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SCHEDULE 14A

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

Filed by the Registrant

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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
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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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(4) Date Filed:



ENZO BIOCHEM, INC.
527 Madison Avenue
New York, NY 10022
Phone: 212.583.0100
Fax: 212.583.0150
www.enzo.com

Dear Fellow Shareholders,

Enzo Biochem, Inc. will hold its 2019 Annual Meeting of Shareholders on January 31, 2020. This year's meeting is particularly critical, as Harbert Discovery Fund ("Harbert") – a short-term oriented activist hedge fund with no experience in our industry -- is seeking to replace two highly qualified directors up for election. We have attempted to work constructively with Harbert in order to understand their perspectives and integrate their director nominees into our Board refreshment process. However, they have steadfastly thrown up roadblocks at every step since they made their demands a few months ago. They refused to provide the names of their nominees while simultaneously demanding that the Board replace without shareholder vote two duly elected independent directors with these then-unnamed candidates. They rejected our offer for the Nominating/Governance Committee to conduct standard interviews of their candidates. They declined to provide any plan to improve the business despite our consistent private engagement with them, probably because as they stated during one of our discussions with them, "Harbert doesn't know anything about the laboratory business." We can only interpret their behavior as an indication that their true intent in obtaining Board seats is to abandon Enzo's long-term strategy and attempt to drive a fire sale of the Company at depressed valuations. As a result, our Board of Directors encourages you to reject Harbert's nominees and support the Company's experienced nominees Dr. Bruce Hanna, Ph.D., and Barry Weiner by voting "FOR" these nominees on the WHITE proxy card.

Our History and Our Strategy

Enzo is a pioneer in modern biological research. We have a legacy as a life sciences innovator and industry disruptor, setting aside convention by creating and investing in new platforms, processes and products designed to enhance value. A vast number of diagnostic systems in use today by laboratories, medical facilities, hospitals, pharmaceutical companies and research institutions use some component of intellectual property developed by Enzo in our labs and research facilities. Our legacy and position in the market as a groundbreaking leader endures today.

We have been issued more than 400 patents worldwide with 75 patents pending and regularly file new patents (74 in 2019 alone) on account of our continued commitment to innovation. As a result, we are well positioned to capitalize on our strategy going forward. Our deep intellectual property has enabled Enzo to generate \$1.3 billion in revenues over the last 15 years.

Recognizing and anticipating the challenges that would face the laboratory industry and leveraging our deep strength in life sciences, we made the strategic decision to reinvent ourselves and build a **new model of a modern diagnostics company**. We saw not just the challenge facing the industry: how to combat rising costs in a rapidly declining reimbursement environment, we also saw the pathway forward. We saw the opportunity, understood the imbalance inherent in the marketplace and developed and invested in a solution and structure that had eluded so many well-funded and large-scale organizations. Our stated goals were, and continue to be, to develop and validate platforms focused on high-value areas that can reduce costs 30-50%, and satisfy clinical demand for fully automated platforms and products while retaining margin for our modern diagnostic company.

To accomplish these important goals, we invested in a complex, dynamic, vertically integrated infrastructure: enhancing and expanding our facilities and physical plant, investing significantly in personnel across the organization, addressing all segments of the four platforms that Enzo has developed -- from sample collection, sample preparation and the analytical process of attaining results. And at the same time, to handle the high-volume capacity needs that make this automated system work, we combined our intellectual property and manufacturing to modify all processes. This was a significant achievement.

We are well positioned. We have a validated platform that reduces costs significantly, we have been granted approval by New York State for a broad menu of diagnostic tests on our platforms and we have gained acceptance in the marketplace for our model. We are proceeding with the FDA and European Community to secure approvals to fully commercialize. We believe there is substantial, unrealized value in these new platforms – well more than the total value of the Company today.

We are proud of the truly vertically integrated approach we have built to address the foremost issue confronting the laboratory marketplace -- focusing on managing costs while investing in technological innovation. This unique vertical integration has enormous tangible benefits: we run our own clinical trials much more cost-effectively in-house vs. hiring an expensive outsourced contract research organization; our R&D is self-funded; we can manufacture our own reagents.

We are making measurable progress against all the elements of this plan. We have hired the investment banking firm Lazard to assist in forming strategic relationships and/or new venture creation across our four core platforms. Testing activity and volume continue to increase. All of this is set against the backdrop of significantly declining reimbursement rates, which has been a headwind for our business but validates the long-term value proposition of our business model.

In close collaboration with our experienced and engaged Board, earlier this year we articulated our three-pronged strategy designed to unlock shareholder value and drive future growth:

- Forming Strategic Relationships for Diagnostic Growth

Enzo is in active discussions with several leading global life sciences, health care and medical device companies, as well as manufacturers of automated systems to develop strategic relationships in four key platforms pioneered by Enzo's proprietary products and intellectual property: molecular diagnostics, immunohistochemistry, cytology and immunology. These discussions involve developing long-term relationships in automation, manufacturing, distribution, marketing and product sales.

- Building a New Model for the Diagnostic Marketplace

As a lower cost and vertically integrated manufacturer and service provider of molecular testing in the U.S., Enzo has rolled out a new business model for its labs to labs business whereby Enzo will serve as the "central capability" for smaller labs, capitalizing on its scale in high value and lower cost operations, proprietary intellectual property and products, decades of innovation and commitment to medical solutions.

- Return to Operating Profitability and Growth in the Lab Segment

Enzo is highly focused on returning its lab segment to profitability and growth. Enzo is working aggressively to control operational costs in its lab segment, which have been negatively impacted by a declining reimbursement environment through, amongst others, consolidating supply chain functions, as well as realigning customer support teams to create greater efficiencies without sacrificing service levels and as discussed above rollout of its "labs to labs" business. Enzo will also continue to pursue through licensing, business development and litigation, revenue opportunities derived from our strong intellectual property estate. We are disruptors in our industry and our focus is to generate the appropriate balance between investment in the future and operational profitability today. We are one of the few organizations to be in a position to do this successfully. We are in active discussions with potential strategic partners as well as smaller labs who are considering the Enzo solution to help them control costs.

We are fully committed to a thoughtful and expansive shareholder engagement strategy that has yielded powerful feedback that we have implemented across our operations, our capital allocation and growth strategies and our governance practices. As fellow shareholders, we share in your disappointment in the recent performance of our equity. However, looking forward we believe there is substantial value to be generated by Enzo as we continue to execute against our plan.

Our Execution and Performance

Enzo's structure and business strategy represent the culmination of years of extensive planning and productive work. The Company has the ability to offer low cost, high performance products and services in molecular diagnostics, immunohistochemistry, immunology and cytology. While reimbursement pressures facing diagnostic labs remain a headwind for Enzo and all our competitors in the short term, our unique, vertically integrated offering positions us well to capitalize on these secular trends over the long term. Our pioneering work in genomic analysis coupled with our extensive and expanding patent estate and enabling platforms have positioned the Company to continue to play an important role in the rapidly growing molecular medicine marketplace.

In fiscal 2019, the Company was awarded 74 patents worldwide, demonstrating our leadership position as a prolific innovator. And over the past five years, Enzo has systematically introduced its technology onto its clinical production floor through Lab Development Tests ("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 estimated 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 fiscal year 2020 to \$3M and to \$5M in fiscal year 2021. Enzo's expanding panel of sexually transmitted infections (STI) testing, enhanced by recent diagnostic test approvals, is one of the most extensive available.

History of Open Engagement with Shareholders

We have a strong history of engaging with and listening to our shareholders. In addition to our normal course Investor Relations program, for the past several years we have conducted outreach to our top shareholders as part of our commitment to be responsive to shareholder concerns. In 2018, for example, we engaged with 68% of our top 25 shareholders that collectively own approximately 60% of our common stock. In response to shareholder feedback from these meetings regarding our compensation program, the Compensation Committee made changes to the structure of the compensation program, resulting in significantly increased support for the Company's Say-on-Pay vote at the 2018 annual shareholder meeting.

These shareholder engagements have become more focused on Board and governance matters. As a result, the Board's regular reviews of Board and governance practices have increasingly incorporated the feedback that has been received on these topics. In response to this feedback, the Board has taken the following actions:

- approved a proposal to implement a majority vote standard in uncontested elections, contingent upon shareholder approval at the upcoming Annual Meeting.
- adopted a Board diversity policy.
- enhanced the robustness of the responsibilities of the Lead Independent Director role.

Our Board will continue to evaluate its Board and governance practices in light of feedback received from shareholders.

Harbert and its Nominees

In the spirit of engagement and soliciting shareholder feedback, we have attempted to engage constructively with Harbert. We have met with Harbert many times. We have never met with Harbert's nominees because they rejected our invitation to meet with them. Our good faith attempts to advance the dialogue have been stymied by Harbert's lack of knowledge of our industry and short-term priorities that we believe would harm long-term, achievable value creation opportunities that would benefit all shareholders. Harbert's unconstructive actions include:

- demanding the immediate appointment of two outside unnamed directors of their choosing to immediately replace without shareholder vote two existing independent Enzo directors, along with observer rights for a representative of Harbert.
- after subsequently disclosing the identity of their nominees, ignoring our requests to conduct standard interviews of these nominees, even after we waived our requirement for these nominees to complete a routine director questionnaire.
- failing to provide to us any plan to improve the business despite our consistent private engagement with them.

Based on our interactions with Harbert and their public demands for unidentified "strategic alternatives", we can only assume that Harbert has sought two Board seats and a Board observer seat in an attempt to drive the sale of the Company at depressed valuations. Harbert has no experience in our industry and no plan for the Company. As far as we can tell, Harbert's track record consists of aggressively targeting highly illiquid, small cap companies outside of the healthcare sector and, through back-door pressure tactics, forcing these companies to install Harbert-designated appointees to the Board to implement changes designed only to advance Harbert's short-term interests. It was highly instructive – but perhaps not surprising given Harbert's lack of a plan for Enzo -- that in one of our discussions, they stated that "Harbert doesn't know anything about the laboratory business."

Months later, after Harbert eventually disclosed the identity of their candidates to us, they nominated these two men to stand for election as directors at this year's upcoming Annual Meeting. Based on a review of their resumes (our sole basis for evaluating them, given they refused to participate in a standard interview process or complete a customary questionnaire), both lack any identifiable experience with a laboratory diagnostics or biotech company like Enzo. Furthermore, it is worth pointing out that one of these nominees resides in Germany with no connection to the US diagnostic biotech industry while the other appears to be a home-town friend of Harbert from Alabama. One of the nominees has never even served on a public company Board, while the other's sole public directorship experience is on the Board of a public company based in Georgia – the country, not the state. Their resumes are a far cry from the deeply experienced candidates nominated and endorsed by your Board up for reelection this year.

Enzo's Experienced Nominees

The two Board members up for reelection at this year's Annual Meeting have strong experience that is directly relevant to Enzo's business and have been integrally involved in the development of Enzo's strategy, operational progress, governance reforms and shareholder engagement.

- Bruce Hanna, Ph.D. has been a director of the Company since 2017 and is deeply qualified to remain on the Board. He is Enzo's most recently added independent director and his appointment followed a thoughtful and robust search process that specifically sought experience in diagnostics and clinical innovation. He is currently the chairman of the Board's Nominating and Corporate Governance Committee and a member of the Audit and Compensation committees. Dr. Hanna's extensive scientific experience adds meaningful value and perspective to Enzo's Board. He is currently a Clinical Professor of Pathology and Clinical Professor of Microbiology at the New York University School of Medicine, Adjunct Professor of Science at New York University College of Dentistry, and Adjunct Professor of Biology, Long Island University. Dr. Hanna has been a leading scientist and educator in the fields of pathology and microbiology, having completed a 32-year career at NYU Langone Medical Center, in addition to his ownership in the Village Lab, a NYC tropical diseases laboratory. He is the author of approximately 100 research papers, book chapters and presentations at international symposia on Clinical Laboratory Medicine.
- Barry Weiner is President, Chief Financial Officer, Principal Accounting Officer and is also a founder of Enzo Biochem. And as a significant, long-term shareholder of Enzo, Mr. Weiner's interests are fully aligned with those of our investors. He has served as the Company's President since 1996, and previously held the position of Executive Vice President. Mr. Weiner is an active member of the New York Biotechnology Association. Mr. Weiner has played a key role in not only executing the strategy of the company designed to unlock shareholder value but also in developing its proud legacy of innovation, funding the company's growth without dilution of shareholders, managing a transparent and open investor relations program and instituting governance reforms. Mr. Weiner manages the three operating businesses at Enzo, each of which are unique and differentiated in their focus and goals, bringing strategic and hands-on leadership and an in-depth knowledge and vision.

This is why we urge you to vote the WHITE proxy card "FOR" the re-election of Enzo's director nominees: Dr. Bruce Hanna, Ph.D. and Barry Weiner.

Questions? Need Help Voting?
Please contact our Strategic Shareholder Advisor and Proxy Solicitation Agent,
Kingsdale Advisors

CONTACT US:



KINGSDALE Advisors

Kingsdale Advisors
1-888-518-1554 (toll-free in North America)
(416) 867-2272 (outside of North America)
email: ENZ@kingsdaleadvisors.com

Important Additional Information and Where to Find It

Enzo Biochem, Inc. (the “Company”) has filed, and is mailing to shareholders, a definitive proxy statement on Schedule 14A and accompanying **WHITE** proxy card with the Securities and Exchange Commission (the “SEC”) in connection with the solicitation of proxies from the Company’s shareholders with respect to its 2019 Annual Meeting of Shareholders. **SHAREHOLDERS ARE STRONGLY ENCOURAGED TO READ THE COMPANY’S PROXY STATEMENT, ACCOMPANYING **WHITE** PROXY CARD AND ALL OTHER DOCUMENTS FILED WITH THE SEC CAREFULLY AND IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE AS THEY WILL CONTAIN IMPORTANT INFORMATION.** Shareholders may obtain a free copy of the proxy statement, any amendments or supplements to the proxy statement and other documents that the Company files with the SEC at the SEC’s website at www.sec.gov or the Company’s website at <http://www.enzo.com/corporate/investor-information> as soon as reasonably practicable after such materials are electronically filed with, or furnished to, the SEC.

Certain Information Regarding Participants to the Solicitation

The Company, its directors and certain of its executive officers are participants in the solicitation of proxies from shareholders in connection with the Company’s 2019 Annual Meeting of Shareholders. Information regarding the direct and indirect interests, by security holdings or otherwise of the Company’s participants is set forth in the Company’s definitive proxy statement for the 2019 Annual Meeting of Shareholders filed with the SEC on December 5, 2019. The Company’s definitive proxy statement can be found on the SEC’s website at www.sec.gov or the Company’s website at <http://www.enzo.com/corporate/investor-information>.

Forward-Looking Statements

Except for historical information, the matters discussed in this release may be considered “forward-looking” statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements include declarations regarding the intent, belief or current expectations of the Company and its management, including those related to cash flow, gross margins, revenues, and expenses which are dependent on a number of factors outside of the control of the Company including, inter alia, the markets for the Company’s products and services, costs of goods and services, other expenses, government regulations, litigation, and general business conditions. See Risk Factors in the Company’s Form 10-K for the fiscal year ended July 31, 2018. Investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties that could materially affect actual results. The Company disclaims any obligations to update any forward-looking statement as a result of developments occurring after the date of this release.