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

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**POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-256662**  
**POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-224841**

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**FORM S-8**  
**REGISTRATION STATEMENT**  
*Under*  
*The Securities Act of 1933*

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**EVELO BIOSCIENCES, INC.**  
(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**46-5594527**  
(I.R.S. Employer  
Identification Number)

**124 Washington Street, Suite 101**  
**Foxborough, Massachusetts 02035**  
**(508) 543-1720**  
(Address of Principal Executive Offices)

**Evelo Biosciences, Inc. 2015 Stock Incentive Plan**  
**Evelo Biosciences, Inc. 2018 Incentive Award Plan**  
**Evelo Biosciences, Inc. 2018 Employee Stock Purchase Plan**  
**Evelo Biosciences, Inc. 2021 Employment Inducement Award Plan**  
(Full Title of the Plans)

**Craig R. Jalbert**  
**President and Chief Executive Officer**  
**Evelo Biosciences, Inc.**  
**124 Washington Street, Suite 101**  
**Foxborough, Massachusetts 02035**  
**(508) 543-1720**

(Name and address, including zip code, and telephone number, including area code, of agent for service)

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*Copies to:*

**Peter N. Handrinos, Esq.**  
**Wesley C. Holmes, Esq.**  
**Latham & Watkins LLP**  
**200 Clarendon Street**  
**Boston, Massachusetts 02116**  
**Telephone: (617) 948-6000**

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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   
Non-accelerated filer

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

### DEREGISTRATION OF SECURITIES

This Post-Effective Amendment No. 1 (“Post-Effective Amendment No. 1”) filed by Evelo Biosciences, Inc., a Delaware corporation (the “Company”), removes from registration all shares of the Company’s common stock, par value \$0.001 per share (the “Common Stock”), registered under the following Registration Statements on Form S-8 (each a “Registration Statement” and, collectively, the “Registration Statements”) filed with the U.S. Securities and Exchange Commission (the “Commission”) that remain unsold thereunder:

- Registration Statement on [Form S-8 \(No. 333-256662\)](#), filed with the Commission on June 1, 2021, relating to the offer and sale of shares of Common Stock of the Company under the Company’s 2021 Employment Inducement Award Plan.
- Registration Statement on [Form S-8 \(No. 333-224841\)](#), filed with the Commission on May 10, 2018, relating to the offer and sale of shares of Common Stock of the Company under the Company’s 2015 Stock Incentive Plan, the Company’s 2018 Incentive Award Plan and the Company’s 2018 Employee Stock Purchase Plan.

As previously reported on November 21, 2023, the board of directors of the Company: (i) determined that it is in the best interests of the Company and its stakeholders that the Company be dissolved in accordance with the Delaware General Corporation Law pursuant to a Plan of Dissolution (the “Dissolution”); and (ii) approved seeking stockholder approval to proceed with the Dissolution pursuant to Delaware law at a special meeting of stockholders and, if approved, file a Certificate of Dissolution with the Secretary of State of the State of Delaware. In connection with the foregoing, the Company has determined to terminate the offerings of securities under the Registration Statements. Accordingly, the Company is filing this Post-Effective Amendment No. 1 to terminate the effectiveness of the Registration Statements, and, in accordance with the undertakings made by the Company in the Registration Statements, to remove from registration any and all of the securities that remain unsold under the Registration Statements as of the date hereof. The Registration Statements are hereby amended, as appropriate, to reflect the deregistration of all such securities.

As no securities are being registered herein, the sole purpose of this filing being to terminate the effectiveness of the Registration Statements and deregister the securities that remain unsold under the Registration Statements, the disclosure requirements for exhibits under Item 601 of Regulation S-K are inapplicable to this filing.

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**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing this Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Foxborough in the Commonwealth of Massachusetts, on January 26, 2024.

**EVELO BIOSCIENCES, INC.**

By: /s/ Craig R. Jalbert

Title: Chief Executive Officer, President and Director