

No. 33-88826
 No. 333-87153
 No. 333-89308
 No. 333-123712
 No. 333-172127
 No. 333-197028
 No. 333-226799
 No. 333-236958
 No. 333-252159
 No. 333-260894

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

Post-Effective Amendment No. 2 to FORM S-8 REGISTRATION STATEMENT No. 33-88826
 Post-Effective Amendment No. 1 to FORM S-8 REGISTRATION STATEMENT No. 333-87153
 Post-Effective Amendment No. 2 to FORM S-8 REGISTRATION STATEMENT No. 333-123712
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 Post-Effective Amendment No. 1 to FORM S-8 REGISTRATION STATEMENT No. 333-260894

UNDER
 THE SECURITIES ACT OF 1933

ENZO BIOCHEM, INC.
 (Exact name of registrant as specified in its charter)

New York
 (State or other jurisdiction of
 incorporation or organization)

13-2866202
 (I.R.S. Employer
 Identification No.)

21 Executive Blvd.
 Farmingdale, New York
 (Address of Principal Executive Offices)

11735
 (Zip Code)

Enzo Biochem, Inc. 1999 Stock Option Plan
 Enzo Biochem, Inc. Salary Reduction Profit Sharing Plan
 Enzo Biochem, Inc. Amended and Restated 2011 Incentive Plan
 (as amended and restated effective as of October 7, 2020)
 Inducement Sign-On Restricted Stock Unit Grant Notice and Agreement
 Inducement Sign-On Option Grant Notice and Agreement
 (Full title of the plans)

Patricia Eckert
 Chief Financial Officer
 21 Executive Blvd.
 Farmingdale, New York 11735
 (631) 755-5500
 (Name, address and telephone number of agent for service)

Copy To:

Adam Finerman
 Baker & Hostetler LLP
 45 Rockefeller Plaza
 New York, NY 10111
 (212) 589-4233

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



Accelerated filer



Non-accelerated filer



Smaller reporting company



Emerging growth company

☐

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 7(a)(2)(B) of the Securities Act. ☐

EXPLANATORY NOTE

These Post-Effective Amendments (these “Post-Effective Amendments”) relate to the following Registration Statements on Form S-8 (each, a “Registration Statement,” and collectively, the “Registration Statements”), filed with the Securities and Exchange Commission (the “SEC”) by Enzo Biochem, Inc. (the “Company”):

- Registration Statement filed with the SEC on December 28, 1983, and any amendments thereto, pertaining to the registration of a number of shares of common stock, par value \$0.01 (“Common Stock”) pursuant to an employee benefit plan.
- Registration Statement filed with the SEC on January 28, 1992, and any amendments thereto, pertaining to the registration of a number of shares of Common Stock pursuant to an employee benefit plan.
- Registration Statement filed with the SEC on February 18, 1994, pertaining to the registration of a number of shares of Common Stock pursuant to an employee benefit plan.
- Registration Statement No. 33-88826 filed with the SEC on January 27, 1995, and Amendment No. 1 to the Registration Statement filed with the SEC on January 27, 2000, pertaining to the registration of an aggregate of 988,951 shares of Common Stock pursuant to the 1994 Plan;
- Registration Statement No. 333-87153 filed with the SEC on September 15, 1999, pertaining to the registration of an aggregate of 950,000 shares of Common Stock pursuant to the 1999 Stock Option Plan (the “1999 Plan”);
- Registration Statement No. 333-89308 filed with the SEC on May 29, 2002, pertaining to the registration of 1,000,000 shares of Common Stock pursuant to the 1999 Plan;
- Registration Statement No. 333-123712 filed with the SEC on March 31, 2005, and Amendment No. 1 to the Registration Statement filed with the SEC on April 21, 2006, pertaining to the registration of an aggregate of 2,000,000 shares of Common Stock pursuant to the 1994 Plan, the 1999 Plan and the 2005 Equity Compensation Incentive Plan;
- Registration Statement No. 333-172127 filed with the SEC on February 9, 2011, pertaining to the registration of 3,000,000 shares of Common Stock pursuant to the 2011 Incentive Plan, as amended and restated (the “2011 Incentive Plan”);
- Registration Statement No. 333-197028 filed with the SEC on June 25, 2014, pertaining to the registration of 1,000,000 shares of Common Stock pursuant to the Salary Reduction Profit Sharing Plan (the “Profit Sharing Plan”);
- Registration Statement No. 333-226799 filed with the SEC on August 13, 2018, pertaining to the registration of 2,000,000 shares of Common Stock pursuant to the 2011 Plan;
- Registration Statement No. 333-236958 filed with the SEC on March 6, 2020, pertaining to the registration of 1,000,000 shares of Common Stock pursuant to the Profit Sharing Plan;
- Registration Statement No. 333-252159 filed with the SEC on January 15, 2021, pertaining to the registration of 4,000,000 shares of Common Stock pursuant to the 2011 Plan; and
- Registration Statement No. 333-260894, filed with the SEC on November 9, 2021, pertaining to the registration of an aggregate of 960,000 shares consisting of: (i) 260,000 shares of Common Stock issuable pursuant to an inducement restricted stock unit award granted on November 8, 2021 and (ii) 700,000 shares of Common Stock issuable pursuant to an inducement stock option award granted on November 8, 2021.

On June 23, 2025, the Company entered into an Agreement and Plan of Merger (the “Merger Agreement”) with Bethpage Parent, Inc., a Delaware corporation (“Parent”) and Bethpage Merger Sub, Inc., a New York corporation and wholly owned subsidiary of Parent (“Merger Sub”). Pursuant to the Merger Agreement, on August 20, 2025, Merger Sub merged with and into the Company (the “Merger”), with the Company surviving the Merger as a wholly owned subsidiary of Parent.

In connection with the Merger, the offerings of securities pursuant to the Registration Statements have been terminated. In accordance with the undertakings made by the Company in the Registration Statements to remove from registration, by means of a post-effective amendment, any of the securities registered pursuant to the Registration Statements which remain unsold at the termination of the offerings, the Company hereby terminates the effectiveness of each Registration Statement and removes from registration all Shares registered under the Registration Statements that remain unsold as of the date hereof. Each Registration Statement is hereby amended, as appropriate, to reflect the deregistration of such securities. After giving effect to these Post-Effective Amendments, there will be no remaining securities registered by the Company pursuant to the Registration Statements.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused these Post-Effective Amendments to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Farmingdale, State of New York, on August 20, 2025.

ENZO BIOCHEM, INC.

By: /s/ Patricia Eckert
Name: Patricia Eckert
Title: Chief Financial Officer

No other person is required to sign these Post-Effective Amendments in reliance upon Rule 478 under the Securities Act of 1933, as amended.
