

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 8-K

CURRENT REPORT Pursuant
to Section 13 or 15(d) of the
Securities Exchange Act of 1934

Date of report (Date of earliest event reported): **December 22, 2015**

Enzo Biochem, Inc.

(Exact Name of Registrant as Specified in Its Charter)

New York

(State or Other Jurisdiction of Incorporation)

001-09974

(Commission File Number)

13-2866202

(IRS Employer Identification No.)

**527 Madison Avenue
New York, New York**

(Address of Principal Executive Offices)

10022

(Zip Code)

(212) 583-0100

(Registrant's Telephone Number, Including Area Code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Introductory Comment

Throughout this Current Report on Form 8-K, the terms “we,” “us,” “our” and “Company” refer to Enzo Biochem, Inc.

Item 7.01 Regulation FD Disclosure

Officers and representatives of the Company will present to various investors and stockholders beginning December 22, 2015 using the presentation materials furnished as Exhibit 99.1 hereto and which are incorporated herein by reference.

The information in this report (including Exhibit 99.1) shall not be deemed to be “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liability of that section, and shall not be incorporated by reference into any registration statement or other document filed under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
99.1	Letter to Shareholders.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ENZO BIOCHEM, INC.

Date: December 23, 2015

By: /s/ Barry W. Weiner
Barry W. Weiner
President

Enzo Biochem Issues Open Letter to Shareholders

Enzo Believes Activist Lone Star's Claims and Misleading Assertions Demonstrate Clear Lack of Understanding of Enzo's Business

Lone Star's Nominees Are Unqualified, Conflicted, and Lack Any Plan for Creating Shareholder Value

Enzo Ideally Positioned to Deliver on Business Strategy and Create Value for Shareholders

*Vote Today on the **WHITE** Proxy Card for the Board's Nominees*

New York – December 22, 2015 – Enzo Biochem, Inc. (NYSE: ENZ) (“Enzo”) has issued the below letter to shareholders:

December 22, 2015

Dear Fellow Shareholder,

Enzo Biochem, Inc. will hold its 2015 Annual Meeting of Shareholders on January 6, 2016. This year's meeting is particularly important, as a small-cap activist investor, Lone Star Value, owning only approximately 1.0% of the Company's outstanding shares, is seeking control of your independent board members. Lone Star, led by its Principal and Founder Jeffrey Eberwein, is a serial short-term activist investor that has demonstrated a track record of value destruction at the expense of shareholders and the companies that it systematically targets.

In the case of Enzo, Lone Star has launched a misguided and disingenuous proxy fight. Even a cursory review of Lone Star's nominees records shows that they are:

- **Not qualified to serve by any measure or standard**
- **Lacking even a rudimentary understanding of both our business and our industry**
- **Unprepared and unable to provide any true plan for shareholder value**
- **Conflicted and lack any independence**

Even more concerning, Lone Star's nominees have chosen not to purchase even one share of Enzo stock, demonstrating a callous disregard for the shareholders that they purport to wish to serve. In fact, Lone Star itself has been reducing the number of shares it owns in Enzo: Lone Star has sold 226,784 shares of Enzo since October 30, 2015, but has only purchased 1,784 during that period. In contrast, Enzo's current Board and management team are long-term Enzo shareholders and are fully committed to taking the best path towards creating shareholder value.

Enzo has already demonstrated systematic execution of its business plan – a comprehensive strategy that has been in development for several years. We have achieved substantial operational and financial improvements over the past several quarters, punctuated by successes such as assay approvals and licensing and settlement agreements – all of which have contributed to an **85.6% total shareholder return in the last six months**. In contrast, the disruption of Enzo's current strategy by an activist investor offering nominees with a proven track record of nothing more than value destruction would achieve just the opposite (and likely derail the continued execution of our strategic growth plan which has already begun to yield meaningful positive results). **This is why we urge you to vote the WHITE proxy card “FOR” the re-election of Enzo's director nominees: Gregory Bortz and Dov Perlysky.**

LONE STAR'S PROXY FIGHT: MISGUIDED CLAIMS VS. REALITY

While the Board and management have been executing on our strategic plan for the benefit of all shareholders, Lone Star has chosen to run a proxy campaign based on claims and criticisms that do not hold up under even a modicum of scrutiny. Moreover, Lone Star or its nominees have failed to present any plan or even provide a single comment on our strategic plan, a copy of which was shared with Lone Star by Enzo management.

In order to cover the lack of any strategic approach to our business, which he admittedly does not understand, Lone Star has brought forth assertions that are not only inaccurate and misleading, but most importantly, are irrelevant to both shareholder value and our business plan. The reality is that our Company and our strategy are transparent and are clearly visible to our shareholders. Our execution and stock performance are evident for all to see. As such, we want to take this opportunity to set the record straight on the key points of Lone Star's misleading argument:

Lone Star Claim: "We have identified two highly qualified, independent directors with complementary skill sets." ¹

The Reality:

- The nominees put forth by Lone Star Principal and Founder Jeffrey Eberwein – John Climaco and Dimitrios Angelis – are **far from independent of each other or from Mr. Eberwein**. On the contrary, all three individuals are part of an insular group of professional activists who regularly collaborate to target small companies with little resources to defend themselves. Mr. Eberwein has been on three public company boards with Mr. Angelis, and two public company boards with Mr. Climaco, and there is a litany of other connections between them.
- Further, we strongly disagree with the claim that Mr. Eberwein's director nominees are "highly qualified."
- When Mr. Climaco was asked to furnish his resume in advance of a meeting with the nominating committee of Enzo's Board, he omitted details of his previous public Board roles at Essex Rental Corp, (whose stock lost more than 80% of its value and was delisted during his directorship), and ALCO Stores (which ended up in Chapter 11 bankruptcy during his directorship). **This lack of judgment shown by Mr. Climaco's omitting of these facts greatly concerns Enzo and is not indicative of the standard of behavior and professional ethics that Enzo and its Board adhere to.**
- This disingenuous misrepresentation greatly concerns Enzo for two reasons: it demonstrates Mr. Climaco's alarmingly poor track record as a director and highlights his unprofessional character. These are not the qualities we believe are beneficial to any Board.
 - Mr. Eberwein claims that Mr. Climaco would make a good candidate because of his, "nine years as a CEO of a company involved in clinical lab services." Mr. Eberwein, we believe, is referring to Mr. Climaco's time as Founder, President, and CEO of Axial Biotech which was founded in 2003 and ultimately **liquidated in a distressed sale at a loss of approximately 80%** of the start-up costs. ²
 - Mr. Angelis, in our view, is a mercenary Board member, as his chief occupation appears to be serving on boards with Mr. Eberwein and Mr. Climaco (such as Digirad and Ameri Holdings). Mr. Angelis has only served as a director on boards that Mr. Eberwein has also been on. As a result, we have serious concerns regarding his independence and consider him simply a proxy for Lone Star.

¹ Source: Lone Star Value Investors Schedule 14A, filed with SEC on December 2, 2015

² Source: Capital IQ

- Mr. Angelis' most recent full-time position was serving as CEO of On Track Innovations (where Mr. Eberwein, Mr. Gillman, and Mr. Singh were all on the Board), and **during his tenure the company saw a nearly 20% decline in its stock price.** ³
 - Mr. Climaco also serves on the Board of Perma-Fix Environmental Services Inc. Recently, the Company filed an amendment disclosing that **he would no longer be considered an "independent" Board member** after he had entered into a \$22,000 / month consulting agreement with the Company.
 - Further, on July 24, 2015, Perma-Fix Medical entered into a supplier agreement with Digirad, at a time when both Mr. Climaco and Mr. Eberwein were Digirad directors, valued at approximately \$1 million, which resulted in Digirad not only owning over 5% of Perma-Fix, but also with Digirad obtaining the right to appoint two individuals to the Perma-Fix board or to the Perma-Fix management team. Mr. Climaco had to abstain from approving this deal, as it was deemed a "related party transaction."⁴
 - During his interview with Enzo's Nominating Committee, Mr. Angelis who according to his resume, has been educated as an attorney, was asked to opine on Enzo's extensive patent estate. After complimenting the Board on Enzo's achievement in building up its intellectual property estate, he stated that he hadn't actually looked at it. **We find this highly suspect from an individual who claims he can bring value to our Company, and further, could not find any evidence that he is indeed registered as either a patent attorney or even a patent agent – a reasonable conclusion for someone who, according to Lone Star has "managed a patent portfolio of 42 patents."**
- **Bottom Line: Based on an established history of questionable interconnected dealings, Mr. Angelis and Mr. Climaco appear to be neither "independent" of Mr. Eberwein, nor of each other, and their unquestionable records of poor stewardship and integrity would put your investment at considerable risk.**

Lone Star Claim: "Our interests are fully aligned with the interests of all Enzo shareholders." ⁵

The Reality:

- Lone Star's track record tells a different story. Since 2012, Mr. Eberwein has been one of the most active activist investors in the U.S., routinely targeting small public companies across a variety of industries. In this time, he has launched a total of 18 campaigns – with a staggering 15 of these companies losing value since Lone Star's campaign and an average true shareholder return of **NEGATIVE 37.1%** following Lone Star's involvement.⁶
 - Since October 30, 2015, **Lone Star has been a net seller of Enzo's stock.** During this time, Lone Star has sold in excess of 225,000 shares.⁷ If Lone Star's interests are truly aligned with the interests of all shareholders with the aim of unlocking and building shareholder value, why would they sell a single share? Lone Star has no regard for Enzo's shareholders. They are merely opportunistic traders with no concern or interest in the long term growth prospects of Enzo. Moreover, neither Mr. Climaco nor Mr. Angelis own a single share of Enzo stock.
- **Bottom Line: The only Enzo shareholders Lone Star's interests are aligned with are short-sellers betting on Enzo's stock to go down.**

³ Source: Factset

⁴ Source: Digirad Press Release 'Strategic Partnership with Perma-Fix Medical' posted on January 20, 2015

⁵ Source: Lone Star Value Investors Schedule 14A, filed with SEC on December 2, 2015

⁶ Source: Factset

⁷ Source: Lone Star Value Investors Schedule 14A, filed with SEC on December 2, 2015

Lone Star Claim: "We are also troubled by the Company's related-party transactions."⁸

The Reality:

- Although Lone Star repeatedly uses the term "transactions," there is in fact a single related-party transaction which has been in place for 25 years, is fully disclosed, and is unquestionably beneficial for Enzo's shareholders. The transaction that Lone Star is concerned with is the Company's lease of its clinical lab in Farmingdale, NY. This criticism is not only disingenuous, but it also demonstrates a complete lack of knowledge of Enzo and the lab industry.
 - In 1990, Enzo was experiencing financial challenges and was in dire need of an expanded laboratory facility in order to grow its business. To address this challenge, a limited liability company established by the founders of the Company acquired a property in Long Island and immediately structured a market-rate lease for the Company.
 - Since that time, all of the rent increases for the lab have been associated with significant square foot expansions commensurate with Enzo's growth, increases in real estate tax rates (nnn lease), and regional cost of living adjustments (the facility has grown from ~25,000 sq. feet to ~43,000 sq. feet).
 - The independent members of the Board retained CB Richard Ellis, a leading independent real estate firm, which reviews Enzo's lease renewals to ensure that the rates and terms are fair and customary.
 - Finally, moving locations for a clinical laboratory, which needs to be operational 24/7/365, is exceedingly challenging and impractical from a logistical, financial, and regulatory perspective, while the stability provided by the current structure is tremendously favorable and has given the Company the latitude to sustainably grow and innovate.
- **Bottom Line:** Lone star's attempt to depict the Company's lab lease as somehow unfair or enriching the management team at the expense of shareholders we believe demonstrates either a complete misunderstanding of the facts or a further attempt to mislead shareholders.

Lone Star Claim: "We also have concerns about whether director Dov Perlysky truly represents the Company's public shareholders as he is the son-in-law of Rosalind Davidowitz, who had an approximate 9.3% ownership interest in the Company at the time Mr. Perlysky was appointed to the Board in September 2012."⁹

The Reality:

- Mr. Perlysky manages a Family Office with a demonstrated track record of highly successful investments in small-cap growth companies. Affiliates of the Family Office own in excess of 9% of Enzo's shares. Moreover, Mr. Perlysky's family has owned Enzo shares for over three decades. **Obviously, Mr. Perlysky is more aligned with our shareholders than Mr. Eberwein's nominees who own zero.**
- Consistent with our desire to value input from all shareholders, Enzo's Nominating and Governance Committee gladly agreed to thoroughly vet Mr. Perlysky as a candidate when he was recommended to the Board. After conducting the same evaluation process used with Lone Star's nominees, it was determined that Mr. Perlysky would add meaningful value to the Board for all shareholders.
- **Bottom Line:** Since Mr. Perlysky joined the Enzo Board, our stock has appreciated 100%.

Lone Star Claim: "The Board's current classified structure, in our view, impedes shareholders' ability to regularly and effectively evaluate the performance of their directors and insulates and entrenches the incumbents despite their apparent lapses in oversight."¹⁰

⁸ Source: Lone Star Value Investors Schedule 14A, filed with SEC on December 2, 2015

⁹ Source: Lone Star Value Investors Schedule 14A, filed with SEC on December 2, 2015

¹⁰ Source: Lone Star Value Investors Schedule 14A, filed with SEC on December 2, 2015

The Reality:

- Enzo's model requires that we vigorously defend our patents and technology against some of the largest, most well-funded and aggressive corporations in the life sciences and diagnostics sector.
 - Our classified board is a necessary protection for Enzo's shareholders since we have litigation against significantly larger companies where the **potential settlement amounts exceed our current enterprise value.**
 - Having a classified board is, in our view, the most effective way of preventing a hostile acquirer from taking control of Enzo in a strategic effort to avoid substantial patent infringement payments to Enzo.
 - Our independent directors are subject to term limits to ensure shareholders regularly have a say in the Board's composition and that the board is continually refreshed.
 - The ultimate example of our Board independence was that the Board terminated an individual that was a founder, officer, fellow board member and major shareholder as it was determined to be in the best interest of the Company.
 - We have a very complex business that takes years to understand.
- **Bottom Line: Lone Star's criticism in this instance is yet another example of how little they understand Enzo's business and industry.**

ENZO IS ON THE RIGHT PATH TO INCREASING SHAREHOLDER VALUE

- Our vertically-integrated structure and strategy represent the culmination of years of extensive planning and execution. The Company now has the unique ability to offer low cost, high performance products and services in molecular diagnostics, which the Company believes positions it now to make a significant impact on the clinical laboratory marketplace, which has experienced increased demand with simultaneous reductions in reimbursements from payers.
- Enzo's IP portfolio stands as one of the most extensive in the industry and serves as the foundation upon which the Company's technologies, platforms and products are built. The result is a business that is poised to create significant shareholder value.
- In one recent key development, on November 16, 2015, New York State Department of Health approved Enzo's Ampiprobe HCV™ assay for the detection of Hepatitis C, clearing the way for Enzo to immediately begin offering this assay and product to the market on a global basis.
- This is the first in a pipeline of products Enzo is developing to address the critical needs of the molecular diagnostics market and we believe serves as validation of Enzo's unique business strategy and structure. Enzo is leveraging its proprietary platform to other molecular diagnostic assays in order to expand the Company's product offerings and address an estimated aggregate market opportunity in excess of \$2 billion worth of laboratory service and product revenue.

ENZO HAS DELIVERED STRONG AND IMPROVING RECENT FINANCIAL RESULTS

- Throughout fiscal 2015, and into the first quarter of fiscal 2016, Enzo has built momentum by delivering positive operational and financial performance.
 - Bolstered by strong and accelerating performance at Enzo Clinical Labs and a series of new legal settlements, Q1 2016 revenues and net income advanced year-over-year, with total revenue up \$25.2 million year-over-year, Clinical Lab revenue up 8% over the prior year quarter, and gross margins increased by 400 basis points.
 - The first quarter of fiscal 2016 also brought a boost in profitability, with net income of \$4.4 million, or \$0.10 per share fully diluted, compared to a loss of \$3.7 million, or \$0.08 per share, in the prior year quarter. Furthermore, even net of legal settlements, Enzo saw a 30% improvement in income from operations.
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- The Company has also significantly bolstered its balance sheet, with cash on hand increasing in Q1 by \$12.5 million, or 69%, from fiscal 2015 year-end, as the Company reaped the rewards of the continued monetization of litigation efforts arising from Enzo's strong patent portfolio. The Company's cash position at the end of Q1 was over \$30 million, as we continue to benefit from settlements such as our \$10 million licensing and settlement agreement with Affymetrix.
- Over the course of fiscal 2015 we continued to emphasize fewer, more high-margin products, along with new product introductions and an expanding experienced sales force, which enabled Life Sciences to remain profitable even while facing macro foreign currency challenges to the market.
- Additionally, with higher margin molecular testing now approaching 50% of its base business, Lab revenues grew 8% during fiscal 2015; and with process improvements spurred by fresh investments, gross margins increased 500 basis points over the course of the year.

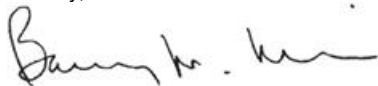
WE HAVE STRONG DIRECTORS IN PLACE WHO HAVE HELPED POSITION ENZO FOR SUCCESS

- At our 2015 Annual Meeting of Shareholders, Gregory Bortz, a director since January 2010, and Dov Perlysky, a director since September 2012, will be nominated for reelection as Class I directors.
- Both of these individuals have been strong contributors to the progress the Company has experienced in the last several years and in ensuring our business is well positioned for the future.
- Mr. Bortz has more than 22 years of financial, investment banking, accounting and operational experience, in addition to his service as a board member of CREO's (the private investment firm he co-founded) portfolio companies.
- Mr. Perlysky has extensive experience in the healthcare field (including his director position at Pharma-Bio Serv, Inc.), which, along with his other current and past board positions and finance background, make him well qualified to serve on the Enzo Board

We urge you to use the Company's WHITE proxy card to vote for the Board's nominees and in accordance with the Board's recommendations on the other proposals, as soon as possible, by telephone or Internet, or by signing, dating, and returning the enclosed WHITE proxy card in the postage-paid envelope provided, whether or not you plan to attend the Annual Meeting.

Thank you for your continued support, interest, and investment in Enzo. The Company hopes that we can count on your vote to allow us to continue to fully focus on delivering value to the true owners of the Company: you, our shareholders.

Sincerely,



Barry W. Weiner
President

Investor Contact:

Pat McHugh / Michael Fein
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Sloane & Company

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Except for historical information, the matters discussed in this news 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 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, litigations, and general business conditions. See Risk Factors in the Company's Form 10-K for the fiscal year ended July 31, 2015. 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 letter.

Enzo Biochem, Inc. (the "Company") has filed a definitive proxy statement with the U.S. Securities and Exchange Commission (the "SEC") with respect to its 2015 Annual Meeting of Shareholders and intends to file a definitive proxy statement as well. The definitive proxy statement and white proxy card has been mailed to shareholders of the Company. Enzo Biochem, Inc., its directors and certain of its executive officers may be deemed to be participants in the solicitation of proxies from shareholders in connection with the matters to be considered at its 2015 Annual Meeting. ENZO BIOCHEM, INC. SHAREHOLDERS ARE STRONGLY ENCOURAGED TO READ ANY SUCH PROXY STATEMENT AND ACCOMPANYING PROXY CARD AS THEY WILL CONTAIN IMPORTANT INFORMATION. Information regarding the ownership of the Company's directors and executive officers in the Company's common stock, restricted stock and options is included in their SEC filings on Forms 3, 4 and 5, which can be found at the Company's website (www.enzo.com) in the section "Corporate—Investor Information." More detailed information regarding the identity of potential participants, and their direct or indirect interests, by security holdings or otherwise, is set forth in the proxy statement and other materials to be filed with the SEC in connection with the Company's 2015 Annual Meeting. Information can also be found in the Company's Annual Report on Form 10-K for the year ended July 31, 2015, filed with the SEC on October 13, 2015, as amended on November 27, 2015. Shareholders will be able to obtain any proxy statement, any amendments or supplements to the proxy statement and other documents filed by the Company with the SEC for no charge at the SEC's website at www.sec.gov. Copies will also be available at no charge at the Company's website at www.enzo.com or by writing to the Company at 527 Madison Avenue, New York, New York 10022.
