontested director elections. Our By-Laws currently defer to New York Corporate law, which provides that the Company's directors are elected pursuant to a "plurality voting" standard, under which director nominees who receive the greatest number of votes cast in favor of their election at the annual meeting of shareholders are elected to the Board, up to the maximum number of directors to be filled at that meeting. This means that, currently, a nominee may be elected to the Board whether or not a majority of the votes cast are in favor of his or her election.

Under the proposed majority voting standard, for a nominee to be elected to the Board in an "uncontested election," the number of votes cast "FOR" the nominee's election must exceed the number of votes cast "AGAINST" their election. Abstentions would not be considered votes cast "FOR" or "AGAINST" a nominee. An "uncontested election" is generally any meeting of shareholders at which the number of nominees does not exceed the number of directors to be elected. In all director elections other than uncontested elections, which we refer to as "contested elections," the plurality voting standard would still apply.

In recent years, many public companies have eliminated plurality voting in uncontested elections and adopted "majority voting" by-laws or standards that provide shareholders with more influence over the outcome of uncontested director elections. As part of the ongoing review of our corporate governance, our Board determined that it is in the best interest of the Company and our shareholders to implement a majority voting standard in uncontested director elections. The Board concluded that the adoption of a majority vote standard will reinforce the Board's accountability to our shareholders, by requiring that a nominee must obtain more "FOR" votes than "AGAINST" votes in order to be elected.

The Board believes, however, that the plurality vote standard should continue to apply in contested director elections. If a majority vote standard is used in a contested election, fewer candidates could be elected to the Board than the number of authorized board seats. Accordingly, we will retain plurality voting in contested elections.

We will also implement conforming amendments to our By-Laws to address the treatment of "holdover" terms for any incumbent directors who fail to be re-elected under majority voting. Under New York law, even if an incumbent director does not receive the vote required for re-election, that director will continue to serve as a "holdover director" until a successor is elected and qualified. Our amendments to our By-Laws will require an incumbent director who does not receive more votes cast "FOR" than "AGAINST" his or her election in an uncontested election to tender his or her resignation to the Board and the Board will decide, through a process managed by the Nominating/Governance committee, whether to accept such resignation or to have such director serve on a holdover basis until a successor is appointed.

The implementation of a majority voting standard requires an amendment to the By-Laws. This amendment consists of amending Article 1, Section 9 of the By-Laws, which refers to voting standards. The text of the revised Section marked with the proposed amendment is below:

Section 9. Voting. Except as otherwise provided by statute, the Certificate of Incorporation, or any certificate duly filed in the office of the Department of State of the State of incorporation, each holder of record of shares of stock of the Corporation having voting power shall be entitled at each meeting of the shareholders to one vote for every share of such stock standing in his name on the record of shareholders of the Corporation on the date fixed by the Board as the record date for the determination of the shareholders who shall be entitled to notice of and to vote at such meeting; or if such record date shall not have been so fixed, then at the close of business on the day next preceding the day on which notice thereof shall be given, or if notice is waived, at the close of business on the day next preceding the day on which the meeting is held; or each shareholder entitled to vote at any meeting of the shareholders may authorize another person or persons to act for him by a proxy signed by such shareholder or his attorney-in-fact. Any such proxy shall be delivered to the secretary of such meeting at or prior to the time designated in the order of business for so delivering such proxies. No proxy shall be valid after the expiration of three years from the date thereof, unless otherwise provided in the proxy. Every proxy shall be revocable at the pleasure of the shareholder executing it, except in those cases where an irrevocable proxy is permitted by law. Except as otherwise provided by statute, these By-Laws, or the Certificate of Incorporation, any corporate action to be taken by vote of the shareholders shall be authorized by a majority of the total votes, or when shareholders are required to vote by class by a majority of the votes of the appropriate class, cast at a meeting of shareholders by the holders of shares present in person or represented by proxy and entitled to vote on such action. Each director of the Corporation to be elected by shareholders shall be elected by the vote of a majority of the votes cast with respect to such director by the shares present in person or represented by proxy and entitled to vote on the election of directors at any meeting of shareholders duly called for that purpose at which a quorum is present; provided, however, that directors shall be elected by a plurality of the votes cast in a contested election. An election shall be considered contested if, as of the date that this 10 days prior to the filing of the definitive proxy materials for such election, the number of nominees for election as a member of the Board exceeds the number of directors to be elected. A "majority of votes cast" means that the number of shares voted "for" a nominee for election as a member of the Board exceeds the number of shares voted "against" the election of such nominee. Abstentions and broker non-votes shall not constitute votes "for" or "against". Any incumbent director nominee who fails to receive a majority of the votes cast in an election that is not a contested election shall promptly tender his or her resignation to the Board with such resignation expressly stating that it is contingent upon the acceptance of the resignation by the Board in accordance with this Section 9. The Nominating/Governance Committee of the Board, or such other committee designated by the Board pursuant to these By-Laws, shall recommend to the Board whether to accept or reject the tendered resignation, or whether other action should be taken. The Board shall act on the resignation, taking into account the Nominating/Governance Committee's recommendation, and publicly disclose on a Form 8-K its decision regarding the resignation and, if such resignation is rejected, the rationale behind the decision, within ninety (90) days following certification of the election results. The Nominating/Governance Committee in making its recommendation, and the Board in making its decision, each may consider any factors and other information that they consider appropriate and relevant. The director who has tendered their resignation pursuant to this Section 9 shall not participate in the Nominating/Governance Committee's or the Board's deliberations or decision with respect to the tendered resignation. If the board of directors accepts a director's resignation pursuant to this Section 9, then the Board may fill the resulting vacancy pursuant to these By-Laws and the Certificate of Incorporation. Unless required by statute, or determined by the chairman of the meeting to be advisable, the vote on any question need not be by written ballot. On a vote by written ballot each, ballot shall be signed by the shareholder voting, or by his proxy, if there be such proxy, and shall state the number of shares voted.

If approved by our shareholders, this amendment will become effective at close of the Annual Meeting. Assuming a quorum is present at the Annual Meeting, the amendment to the By-Laws will be approved if it receives the affirmative vote of a majority of the votes present in person or by proxy by the holders of shares entitled to vote therein. Abstentions will have the same effect as a vote against this proposal. Broker non-votes, if any, will not be counted as votes cast for such purposes.

THE BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” PROPOSAL 4 TO AMEND THE BY-LAWS TO IMPLEMENT MAJORITY VOTING IN UNCONTESTED DIRECTOR ELECTIONS.

OTHER MATTERS

Except as discussed in this Proxy Statement, the Board does not know of any matters that are to be properly presented at the Annual Meeting other than those stated in the Notice of Annual Meeting and referred to in this Proxy Statement.

If other matters properly come before the Annual Meeting, it is the intention of the persons named in the enclosed proxy card to vote thereon in accordance with their best judgment. Moreover, the Board reserves the right to adjourn or postpone the Annual Meeting for failure to obtain a quorum, for legitimate scheduling purposes or based on other circumstances that, in the Board's belief, would cause such adjournments or postponements to be in the best interests of all Enzo shareholders.

Participants in the Company's Solicitation

Under applicable SEC regulations, each of the Company's directors and certain executive officers and other employees of the Company are deemed to be "participants" in this proxy solicitation. Please refer to the sections of this Proxy Statement entitled "Security Ownership of Certain Beneficial Owners and Management" and "Certain Information Regarding Participants in this Proxy Solicitation" for information about our directors and certain of our executive officers who may be deemed to be participants in the solicitation. Except as described in this Proxy Statement, there are no agreements or understandings between the Company and any such participants relating to employment with the Company or any future transactions.

Solicitation of Proxies

The cost of soliciting proxies will be borne by the Company. We are required by law to convene an Annual Meeting of our shareholders at which directors are elected. Because our shares are widely held, it would be impractical for our shareholders to meet physically in sufficient numbers to hold a meeting. Accordingly, proxies are solicited from our shareholders. United States federal securities laws require us to send you this Proxy Statement and specify the information required to be contained in it. This solicitation of proxies is being made by the Board and all expenses of this solicitation will be borne by the Company. Proxies may be solicited through the mail and through telephonic or telegraphic communications to, or by meetings with, shareholders or their representatives by directors, officers and other employees of the Company who will receive no additional compensation therefor. Other than the persons described herein, no general class of employee of the Company will be employed to solicit shareholders. However, in the course of their regular duties, employees may be asked to perform clerical or ministerial tasks in furtherance of this solicitation.

We have retained Kingsdale Advisors ("Kingsdale") for an estimated fee of up to \$145,000 to assist us in the mailing, collection and administration of proxies. Kingsdale expects that approximately 35 of its employees will assist in the solicitation. The Company also requests brokers, nominees and fiduciaries holding stock in their names for the benefit of others, or holding stock for others who have the right to give voting instructions, to forward proxy material to their principals and to request authority for the execution of the proxy, and the Company will reimburse such persons for their reasonable expenses. Except as set forth in this Proxy Statement, neither the Company nor any person acting on its behalf has employed, retained or agreed to compensate any person to make solicitations or recommendations to shareholders of the Company concerning the proxy solicitation. The Company's aggregate expenses, including those of Kingsdale, related to this solicitation in excess of expenses normally spent for an annual meeting in which there is not a proxy contest are currently estimated to be approximately \$950,000, of which approximately \$645,000 has been spent to date.

Reimbursement for Certain Expenses

The Company requests persons such as brokers, nominees and fiduciaries holding stock in their names for the benefit of others, or holding stock for others who have the right to give voting instructions, to forward proxy material to their principals and to request authority for the execution of the proxy, and the Company will reimburse such persons for their reasonable expenses.

Shareholder List

A list of our shareholders as of the close of business on December 3, 2019 will be available for inspection during business hours for ten days prior to the Annual Meeting at our principal executive offices located at 527 Madison Avenue, New York, New York 10022.

Householding of Proxy Materials

Under SEC rules, companies and intermediaries (such as brokers) may satisfy the delivery requirements for proxy statements with respect to two or more shareholders sharing the same address by delivering a single proxy statement addressed to those shareholders. This practice, known as “householding,” is intended to improve the convenience of shareholders and to reduce the Company’s printing and postage costs.

A number of brokers with accountholders who are shareholders of the Company will be householding the Company’s proxy materials and, accordingly, a single proxy statement will be delivered to multiple shareholders sharing an address unless contrary instructions have been received from an affected shareholder. Shareholders who participate in householding will continue to receive separate proxy cards. Once you have received notice from your broker that they will be householding communications to your address, householding will continue until you are notified otherwise or you revoke your consent. If at any time you no longer wish to participate in householding and would prefer to receive a separate proxy statement, please notify your broker or call the Company at (212) 583-0100 or write the Company at 527 Madison Avenue, New York, New York 10022, Attention: Investor Relations.

Shareholders who currently receive multiple copies of the proxy statement at their address and would like to request householding of their communications should contact their brokers.

The Company will provide, upon availability, without charge to each person being solicited by this Proxy Statement a copy of its 2019 Annual Report, which includes the Company’s Annual Report on Form 10-K and Form 10-K/A for its fiscal year ended July 31, 2019. Upon payment of a reasonable fee, shareholders may also obtain a copy of the exhibits to our Annual Report on Form 10-K for our fiscal year ended July 31, 2019. Any requests for such materials should be directed to Barry Weiner, Enzo Biochem, Inc., 527 Madison Avenue, New York, New York 10022.

Forward-Looking Statements

This Proxy Statement contains “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act, and Section 21E of the Exchange Act. These forward-looking statements are predictions and generally can be identified by use of statements that include phrases such as “plan,” “expect,” “will,” “should,” “could,” “anticipate,” “intend,” “project,” “estimate,” “guidance,” “possible,” “continue” and other similar terms and phrases, including references to assumptions and forecasts of future results. Forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors that may cause the actual results to differ materially from those anticipated at the time the forward-looking statements are made. These risks include, but are not limited to, those described in “Risk Factors” and elsewhere in the Company’s Annual Report on Form 10-K, for the year ended July 31, 2019 and subsequent filings with the SEC. These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements. No assurance can be given that the future results covered by the forward-looking statements will be achieved. Except as required by applicable law, all information contained herein is as of the date of this Proxy Statement, and the Company does not intend to update this information.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE SHAREHOLDER MEETING TO BE HELD ON JANUARY 31, 2020

The Notice of Annual Meeting of Shareholders, this Proxy Statement, the Company’s 2019 Annual Report on Form 10-K and Form 10-K/A for the fiscal year ended July 31, 2019, and form of **WHITE** proxy card, and any amendments thereto, are available free of charge at <http://www.enzo.com/corporate/investor-information/enzo-sec-filings>. Information on our website does not constitute part of the Company’s proxy solicitation materials.

Shareholders may also obtain a copy of these materials by writing to Enzo Biochem, Inc., 527 Madison Avenue, New York, New York 10022, Attention: Investor Relations. Upon payment of a reasonable fee, shareholders may also obtain a copy of the exhibits to our Annual Report on Form 10-K and Form 10-K/A for our fiscal year ended July 31, 2019. Any request for such materials should be delivered to the Company before January 24, 2019 to facilitate timely delivery.

For information on how to obtain directions to be able to attend the Annual Meeting and vote in person, please write to the Company’s principal corporate office at 527 Madison Avenue, New York, New York 10022, Attention: Investor Relations or call (212) 583-0100 requesting such information.

THE BOARD UNANIMOUSLY RECOMMENDS VOTING “FOR” THE ELECTION OF THE BOARD’S NOMINEES UNDER PROPOSAL 1, “FOR” PROPOSAL 2, “FOR” PROPOSAL 3 AND “FOR” PROPOSAL 4 USING THE ENCLOSED WHITE PROXY CARD. THE BOARD URGES YOU NOT TO SIGN, RETURN OR VOTE ANY PROXY CARD THAT MAY BE SENT TO YOU BY HARBERT EVEN AS A PROTEST VOTE, AS ONLY YOUR LATEST DATED PROXY CARD WILL BE COUNTED.

Kingsdale Advisors is assisting us with our effort to solicit proxies. Therefore, requests for the above materials can also be made to Kingsdale Advisors through the following channels: (1) by calling (888) 518-1554 (toll-free in North America); (2) by calling (416) 867-2272 (outside of North America); or (3) by emailing ENZ@kingsdaleadvisors.com. Additionally, if you have any questions or require assistance in authorizing a proxy or voting your shares of our Common Stock or in obtaining any of the above materials, please contact Kingsdale Advisors through one of the three channels listed above. We are not aware of any other business, or any other nominees for election as directors, that may properly be brought before the Annual Meeting.

IF YOU ARE A RECORD HOLDER OF SHARES, OR AN OWNER WHO OWNS SHARES IN “STREET NAME” AND OBTAINS A “LEGAL” PROXY FROM YOUR BROKER, BANK, TRUSTEE OR NOMINEE, YOU STILL MAY ATTEND THE ANNUAL MEETING AND VOTE YOUR SHARES OR REVOKE YOUR PRIOR VOTING INSTRUCTIONS.

Regardless of the number of shares of our Common Stock that you own, your vote will be very important. Thank you for your continued support, interest and investment in Enzo Biochem, Inc.

WHERE YOU CAN FIND MORE INFORMATION

In addition to the information about the Company and its subsidiaries contained in this Proxy Statement, additional information about the Company can be found on our website located at www.enzo.com, including information about our management team, products and services and our corporate governance practices.

The corporate governance information on our website includes the Company's Corporate Governance Guidelines, the Code of Business Conduct and Ethics, and the charters of each of the committees of the Board. These documents can be accessed at www.enzo.com. Printed versions of our Corporate Governance Guidelines, our Code of Conduct and the charters for our Board committees can be obtained, free of charge, by writing to the Company at: 527 Madison Avenue, New York, New York 10022, Attention: Investor Relations.

We are also required to file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's public reference room located at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. Our SEC filings are also available to the public at the SEC's website at www.sec.gov. You also may obtain free copies of the documents we file with the SEC by going to our website, the address of which is <http://www.enzo.com/corporate/investor-information/enzo-sec-filings>. The information provided on our website is not part of this Proxy Statement, and therefore is not incorporated by reference.

Shareholders are entitled to express their views regarding the topics raised in this Proxy Statement or other matters directly to the Company through written communications sent directly to the attention of the Board, any individual director or the "non-employee directors" as a group, by written communications addressed in care of Enzo Biochem, Inc., 527 Madison Avenue, New York, New York 10022, Attention: Investor Relations.

This information about Enzo's website and its content, together with other references to the website made in this Proxy Statement, is for information only and the content of the Company's website is not deemed to be incorporated by reference in this Proxy Statement or otherwise filed with the SEC.

SHAREHOLDER PROPOSALS

Shareholder Proposals for the 2020 Annual Meeting

Proposals of shareholders intended to be included in the Company's Proxy Statement and form of proxy for use in connection with the Company's 2020 Annual Meeting must be received by the Company's Secretary at the Company's principal executive offices at 527 Madison Avenue, New York, New York 10022, Attention: Elazar Rabbani, Secretary, no later than August 8, 2020 (120 calendar days preceding the one-year anniversary of the date this Proxy Statement was first mailed to our shareholders for the Annual Meeting), and must otherwise satisfy the procedures prescribed by Rule 14a-8 under the Exchange Act. It is suggested that any such proposals be submitted by certified mail with return receipt requested.

Pursuant to Rule 14a-4 under the Exchange Act, shareholder proxies obtained by our Board in connection with our 2020 Annual Meeting will confer on the proxies and attorneys-in-fact named therein discretionary authority to vote on any matters presented at the annual meeting which were not included in the Company's Proxy Statement in connection with such annual meeting, unless notice of the matter to be presented at the annual meeting is provided to the Company's Secretary before October 22, 2020 (the 45th day preceding the one-year anniversary of the date this Proxy Statement was first mailed to our shareholders for the Annual Meeting).

Director Nominations

Under our By-Laws, shareholders intending to nominate one or more candidates for election to our Board at our 2020 Annual Shareholder Meeting may do so only if written notice of the intent to make such nomination(s) has been given, either by personal delivery or by United States mail, postage prepaid, to the Secretary of the Company, at the Company's principal executive offices at 527 Madison Avenue, New York, New York 10022, Attention: Elazar Rabbani, Secretary, not less than ninety (90) days nor more than one hundred twenty (120) days prior to the earlier of the date of such annual meeting or the corresponding date on which the immediately preceding year's annual meeting of shareholders was held. Such notice must contain all of the information required by our By-Laws, including, without limitation, all information that would be required in connection with such nomination(s) under the SEC's proxy rules if such nomination were the subject of a proxy solicitation and the written consent of each nominee for election to our Board named therein to serve if elected. The chairman of the meeting may refuse to acknowledge the nomination of any person not made in compliance with our By-Laws.

The contents and sending of this Proxy Statement have been approved by all of the directors of the Company. Dated as of the 5th day of December, 2019.

ENZO BIOCHEM, INC.

/s/ Barry W. Weiner

Barry W. Weiner
President, Chief Financial Officer, Principal
Accounting Officer, Treasurer and Director

ANNEX A CERTAIN INFORMATION REGARDING PARTICIPANTS IN THIS PROXY SOLICITATION

The following tables set forth the names, present principal occupations and business addresses of our directors and nominees, and the names, present principal occupations and business addresses of our officers and employees who, under the rules of the SEC, are considered to be participants in our solicitation of proxies from our shareholders in connection with the Annual Meeting.

Directors and Nominees

The principal occupations and the address of the corporation or other organization in which such employment is carried on of our directors and nominees below.

<u>Name</u>	<u>Principal Occupation</u>	<u>Address</u>
Elazar Rabbani, Ph.D.	Chairman of the Board, Chief Executive Officer and Secretary, Enzo Biochem, Inc.	c/o Enzo Biochem, Inc. 527 Madison Avenue, New York, New York 10022
Barry W. Weiner	President, Chief Financial Officer, Principal Accounting Officer, Treasurer and Director, Enzo Biochem, Inc.	c/o Enzo Biochem, Inc. 527 Madison Avenue, New York, New York 10022
Dieter Schapfel, M.D.	Chief Medical Director, Enzo Clinical Labs	c/o Enzo Biochem, Inc. 527 Madison Avenue, New York, New York 10022
Kara Cannon	Corporate Vice President, Commercial Operations	c/o Enzo Biochem, Inc. 527 Madison Avenue, New York, New York 10022
Bruce A. Dey	Vice President of Sales, Enzo Clinical Labs	c/o Enzo Biochem, Inc. 527 Madison Avenue, New York, New York 10022
Gregory M. Bortz	Managing Partner, CREO group of companies	c/o Enzo Biochem, Inc. 527 Madison Avenue, New York, New York 10022
Dov Perlysky	Director, Chairman of the Compensation Committee, Enzo Biochem, Inc.	c/o Enzo Biochem, Inc. 527 Madison Avenue, New York, New York 10022
Bruce A. Hanna, Ph.D.	Clinical Professor of Pathology and Clinical Professor of Microbiology, New York University School of Medicine	c/o Enzo Biochem, Inc. 527 Madison Avenue, New York, New York 10022

Officers and Employees

The principal occupations of our executive officers who are considered participants are set forth below. The principal occupation refers to such person's position with the Company, and the business address for each person is c/o Enzo Biochem, Inc., 527 Madison Avenue, New York, New York 10022.

<u>Name</u>	<u>Principal Occupation</u>
Elazar Rabbani, Ph.D.	Chairman of the Board, Chief Executive Officer and Secretary
Barry W. Weiner	President, Chief Financial Officer, Principal Accounting Officer, Treasurer and Director
Dieter Schapfel, M.D.	Chief Medical Director, Enzo Clinical Labs
Kara Cannon	Corporate Vice President, Commercial Operations
Bruce A. Dey	Vice President of Sales, Enzo Clinical Labs

Information Regarding Ownership of Company Securities by Participants

The amount of the Company's securities beneficially owned by each participant is set forth in the section of this Proxy Statement entitled "Security Ownership of Certain Beneficial Owners and Management."

Transactions in the Common Stock during the Past Two Years

A list of all acquisitions and dispositions of the Common Stock made during the last two years by persons who are participants in the Company's solicitation of proxies is found in Annex B.

Other Contracts, Arrangements and Understandings with Participants

Except as otherwise set forth in this Proxy Statement, to the best of the Company's knowledge: (i) none of the participants in the Company's solicitation of proxies is, or was within the past year, a party to any contract, arrangement or understanding with any person with respect to any securities of the Company, including, but not limited to, joint ventures, loan or option arrangements, puts or calls, guarantees against loss or guarantees of profit, division of losses or profits or the giving or withholding of proxies; (ii) neither any of the participants nor any of their respective associates has any arrangement or understanding with any person with respect to any future employment by the Company or its affiliates, or with respect to any future transactions to which the Company or any of its affiliates will or may be a party; and (iii) no participant knows of any arrangements, including any pledge by any person of securities of the Company or any of the Company's parents and the operation of which may at a subsequent date result in a change in control of the Company.

Beneficial Ownership of the Common Stock by Associates of Participants

To the best of the Company's knowledge, other than as set forth in this Proxy Statement, none of the participants in the Company's solicitation of proxies has any "associates" (as defined in Rule 14a-1 under the Exchange Act) who beneficially own any shares of the Common Stock.

Beneficial Ownership of Securities of the Company's Subsidiaries

To the best of the Company's knowledge, other than as set forth in this Proxy Statement, none of the participants in the Company's solicitation of proxies beneficially owns, directly or indirectly, any securities of any parent or subsidiary of the Company.

Other Proceedings

There are no material proceedings to which the participant or any of his or her associates is a party adverse to the Company or has a material interest adverse to the Company.

Miscellaneous Information Concerning Participants

Except as described in this Proxy Statement, none of the participants (i) beneficially owns (within the meaning of Rule 13d-3 under the Exchange Act), directly or indirectly, any shares or other securities of the Company or any of the Company's subsidiaries, (ii) owns any securities of the Company of record but not beneficially, (iii) has purchased or sold any of such securities within the past two years or (iv) is, or within the past year was, a party to any contract, arrangement or understanding with any person with respect to any such securities. No part of the purchase price or market value of any of the Company's securities owned by any participant is represented by funds borrowed or otherwise obtained for the purpose of acquiring or holding such securities. Except as disclosed in this Proxy Statement, none of the participants' associates beneficially owns, directly or indirectly, any of the Company's securities. Other than as disclosed in this Proxy Statement, neither the Company nor any of the participants has any substantial interests, direct or indirect, by security holding or otherwise, in any matter to be acted upon pursuant to this Proxy Statement or is or has been within the past year a party to any contract, arrangement or understanding with any person with respect to any of the Company's securities, including, but not limited to, joint ventures, loan or option agreements, puts or calls, guarantees against loss or guarantees of profit, division of losses or profits or the giving or withholding of proxies. Other than as set forth in this Proxy Statement, none of the Company, the participants or any of their affiliates has had or will have a direct or indirect material interest in any transaction or series of similar transactions since the beginning of the Company's last fiscal year or any currently proposed transactions, or series of similar transactions, to which the Company or any of the Company's subsidiaries was or is to be a party in which the amount involved exceeds \$120,000.

Other than as set forth in this Proxy Statement, none of the Company, any of the participants or any of their affiliates has any arrangements or understandings with any person with respect to any future employment by the Company or the Company's affiliates or with respect to any future transactions to which the Company or any of its affiliates will or may be a party.

Other than as set forth in this Proxy Statement, there are no material legal proceedings in which any of the directors or executive officers of the Company is a party adverse to the Company or any of its subsidiaries, or proceedings in which such directors or executive officers have a material interest adverse to the Company or any of its subsidiaries. Other than as set forth in this Proxy Statement, none of the Company or any of the other participants has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) during the past ten years.

Our Certificate of Incorporation and the By-Laws also provide that we shall indemnify and hold harmless each person who serves at any time as a director, officer, employee or agent of the Company from and against any and all claims, judgments and liabilities to which such person shall become subject by reason of the fact that he is or was a director, officer, employee or agent of the Company and shall reimburse such person for all legal and other expenses reasonably incurred by him or her in connection with any such claim or liability. We also have the power to defend such person from all suits or claims in accord with New York law. The rights accruing to any person under our Certificate of Incorporation and the By-Laws do not exclude any other right to which any such person may lawfully be entitled, and we may indemnify or reimburse such person in any proper case, even though not specifically provided for by our Certificate of Incorporation and the By-Laws.

ANNEX B RECENT TRANSACTION HISTORY OF PARTICIPANTS IN THIS PROXY SOLICITATION

The following is a list of all purchases and sales of our Common Stock made during the last two years by persons who are participants in our solicitation of proxies.

Reporting Owner	Acquisition or Disposition	Transaction Date	Number of Securities Transacted	Security Name
Elazar Rabbani	A	1/14/2019	2782	Common Stock
	D	1/14/2019	41634	Stock option (to acquire Common Stock)
	A	1/3/2019	128000	Stock option (to acquire Common Stock)
	A	10/29/2018	10000	Common Stock
	A	7/31/2018	90000	Stock option (to acquire Common Stock)
	D	1/17/2018	14534	Common Stock
	A	1/17/2018	38505	Common Stock
	D	1/17/2018	38505	Stock option (to acquire Common Stock)
Dov Perlysky	D	1/14/2019	14000	Common Stock
	A	1/14/2019	64286	Stock option (to acquire Common Stock)
	A	1/14/2019	9184	Common Stock
	A	1/3/2019	94607	Stock option (to acquire Common Stock)
	A	10/18/2018	10000	Common Stock
	A	4/13/2018	81855	Common Stock
	A	4/12/2018	3139	Common Stock
Gregory M Bortz	A	1/5/2018	36860	Stock option (to acquire Common Stock)
	A	1/14/2019	9184	Common Stock
	D	1/14/2019	64286	Stock option (to acquire Common Stock)
	A	1/3/2019	94607	Stock option (to acquire Common Stock)
Barry W Weiner	A	1/5/2018	36860	Stock option (to acquire Common Stock)
	A	1/14/2019	2226	Common Stock
	D	1/14/2019	33305	Stock option (to acquire Common Stock)
	A	1/3/2019	115000	Stock option (to acquire Common Stock)
	A	7/31/2018	80000	Stock option (to acquire Common Stock)
	D	1/17/2018	11626	Common Stock
	A	1/17/2018	30802	Common Stock
	D	1/17/2018	30802	Stock option (to acquire Common Stock)
	D	1/17/2018	11000	Common Stock
Bruce A. Hanna	A	1/3/2019	94607	Stock option (to acquire Common Stock)
	A	10/18/2018	15000	Common Stock
	A	1/5/2018	36860	Stock option (to acquire Common Stock)

Questions? Need Help Voting?

Please contact our Strategic Shareholder Advisor and Proxy Solicitation Agent, Kingsdale Advisors

CONTACT US:



Kingsdale Advisors

1-888-518-1554 (toll-free in North America)

(416) 867-2272 (outside of North America)

email: ENZ@kingsdaleadvisors.com

Form of White Proxy

ENZO BIOCHEM, INC.

YOUR VOTE IS IMPORTANT

Please take a moment now to vote your shares of Enzo Biochem, Inc. common stock for the upcoming Annual Meeting of Shareholders.

YOU CAN VOTE TODAY IN ONE OF THREE WAYS:

- 1. VOTE BY TELEPHONE – Call toll-free from the U.S. or Canada at 1-800-PROXIES (1-800-776-9437), on a touch-tone telephone. If outside the U.S. or Canada, call 1-718-921-8500. Then, simply follow the easy voice prompts. You will be required to provide the unique control number printed below.

OR

- 2. VOTE BY INTERNET – Please access www.voteproxy.com, and follow the simple instructions provided. Please note you must type an “s” after “http”. You will be required to provide the unique control number printed below.

CONTROL NUMBER:

[Empty box for control number]

You may vote by telephone or Internet 24 hours a day, 7 days a week. Your telephone or Internet vote authorizes the named proxies to vote your shares in the same manner as if you had marked, executed and returned a proxy card.

OR

- 3. VOTE BY MAIL – Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or mail it to AST Financial, 6201 15th Avenue, Brooklyn, NY 11219, Attention: Proxy Operations.

▼ TO VOTE BY MAIL, PLEASE DETACH PROXY CARD HERE AND RETURN IN THE POSTAGE-PAID ENVELOPE PROVIDED ▼

☑ Please mark your vote as indicated in this example

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

The Board of Directors recommends you vote “FOR” all of the nominees under Proposal 1 and “FOR” Proposals 2, 3 and 4.

- 1. Election of two Class II Directors for a three-year term:

Nominees: (01) Barry W. Weiner and (02) Bruce A. Hanna

For All Withhold All For All Except

To withhold authority to vote for any individual nominee, mark “For All Except” and write the number of the nominee for which you would like to withhold authority to vote on the line below:

- 2. Company proposal to approve, on an advisory basis, Named Executive Officer compensation:

For Against Abstain

- 3. Company proposal to ratify the appointment of EisnerAmper, LLP, as the Company’s independent registered public accounting firm for fiscal 2020:

For Against Abstain

- 4. Company proposal to approve an amendment to the Company’s By-Laws to implement majority voting in uncontested director elections:

For Against Abstain

Date: _____

Signature: _____

Signature (if jointly held): _____

Title(s): _____

NOTE: Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, trustee, guardian, custodian 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.

PLEASE VOTE TODAY!
SEE REVERSE SIDE
FOR THREE EASY WAYS TO VOTE.

▼ TO VOTE BY MAIL, PLEASE DETACH PROXY CARD HERE, SIGN, DATE AND RETURN IN THE POSTAGE-PAID ENVELOPE PROVIDED ▼

**THIS PROXY IS SOLICITED ON BEHALF OF
THE BOARD OF DIRECTORS OF ENZO BIOCHEM, INC.**



2019 ANNUAL MEETING OF SHAREHOLDERS

The undersigned hereby appoints Dov Perlysky and Barry W. Weiner or any of the foregoing, as proxies, each with full power of substitution, revoking all proxies previously given, and hereby authorizes them to represent and to vote, as designated on the reverse side of this form, all shares of common stock of Enzo Biochem, Inc. that the undersigned would be entitled to vote if personally present at the 2019 Annual Meeting of Shareholders to be held at 9:00 a.m. on January 31, 2020 at The Yale Club of New York City, 50 Vanderbilt Avenue, New York, NY 10017 including any adjournments, postponements or continuations thereof, (the "Annual Meeting").

This proxy, when properly executed, will be voted in the manner specified on the reverse side. **IF THIS PROXY IS EXECUTED, BUT NO INSTRUCTION IS GIVEN, THIS PROXY WILL BE VOTED "FOR" ALL OF THE NOMINEES UNDER PROPOSAL 1 AND "FOR" PROPOSALS 2, 3 and 4.** The proposals are more fully described in the Proxy Statement. If a matter is not timely submitted pursuant to Rule 14a-4(c)(1), the proxies appointed in this proxy card will have discretionary authority to vote with respect to any such matter subsequently and properly raised at the Annual Meeting. Only shareholders of record as of the close of business on December 3, 2019, may vote at the Annual Meeting.

PLEASE MARK, SIGN, DATE AND RETURN THE PROXY CARD, USING THE ENCLOSED ENVELOPE.
YOUR VOTE IS IMPORTANT - PLEASE VOTE TODAY

Continued and to be signed and dated on reverse side

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