

DIVISION OF CORPORATION FINANCE

June 28, 2023

Hamid Erfanian Chief Executive Officer ENZO BIOCHEM INC 81 Executive Blvd., Suite 3 Farmingdale, New York 11735

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

Dear Hamid Erfanian:

We have limited our review of your registration statement to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

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.

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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.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Jessica Ansart at 202-551-4511 or Katherine Bagley at 202-551-2545 with any questions.

Sincerely,

Division of Corporation Finance Office of Industrial Applications and Services

cc: Dan Woodard