



July 10, 2023

VIA EDGAR AND EMAIL

U.S. Securities and Exchange Commission
Division of Corporation Finance
Office of Industrial Applications and Services
100 F Street, N.E.
Washington, D.C. 20549

Attention: Jessica Ansart
Katherine Bagley

**Re: ENZO BIOCHEM INC
Registration Statement on Form S-3
Filed June 16, 2023
File No. 333-272727**

Dear Ms. Ansart and Ms. Bagley:

I am writing to submit the responses of Enzo Biochem, Inc. (the "Company") to the comments of the staff (the "Staff") of the Division of Corporation Finance of the Securities and Exchange Commission (the "Commission") dated June 28, 2023 (the "Comment Letter"), relating to the above referenced Registration Statement on Form S-3 (File No. 333-272727) filed by the Company on June 16, 2023 (the "Registration Statement").

Concurrent with the submission of this letter, the Company is filing via EDGAR Amendment No. 1 to the Registration Statement ("Amendment No. 1"), which reflects the Company's responses to the comments received by the Staff and certain updated information. I have also enclosed a courtesy copy of Amendment No. 1, marked to indicate changes from the Registration Statement, as Exhibit A. For your convenience, the Company is also delivering via email a copy of this letter and its enclosures.

For ease of review, I have set forth below each of the numbered comments of your letter and the Company's responses thereto. Capitalized terms used herein but not defined herein have the meanings given to such terms in Amendment No. 1.

Registration Statement on Form S-3 filed June 16, 2023

Risk Factors

There can be no guarantee that the asset sale will be completed and, if not completed, we may have to file for bankruptcy and liquidation, page 6

1. **We note your disclosure here that if the Asset Sale is not completed, then the Company may need to consider strategic alternatives that may not be as favorable to its stockholders as the Asset Sale "and may include a bankruptcy and liquidation of the Company." Please revise your Cover Page and Summary section to explain that if the Asset Sale is not completed, the Company may consider less favorable strategic alternatives, including bankruptcy and liquidation.**

Response: In response to the Staff's comment, we have revised our Cover Page and Summary section to explain that if the Asset Sale is not completed, the Company may consider less favorable strategic alternatives, including bankruptcy and liquidation.

Private Placement of Securities

Debentures, page 14

2. **We note your disclosure in a risk factor on page 6 that "the 10% convertible debenture securities are dependent on [y]our closing the asset sale with Labcorp within a given time frame." We also note that in the Form of Debenture, filed as Exhibit 4.2, it states on page 16 that an Event of Default will occur if the Asset Sale is not consummated on or prior to October 15, 2023 such that the outstanding principal amount of the Debentures, plus accrued unpaid interest and other amounts, would become immediately due and payable. Please expand your disclosure here to explain how the debentures depend on the closing of the asset sale with Labcorp within a given time frame, including that failure to consummate the Asset sale prior to October 15, 2023 would be an Event of Default under the Debentures. Include disclosure describing the liquidity risks related to the acceleration of the Debentures if the Asset Sale is not consummated.**

Response: In response to the Staff's comment, we have included on page 14 disclosure describing the liquidity risks related to the acceleration of the Debentures if the Asset Sale is not consummated. We have also added to the Cover Page and risk factor on page 6 cross-references to the disclosure on page 14.

Please contact me at (631) 755-5500 if you have any questions or require any additional information in connection with this letter.

Sincerely,

/s/ Hamid Erfanian

Hamid Erfanian, Chief Executive Officer

cc: Dan Woodard, McDermott Will & Emery
