

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K/A
(Amendment No. 1)

(Mark One)

☒ Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended July 31, 2022

or

☐ Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from _____ to _____

Commission File Number: 001-09974

Enzo Biochem, Inc.

(Exact name of Registrant as specified in its charter)

New York

(State or other jurisdiction of
incorporation or organization)

13-2866202

(IRS Employer
Identification Number)

81 Executive Blvd., Suite 3 Farmingdale, NY 11735

(Address of Registrant's principal executive offices)

(631) 755-5500

(Registrant's telephone number, including area code)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, \$.01 par value	ENZ	The New York Stock Exchange

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act of 1934). Yes ☐ No ☒

The aggregate market value of the registrant's voting stock held by non-affiliates of the registrant was approximately \$131,825,000 as of January 31, 2022.

The number of shares of the Company's common stock, \$.01 par value, outstanding at November 23, 2022 was 48,720,454.

DOCUMENTS INCORPORATED BY REFERENCE

None

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EXPLANATORY NOTE

Enzo Biochem, Inc. (the “Company”) is filing this Amendment No. 1 to Form 10-K on Form 10-K/A for the fiscal year ended July 31, 2022, in order to amend and restate Part III, Items 10 through 14 of the report on Form 10-K (the “original 10-K”) that we originally filed with the Securities and Exchange Commission (the “SEC”) on October 14, 2022.

This Form 10-K/A has been prepared and filed in reliance on General Instruction G to Form 10-K, which provides that registrants may provide the information required by Part III in a definitive proxy statement or an amendment to the Form 10-K filed with the SEC within 120 days after the end of the fiscal year covered by the report. The Company had initially planned to file the Part III information in a definitive proxy statement.

The original Form 10-K is therefore amended to (i) delete the reference on the cover of the original Form 10-K to the incorporation by reference of a definitive proxy statement into Part III of such Form 10-K and (ii) revise Part III, Items 10 through 14 of the Company’s original Form 10-K to include information previously omitted from the original Form 10-K.

Except as described above, no other changes have been made to the original Form 10-K. The original Form 10-K continues to speak as of October 14, 2022, the date the Company filed the original Form 10-K with the SEC, and other than as expressly indicated in the original Form 10-K or in this Form 10-K/A, the Company has not updated the disclosures contained therein to reflect any events that have occurred at a date subsequent to October 14, 2022. Accordingly, this Form 10-K/A should be read in conjunction with the original Form 10-K and the Company’s other reports filed thereafter.

FORWARD LOOKING STATEMENTS

This Annual Report contains “forward-looking statements” as defined in the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact, including, without limitation, the statements under “Management’s Discussion and Analysis of Financial Condition and Results of Operations” are “forward-looking statements.” Forward-looking statements may include the words “believes,” “expects,” “plans,” “intends,” “anticipates,” “continues” or other similar expressions. These statements are based on the Company’s current expectations of future events and are subject to a number of risks and uncertainties that may cause the Company’s actual results to differ materially from those described in the forward-looking statements. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, estimated or projected. The Company assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

Part III

ITEM 10. Directors, Executive Officers and Corporate Governance. Directors

The Company's Board had three staggered classes of Directors, each of which served for a term of three years, prior to the 2021 Annual Meeting of Shareholders in March 2022 (the "2021 ASM"). At the 2021 ASM, shareholders approved an amendment to the Enzo Certificate of Incorporation to eliminate the classified structure of our Board. With the approval of the amendment, all directors elected at and after the 2021 ASM are elected for a one-year term. Directors elected prior to the 2021 ASM will continue to serve out the remainder of their three year term. As a result of shareholder approval of the proposal to declassify the Board, director term limits were also amended. See "Director Term Limits" below.

The names of our directors, their ages and their positions with the Company are set forth below, followed by certain other information about them:

Directors whose Term expires at the Fiscal 2022 Meeting in January 2023:

Name	Year First Became A Director
Hamid Erfanian (age 53)	2022
Bradley L. Radoff (age 49)	2022
Mary Tagliaferri, M.D. (age 56)	2020

Directors whose terms expire at the Fiscal 2023 Meeting in 2024

Name	Year First Became a Director
Elazar Rabbani, Ph.D. (age 79)	1976
Ian Walters, M.D. (age 54)	2020

HAMID ERFANIAN is the Company's Chief Executive Officer as of November 2021 and a director of the Company since January 2022. Mr. Erfanian has over 29 years of experience as a seasoned healthcare executive specializing in the diagnostic, medical devices, and life sciences industry. Prior to his appointment as Chief Executive Officer of the Company, Mr. Erfanian was most recently Chief Commercial Officer of EUROIMMUN, a PerkinElmer Company. He previously served as Chief Executive Officer of its US subsidiary, a position he held from June 2014 through August 2021. Prior to EUROIMMUN, Mr. Erfanian held executive and senior positions at several notable diagnostics companies including Diagnostica Stago, Beckman Coulter, and Abbott Laboratories. Earlier in his career, Mr. Erfanian worked at leading diagnostic laboratory testing companies, Quest Diagnostics and Laboratory Corporation of America. He received his Bachelor's Degree in Science and Mathematics from North Dakota State University and a Masters of Business Administration from the Cox School of Business at Southern Methodist University.

We believe that Mr. Erfanian's qualifications to serve on the Board are demonstrated by his experience at Enzo and EUROIMMUN, his ability with regards to diagnostics commercialization and his keen understanding of the global biotech market.

BRADLEY L. RADOFF has been a director of the Company since January 2022. Mr. Radoff is currently chair of the Company's Audit Committee and a member of the Company's Nominating and Governance Committee and Compensation Committee. Mr. Radoff is a private investor and has also served as Principal of Fondren Management LP, a private investment management company, since 2005. Mr. Radoff previously served as a Portfolio Manager at Third Point LLC, a registered investment advisory firm, from 2006 to 2009. He also served as Managing Director of Lonestar Capital Management LLC, a registered investment advisory firm, from 2003 to 2004. Mr. Radoff also previously served as a director of Citadel Investment Group LLC, a global financial institution, from 2000 to 2003. Mr. Radoff has served as a director of VAALCO Energy, Inc. (NYSE:EGY), a Texas-based independent energy company, since June 2020, and Harte Hanks, Inc. (NASDAQ: HHS), a leading global customer experience company, since May 2021. Mr. Radoff previously served as a director of Support.com, Inc. (formerly NASDAQ:SPRT), a leading provider of cloud-based software and services, from June 2016 until its merger in September 2021, and Pogo Producing Company (formerly NYSE:PPP), an oil and gas exploration, development and production company, from March 2007 until the completion of its sale to Plains Exploration & Production Company in November 2007. Mr. Radoff graduated summa cum laude with a B.S. in Economics from The Wharton School at the University of Pennsylvania.

We believe that Mr. Radoff's qualifications to serve on the Board are demonstrated by his financial and investment expertise together with his perspective as a significant shareholder of the Company.

MARY TAGLIAFERRI, M.D., has been a director of the Company since November 2020 and Chair of the Board since January 2022. Dr. Tagliaferri is currently chair of the Company's Nominating & Governance Committee and a member of both the Company's Audit Committee and Compensation Committee. Dr. Tagliaferri has been serving on the board of directors of RayzeBio, Inc., a biotechnology company, since October 2021. Dr. Tagliaferri has been serving as Senior Vice President and Executive Clinical Fellow for Nektar Therapeutics, a Nasdaq-listed company, since March 2020 and previously served as Chief Medical Officer from November 2017 to March 2020, Senior Vice President, Clinical Development from April 2017 to October 2017 and Vice President of Clinical Development from January 2015 to March 2017. Dr. Tagliaferri served as Consultant for InterMune from March 2014 to December 2014. Dr. Tagliaferri served as Chief Medical Officer of Kanglaite, Inc. from October 2012 to April 2014. Dr. Tagliaferri was the co-founder of Bionovo, Inc. and served as its Chief Medical Officer, Chief Regulatory Officer, Secretary and Treasurer and a member of the Board of Directors from February 2002 to June 2012 and President from May 2007 to June 2012. Dr. Tagliaferri received her Bachelor of Science Degree in Agricultural Economics and Business Management from Cornell University in 1988, Post Baccalaureate Degree in Science from Bryn Mawr College in 1996, Master of Science Degree, Oriental Medicine from the American College of Traditional Chinese Medicine, San Francisco, California in 1995 and Medical Degree from the University of California, San Francisco in 2002. Dr. Tagliaferri completed her residency in internal medicine at Alameda County Medical Center, Oakland, California, in 2003 and a research fellowship in translational science at the University of California, San Francisco in 1999. She has contributed to approximately 70 publications.

We believe that Dr. Tagliaferri's qualifications to serve on the Board are demonstrated by her professional background, experience in the healthcare field and past board position, making her well qualified as a member of our Board.

ELAZAR RABBANI, Ph.D., is an Enzo Biochem founder and served as the Company's Chairman of the Board from its inception in 1976 to January 2022 and as Secretary from November 2009 to April 2022. Dr. Rabbani also served as the Company's Chief Executive Officer from 1976 until November 2021. 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 the Board are demonstrated by his extensive knowledge of our industry and his accomplishments over the last 45 years, including building our intellectual property estate and the commercialization of technology, which has generated significant revenues for the Company.

IAN B. WALTERS, M.D. has been a director of the Company since November 2020. Mr. Walters is currently chair of the Company's Compensation Committee and a member of the Company's Audit Committee and Nominating & Governance Committee. Dr. Walters is an experienced entrepreneur and drug developer with leadership in the development of over 30 drugs in multiple therapeutic areas involving diverse technologies, leading to five new oncology drug approvals. His previous roles include Executive Director of Global Oncology Clinical Research, and Business Development for Bristol-Myers Squibb and Medical Director at Millennium Pharmaceuticals. Dr. Walters is currently CEO and Director of Portage Biotech, a publicly traded clinical stage biopharmaceutical company developing an innovative portfolio of immuno-oncology assets. He is also founder of seven of Portage's portfolio companies. Dr. Walters holds an MBA from the Wharton School of the University of Pennsylvania. He received his MD at the Albert Einstein College of Medicine and completed doctoral training in experimental medicine at The Rockefeller University. Dr. Walters has been the lead author or contributor to approximately 60 journal publications.

We believe that Dr. Walter's qualifications to serve on the Board are demonstrated by his professional background, experience in the healthcare field, and other current and past board and management positions, making him well qualified as a member of our Board.

Family Relationships

There are no family relationship 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, President of Enzo until April 2022 are brothers-in-law.

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 (631) 755-5500.

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 (631) 755-5500.

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 (631) 755-5500.

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 in 2019. 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 non-traditional 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 nine one-year terms, whether consecutively or in total, plus any portion of an earlier term that such Outside Director may have been appointed to serve. The limit set forth above may be extended for a maximum of three years 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 in 2019 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 may be available for consultation and direct communication with major shareholders, if deemed appropriate, and act as a contact for other interested persons, if other Company spokespersons are not available;
- 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. The Lead Independent Director role was established in October 2005. Currently, there is no Lead Independent Director, as the Board Chair, Mary Tagliaferri, M.D. is considered an independent director.

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 (631) 755-5500.

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

During the fiscal year ended July 31, 2022, Elazar Rabbani, Ph.D., served as the Company's Chairman of the Board until January 2022 and Secretary until April 2022, and Chief Executive Officer until November 2021. In October 2021, the Company announced the appointment of Hamid Erfanian to the position of Chief Executive Officer, which appointment commenced on November 8, 2021. In January 2022, Mary Tagliaferri, M.D. became Chair of the Board.

The Company believes that this structure promotes effective oversight, strengthens our Board's independent leadership, and supports our commitment to enhancing shareholder value and strong governance. In addition, appointing Mary Tagliaferri, M.D. as Chair of the Board, with her deep industry and executive management and board experience, while also appointing a separate Chief Executive Officer is the best leadership structure for the Company at this time.

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. Dr. Rabbani, as the Company's former Chairman of the Board and former Chief Executive Officer, brings Company-specific experience and expertise.

Additionally, the Company has had a Lead Independent Director from October 2005 to January 2022, 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 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 Chair of the Board's extensive knowledge of the Company and experience in the industries in which we operate uniquely qualifies her to lead the Board in assessing the various risks the Company faces. The Board believes that the work undertaken by the Audit Committee, the full Board and the Chairman of the Board, enables the Board to effectively oversee the Company's risk management function.

Board Nomination Policies and 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" (a member of the Board who is not an officer or employee of the Company) may serve on the Board is limited to a maximum of nine, one-year terms. The term limit set forth above may be extended for up to a maximum of one additional term if such individual is renominated 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."

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 Nominating & Governance 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 Nominating & Governance 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 meet the Company's Director Independence Standards as well as the independent director standards established by NYSE. See below for a description of the responsibilities of the Board's standing committees.

Executive Sessions of Non-Management Directors

The Board periodically holds meetings of only the independent directors without management or other board members 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 Office of the Secretary, Enzo Biochem, Inc., 81 Executive Blvd., Suite 3, Farmingdale, New York 11735. 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 by emailing or asking the Board Chair to share information with the non-management members.

Annual Meeting - The Company encourages its directors to attend the annual meeting of shareholders each year. All directors attended the Annual Meeting of Shareholders held in March 2022.

Meetings of the Board and its Committees

During the fiscal year ended July 31, 2022, there were twenty five 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, and since July 2022, the M&A subcommittee. The Board established this independent subcommittee of the Board to be tasked with oversight of the merger and acquisition process (the “M&A Committee”) which will report to the broader board. The subcommittee is made up of the three independent Board members: Bradley L. Radoff, Mary Tagliaferri, M.D. and Ian Walters, M.D.

The Nominating & Governance Committee, which includes a Succession subcommittee had three formal meetings, the Audit Committee had four formal meetings and the Compensation Committee had six 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 as defined in 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 Dr. Walters, Dr. Tagliaferri and Mr. Radoff. Mr. Radoff has been the Chair since January 2022. 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. Radoff 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 Mr. Radoff, Dr. Tagliaferri and Dr. Walters. The Board has determined that each member of the Compensation Committee is independent, as defined in the NYSE listing standards. Dr. Walters has been the Chair of the Compensation Committee since January 2021.

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 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 Mr. Radoff, Dr. Walters and Dr. Tagliaferri, who has been Chair of the committee since January 2021.

Executive officers and key employees

Set forth below is the name, age and title of each executive officer and key employee of the Company followed by a summary of each executive's and key employee's background.

Name	Age	Year Became an Executive Officer	Position
		or Key Employee	
Hamid Erfanian ⁽¹⁾	53	2021	Chief Executive Officer
Kara Cannon	54	2018	Chief Operating Officer
David Bench ⁽²⁾	49	2019	Chief Financial Officer
Patricia Eckert ⁽²⁾	45	2022	Interim Chief Financial Officer
Matthew Kupferberg ⁽³⁾	57	2022	General Counsel, Secretary
Dieter Schapfel, M.D.	59	2014	Chief Medical Director, Enzo Clinical Labs
Elazar Rabbani, Ph.D. ⁽¹⁾	79	1976	Former Chief Executive Officer and Secretary

(1) Mr. Erfanian started his tenure as our Chief Executive Officer in November 2021. Dr. Rabbani served as Chief Executive Officer from the Company's inception in 1976 to November 2021, Secretary from November 2009 to April 2022 and Chairman of the Board from the Company's inception in 1976 to January 2022.

(2) Mr. Bench resigned from the Company effective November 14, 2022. Ms. Eckert became interim Chief Financial Officer effective on that date.

(3) Mr. Kupferberg was hired as General Counsel on August 1, 2022.

Biographical Information Regarding Executive Officers and Key Employees

HAMID ERFANIAN has been the Company's Chief Executive Officer since November 2021. Mr. Erfanian has over 28 years of experience as a seasoned healthcare executive specializing in the diagnostic, medical devices, and life sciences industry. Prior to his appointment as Chief Executive Officer of the Company, Mr. Erfanian was most recently Chief Commercial Officer of EUROIMMUN, a PerkinElmer Company. He previously served as Chief Executive Officer of its US subsidiary, a position he held from June 2014 through August 2021. Prior to EUROIMMUN, Mr. Erfanian held executive and senior positions at several notable diagnostics companies including Diagnostica Stago, Beckman Coulter, and Abbott Laboratories. Earlier in his career, Mr. Erfanian worked at leading diagnostic laboratory testing companies, Quest Diagnostics and Laboratory Corporation of America. He received his Bachelor's Degree in Science and Mathematics from North Dakota State University and a Masters of Business Administration from the Cox School of Business at Southern Methodist University.

KARA CANNON is Chief Operating Officer 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.

PATRICIA ECKERT is interim Chief Financial Officer and has been employed with the Company since 2017 in various finance roles. Ms. Eckert previously served as accounting director at Pall Corporation, where she advanced through multiple accounting and finance roles, ultimately managing a broad team and directly leading all aspects of implementation of the ASC 606 Revenue Recognition standard, overseeing matters relating to SOX compliance and driving multiple operational and finance cost savings initiatives. Prior to her tenure at Pall Corporation, Ms. Eckert served as senior accountant at a midsize accounting firm based in New York. She graduated cum laude with a BBA in accounting and an MBA in finance, both from Hofstra University in Hempstead, NY.

MATTHEW KUPFERBERG has been the Company General Counsel since August 1, 2022. Mr. Kupferberg was most recently General Counsel, Chief Compliance Officer and Privacy Officer of Digital Medical Technologies, LLC (dba AdhereTech), a medication adherence technology company. His previous experience includes Health Delegates, LLC, RxEDO, Inc. and DaVita, Inc. At DaVita, he was Assistant General Counsel to DaVita Rx, DaVita's pharmacy subsidiary. He also served as Assistant General Counsel at Humana, Inc., a managed health care company that markets and administers health insurance. Earlier in his career Mr. Kupferberg worked at the law firms ArentFox Schiff LLP and McDermott, Will & Emery. He received his B.A. from Binghamton University (Phi Beta Kappa) and his J.D. from Boston College Law School. Mr. Kupferberg is licensed in the states of New York, New Jersey, and Massachusetts.

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.

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 (631) 755-5500. 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.

ITEM 11. Executive Compensation.

Director Compensation

The following table sets forth the information concerning compensation earned during our fiscal year ended July 31, 2022 by all non-employee Directors:

Name	Fees Earned or Paid in Cash	Restricted Stock Unit Awards ⁽¹⁾	Total
Mary Tagliaferri, M.D. <i>Chair of the Board</i>	\$ 95,000	\$ 200,000	\$ 295,000
Ian B. Walters, M.D. <i>Director</i>	\$ 75,000	\$ 200,000	\$ 275,000
Elazar Rabbani <i>Director</i>	\$ 12,500	—	\$ 12,500
Bradley L. Radoff <i>Director</i>	\$ 72,500	\$ 200,000	\$ 272,500
Dov Perlysky ⁽²⁾ <i>Lead Independent Director</i>	\$ 7,500	—	\$ 7,500
Rebecca J. Fischer ⁽²⁾ <i>Director</i>	\$ 7,500	—	\$ 7,500

(1) Represents the grant fair value on the respective grant dates for the fiscal year ended July 31, 2022, in accordance with accounting authoritative guidance. The assumptions used in calculating these amounts are set forth in Note 12 to the Company's consolidated financial statements for the fiscal year ended July 31, 2022, included in the Company's Annual Report on Form 10-K for the fiscal year ended July 31, 2022 filed with the SEC on October 14, 2022.

(2) Dov Perlysky and Rebecca J. Fischer resigned from the Board in January 2022.

Compensation of Executive Officers

Summary Compensation Table

The following table sets forth summary information concerning compensation awarded to, paid to or earned by each of our named executive officers for each of the fiscal years ended July 31, 2022 and 2021.

Name and Principal Position	Year	Salary ⁽¹⁾	Bonus ⁽²⁾	Stock awards ⁽³⁾	Option awards ⁽⁴⁾	Non-equity incentive plan compensation ⁽⁵⁾	All other Compensation ⁽⁶⁾	Total
Hamid Erfanian ⁽⁷⁾ Chief Executive Officer	2022	\$ 415,385	\$ -	\$ 881,400	\$ 1,246,000	\$ 360,000	\$ 382	\$ 2,903,167
Elazar Rabbani, Ph.D. ⁽⁷⁾ Former Chief Executive Officer and Secretary	2022	\$ 467,650	-	-	-	-	\$ 2,748,971	\$ 3,216,621
	2021	\$ 611,000	-	-	-	-	\$ 219,901	\$ 830,901
Kara Cannon Chief Operating Officer	2022	\$ 269,731	\$ 40,000	-	\$ 294,875	\$ 140,000	\$ 24,552	\$ 769,158
	2021	\$ 265,000	\$ -	-	\$ 72,131	\$ 60,000	\$ 13,552	\$ 410,683
David Bench ⁽⁸⁾ Former Chief Financial Officer, Secretary and Treasurer	2022	\$ 279,462	\$ 55,000	-	\$ 294,875	\$ -	\$ 21,110	\$ 650,447
	2021	\$ 270,000	\$ -	-	\$ 72,131	\$ 75,000	\$ 5,206	\$ 422,337

(1) Base salaries set as of January 1 each year and reflect any subsequent salary increases.

(2) Sign on bonus.

(3) Represents the grant date fair value of restricted stock units on November 8, 2021, the date of grant.

(4) Represents the fair market value of incentive stock option awards granted to Named Executive Officers 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 12 to the Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended July 31, 2022.

(5) Represents awards accrued under the Pay for Performance Plan for the years ended July 31, 2022 and 2021.

(6) See the “All Other Compensation” table below for additional information.

(7) Dr. Rabbani served as Chief Executive Officer during our entire fiscal year ended July 31, 2021 and until November 2021 when Mr. Hamid Erfanian started his tenure as our Chief Executive Officer.

(8) David Bench served as Chief Financial Officer during our entire fiscal year ended July 31, 2022 until his resignation on November 14, 2022. Ms. Patricia Eckert became interim Chief Financial Officer effective on that date.

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 for the fiscal years ended July 31, 2022 and 2021.

Name	Year	401(k) ⁽¹⁾	Life insurance ^{(2) (3)}	Medical & disability insurance ⁽⁴⁾	Personal use of auto ⁽⁵⁾	Severance ⁽⁶⁾	Total all other compensation
Hamid Erfanian	2022	\$ -	\$ 382	\$ -	\$ -	\$ -	\$ 382
Elazar Rabbani, Ph.D.	2022	\$ 13,000	\$ 112,808	\$ 39,878	\$ 29,453	\$ 2,553,832	\$ 2,748,971
	2021	\$ 13,000	\$ 105,212	\$ 78,779	\$ 22,910	-	\$ 219,901
Kara Cannon	2022	\$ 13,000	\$ 552	-	\$ 11,000	-	\$ 24,552
	2021	\$ 13,000	\$ 552	-	-	-	\$ 13,552
David Bench	2022	\$ 9,750	\$ 360	-	\$ 11,000	-	\$ 21,110
	2021	\$ 4,846	\$ 360	-	-	-	\$ 5,206

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

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

(3) Represents the contractual payment for life insurance reimbursement for Dr. Rabbani.

(4) Represents supplemental medical and disability benefits costs.

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

(6) Represents severance paid to Dr. Rabbani for termination of his employment effective April 21, 2022.

Employment Agreements

Former executives 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 renewed for successive two-year periods unless notice was given to the Company within 180 days of the end of such successive term.

Former executives arbitration

The Company terminated the employment of Elazar Rabbani, Ph.D. the Company's former Chief Executive Officer, effective April 21, 2022. Dr. Rabbani remains a board director of the Company. Dr. Rabbani is a party to an employment agreement with the Company, which entitles him to certain termination benefits, including severance pay, acceleration of vesting of share-based compensation, and continuation of benefits. Based on the terms of his employment agreement, the Company estimated and accrued a charge of \$2,600,000 in fiscal 2022 which is included in Selling, general and administrative expenses. The charge was partially offset by the reversal of bonus accruals. In May 2022, the Company paid Dr. Rabbani \$2,123,000 in accordance with terms of the employment contract. In July 2022, the Company paid income and other withholding taxes of \$1,024,000 related to that payment on Dr. Rabbani's behalf, which is included in "prepaid expense and other current assets" as of July 31, 2022, as the payment is reimbursable from Dr. Rabbani. In July 2022 the Company paid Dr. Rabbani an additional \$431,000 in accordance with terms of the employment contract. Dr. Rabbani disputed the Company's decision to not award him a bonus for fiscal year 2021 and the amount of severance that was owed to him under his employment agreement. On July 8, 2022, the Company filed a demand for arbitration with the American Arbitration Association (the "AAA") seeking, among other things, a declaration that the Company has fully satisfied its contractual obligations to Dr. Rabbani. On August 4, 2022, Dr. Rabbani filed counterclaims in the arbitration seeking, among other things, a bonus for fiscal year 2021 and additional severance that he asserts is owed to him. The parties have chosen an arbitrator from the AAA's panel and a hearing is scheduled for June 8-16, 2023.

On February 25, 2022, Barry Weiner, the Company's co-founder and President, notified the Company that he was terminating his employment as President of the Company for "Good Reason" as defined in his employment agreement. The Company accepted Mr. Weiner's termination, effective April 19, 2022 but disagrees with Mr. Weiner's assertion regarding "Good Reason." On July 20, 2022, Mr. Weiner filed a demand for arbitration with the AAA asserting, among other things, that his annual bonus for fiscal year 2021 was too low and that his resignation (effective April 19, 2022) was for "Good Reason" under the terms of his employment agreement. He seeks, among other things, payment of a higher 2021 bonus, and severance payments and benefits. The parties have chosen an arbitrator from the AAA's panel and a hearing is scheduled for July 18-21, and 24, 2023. As of July 31, 2022, the Company has not accrued any charges related to Mr. Weiner's termination.

Hamid Erfanian and Kara Cannon are "at will" employees but are parties to employment agreements which provide for twelve month severance and payment of an Annual Bonus if termination occurs subsequent to the conclusion of the fiscal year but prior to the payment of the Annual Bonus to which the fiscal year relates, if they are terminated by the Company without cause or resign for Good Reason, as defined. They are also entitled to a Transaction Bonus in the event of a change in control of the Company or the sale of an operating subsidiary. Also, certain of their equity award agreements provide for the acceleration of unvested awards after a change of control. Dieter Schapfel, M.D. is an "at will" employee and not party to any employment agreement.

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 \$13,000 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 were 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

Hamid Erfanian and Kara Cannon are "at will" employees but are parties to employment agreements that provide for severance or change of control benefits and have certain equity award agreements that provide for the acceleration of unvested awards upon a change of control. We have provided more information about these benefits in the description of the Employment Agreements above.

Dieter Schapfel, M.D., Matthew Kupferberg and Patricia Eckert are "at will" employees and not parties to any agreements with the Company that provides for severance or change of control benefits other than certain equity award agreements that provide for the acceleration of unvested awards upon a change of control.

Pursuant to Employment Agreements entered into with Dr. Rabbani and Mr. Weiner, these executives were entitled to specified benefits upon 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). We have provided more information about these benefits in the description of the Employment Agreements above.

Outstanding Equity Awards at Fiscal Year End—July 31, 2022

The following table sets forth summary information regarding the outstanding equity awards made to the Named Executive Officers and Key Employees at July 31, 2022.

Name	Options awards				Stock awards			
	Number of securities underlying unexercised options exercisable	Number of securities underlying unexercised options unexercisable ⁽¹⁾	Option exercise price	Options expiration date	Number of shares or units of stock that have not vested ⁽²⁾	Market value of shares or units of stock that have not vested ⁽³⁾	Equity incentive plan awards: Number of unearned shares, units or other rights that have not vested ⁽⁴⁾	Equity incentive plan awards: Market or payout value of Unearned shares, units or other rights that have not vested ⁽⁵⁾
Hamid Erfanian	—	700,000	\$ 3.39	11/8/2026	260,000	\$ 616,200	—	—
Elazar Rabbani, Ph.D.	90,000	—	\$ 4.42	7/31/2023	—	—	—	—
	128,000	—	\$ 2.80	1/3/2024	—	—	—	—
	65,000	—	\$ 2.20	2/24/2025	—	—	—	—
Kara Cannon	35,000	—	\$ 4.42	7/31/2023	—	—	—	—
	52,000	—	\$ 2.80	1/3/2024	—	—	—	—
	55,400	—	\$ 2.20	2/24/2025	—	—	—	—
	55,400	—	\$ 2.63	01/11/26	—	—	13,300	\$ 37,825
	—	87,500	\$ 3.36	02/11/27	—	—	—	—
	—	87,500	\$ 2.98	03/24/27	—	—	—	—
David Bench	36,933	18,467	\$ 2.20	2/24/2025	—	—	—	—
	18,467	36,933	\$ 2.63	01/11/26	—	—	—	—
	—	87,500	\$ 3.36	02/11/27	—	—	—	—
	—	87,500	\$ 2.98	03/24/27	—	—	—	—

(1) Each option award vests in equal amounts on the first, second and third anniversaries of the award which was July 31, 2018 for the options granted at \$4.42 per share, January 3, 2019 for the options granted at \$2.80 per share, February 24, 2020 for the options granted at \$2.20 per share, January 11, 2021 for the options granted at \$2.63 per share, and is November 11, 2024 for the options granted at \$3.39 per share, February 11, 2025 for the options granted at \$3.36 per share, and March 24, 2025 for the options granted at \$2.98 per share. For Dr. Rabbani, options vested in equal amounts on the first and second anniversary dates and are fully vested.

(2) The number of unearned restricted stock units (“RSUs”) in this column is based on awards made during the 2022 fiscal year awarded to Mr. Erfanian on November 11, 2021 as part of his employment agreement. They vest in equal amounts on the first, second and third anniversaries of the award.

(3) Calculated using the closing market price of the Common Stock on July 31, 2021 of \$2.37 per share.

(4) Represents PSUs granted on February 24, 2020 that will vest, subject to the achievement of the Company’s Revenue and Adjusted EBITDA performance goals for the fiscal years 2020-2023 performance period, on October 19, 2023, the third anniversary of the grant measurement date.

(5) Calculated using the closing market price of the Common Stock on July 31, 2022 of \$2.36 per share on a maximum performance basis and after applying the minimum relative total shareholder return (TSR) modifier.

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Beneficial Ownership of Principal Shareholders and Management

Set forth below is information, as of November 23, 2022 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 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 November 23, 2022.

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 and Address of Beneficial Owner	Amount and Nature of Beneficial Ownership ⁽¹⁾	Percent of Class ⁽²⁾
Common Stock	Elazar Rabbani, Ph.D.	2,268,434(3)	4.6%
Common Stock	Hamid Erfanian	334,600(4)	*%
Common Stock	Kara Cannon	198,581(5)	*
Common Stock	David Bench	47,071(6)	*
Common Stock	Bradley L. Radoff	4,624,663(7)	9.3%
Common Stock	Mary Tagliaferri, M.D.	25,700(8)	*
Common Stock	Ian B. Walters, M.D.	25,700(9)	*
Common Stock	Harbert Management Corp	5,175,913(10)	10.6%
Common Stock	Renaissance Technologies, LLC	2,909,664(11)	6.0%
Common Stock	James G. Wolf	4,168,500(12)	8.6%
Common Stock	All directors, executive officers and key employees as a group (10 persons)	7,736,691(13)	15.5%

* 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., 81 Executive Blvd., Suite 3 Farmingdale, NY 11735.
- (2) For directors, executive officers and key employees, based upon 48,720,454 shares of Common Stock of the Company considered outstanding as of the close of business on November 23, 2022. Common Stock not outstanding but deemed beneficially owned by virtue of the right of an individual to acquire shares within 60 days from November 23, 2022 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) 348,100 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from November 23, 2022, (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) 46,664 shares of Common Stock held in the Company’s 401(k) plan.
- (4) Includes (i) 233,333 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from November 23, 2022, and (ii) 86,667 shares of Common Stock vested but not yet issued under Mr. Erfanian’s restricted stock unit award made November 8, 2021.

- (5) Includes (i) 160,867 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from November 23, 2022, (ii) 12,600 shares of common stock earned for performance but not yet issued, and (iii) 25,114 shares of Common Stock held in the Company's 401(k) plan.
- (6) Includes 36,933 shares of Common Stock issuable upon the exercise of vested options which are exercisable within 60 days from November 23, 2022. Mr. Bench resigned effective November 14, 2022.
- (7) Includes 430,000 shares of Common Stock held by The Radoff Family Foundation of which Mr. Radoff is deemed to be the beneficial owner. The address of Bradley L. Radoff is 2727 Kirby Drive Unit 29L Houston, Texas 77098.
- (8) Includes 25,700 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from November 23, 2022.
- (9) Includes 25,700 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from November 23, 2022.
- (10) 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 for the period ended September 30, 2022.
- (11) The address of Renaissance Technologies, LLC is 800 Third Avenue, New York, NY 10022. This information is based solely on a Schedule 13F filed for the period ended September 30, 2022.
- (12) The address of James G. Wolf is 105, Flyway Drive, Kiawah Island, SC 29455. This information is based solely on a Schedule 13D/A filed on November 23, 2022.
- (13) Includes 956,834 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from November 23, 2022.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table sets forth information regarding our existing equity compensation plans as of July 31, 2022:

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, warrants and rights	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	4,563,270	\$ 2.98	4,121,000
Equity compensation plans not approved by security holders	-	-	-
Total	4,563,270	\$ 2.98	4,121,000

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

(2) Shares available for awards or grants under the 2011 Incentive Plan.

ITEM 13. Certain Relationships and Related Transactions, and Director Independence.

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 former Chairman and Secretary of the Company and a current director; Shahram K. Rabbani, a former officer and former director of the Company; and Barry Weiner, the former President and Treasurer 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, 2022, Enzo Labs paid approximately \$1,867,000 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 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, believed that the existing lease terms were as favorable to the Company as it would be to an unaffiliated party.

Director Independence

The Board believes that a majority of its members are independent non-employee directors and meet the "Director Independence Standards" that the Company has adopted, which are set forth on Appendix A attached hereto. The Board has determined that each member of the Compensation and Nominating Committees is independent, as defined in the NYSE listing standards. 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. Radoff 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.

ITEM 14. Principal Accounting Fees and Services.**Principal Accountant Fees and Services**

EisnerAmper billed the Company for services for fiscal 2022 and 2021, 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 and paid.

	FY 2022	FY 2021
Audit Fees	\$ 590,000	\$ 505,000
Audit-related Fees	67,000	95,900
Tax Fees	-	-
All Other Fees	-	-
Total	\$ 657,000	\$ 600,900

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 statement.

Audit-Related Fees—EisnerAmper performed certain Audit services for an employee benefit plan for the years ended December 31, 2021 and 2020, for which the Company is the plan sponsor; these fees were \$43,000 and \$41,600, respectively. EisnerAmper performed other Audit-Related services during the fiscal year ended July 31, 2022 and 2021; the fees for these services were \$4,000 and \$54,000, respectively.

Tax Fees—There were no tax fees for fiscal years 2022 and 2021.

All Other Fees—There were no other fees for fiscal years 2022 and 2021.

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.

Part IV

Exhibit 15. Exhibit, Financial Statement Schedules

(a) The following documents are filed as part of this report:

3. Exhibits:

The exhibits listed in the exhibit index of the original Form 10-K filing which was filed with the SEC on October 14, 2022, and the exhibits listed in the exhibit index of this Amendment are filed with, or incorporated by reference in, this report.

EXHIBIT INDEX

Exhibit No.	Description
31.1*	Certification of CEO Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of interim CFO Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

* Filed herewith

Appendix A

Independent Directors - 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.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ENZO BIOCHEM, INC.

Date: November 25, 2022

/s/ Patricia Eckert
Interim Chief Financial Officer
(Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By: /s/ Hamid Erfanian November 25, 2022
Hamid Erfanian
Chief Executive Officer
(Principal Executive Officer)

By: /s/ Patricia Eckert November 25, 2022
Patricia Eckert
Interim Chief Financial Officer,
(Principal Accounting Officer)

By: /s/ Mary Tagliaferri, M.D. November 25, 2022
Mary Tagliaferri, M.D.
Chair of the Board

By: _____
Elazar Rabbani, Ph.D., Director

By: /s/ Bradley L. Radoff November 25, 2022
Bradley L. Radoff, Director

By: /s/ Ian B. Walters, M.D. November 25, 2022
Ian B. Walters, M.D., Director

CERTIFICATION

In connection with the Annual Report on Form 10-K/A of Enzo Biochem, Inc. ("the Company") for the fiscal year ended July 31, 2022 as filed with the Securities and Exchange Commission on the date hereof, I, Hamid Erfanian, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 302 of the Sarbanes-Oxley Act of 2002, that:

1. I have reviewed this Annual Report on Form 10-K/A of Enzo Biochem, Inc.
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the Company's most recent fiscal quarter (the Company's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: November 25, 2022

By: /s/ Hamid Erfanian

Hamid Erfanian
Chief Executive Officer and Director

CERTIFICATION

In connection with the Annual Report on Form 10-K/A of Enzo Biochem, Inc. ("the Company") for the fiscal year ended July 31, 2022 as filed with the Securities and Exchange Commission on the date hereof, I, Patricia Eckert, interim Chief Financial Officer and Principal Accounting Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 302 of the Sarbanes-Oxley Act of 2002, that:

1. I have reviewed this Annual Report on Form 10-K/A of Enzo Biochem, Inc.
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the Company's most recent fiscal quarter (the Company's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: November 25, 2022

By: /s/ Patricia Eckert
 Patricia Eckert
 Interim Chief Financial Officer,
 Principal Accounting Officer