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

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**POST-EFFECTIVE AMENDMENT NO. 3 TO:  
FORM S-3 REGISTRATION STATEMENT NO. 333-240323**  
*UNDER  
THE SECURITIES ACT OF 1933*

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**KALEIDO BIOSCIENCES, INC.**

(Exact name of registrant as specified in its charter)

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

**47-3048279**  
(I.R.S. Employer  
Identification No.)

**65 Hayden Avenue  
Lexington, MA 02421  
(617) 674-9000**  
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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**Kaleido Biosciences, Inc.  
65 Hayden Avenue  
Lexington, MA 02421  
(617) 674-9000**  
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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*with a copy to:*

**Kingsley L. Taft  
Laurie A. Burlingame  
Goodwin Procter LLP  
100 Northern Avenue  
Boston, MA 02210  
(617) 570-1000**

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*Approximate date of commencement of proposed sale to the public:* Not applicable. Removal from registration of shares that were not sold pursuant to the above referenced registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box:

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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 to Section 7(a)(2)(B) of the Securities Act.

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## DEREGISTRATION OF SHARES

This Post-Effective Amendment (this “Amendment”) relates to the following Registration Statement on Form S-3 (the “Registration Statement”) filed by Kaleido Biosciences, Inc., a Delaware corporation (the “Company”) with the Securities and Exchange Commission (the “SEC”):

- [Registration Statement No. 333-240323, filed on August 4, 2020.](#)

The purpose of this Amendment is to deregister all remaining securities available for issuance under the Registration Statement. In accordance with the undertakings made by the Company in the Registration Statement to remove from registration by means of a post-effective amendment any securities that had been registered for issuance but remain unsold at the termination of the offering, the Company hereby removes and withdraws from registration any and all securities registered pursuant to the Registration Statement that remain unsold as of the date hereof.

## 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-3 and has duly caused this Amendment to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Boston, Massachusetts, on April 25, 2022. No other person is required to sign this Amendment to the Registration Statement in reliance on Rule 478 of the Securities Act of 1933, as amended.

**Kaleido Biosciences, Inc.**

By: /s/ Theo Melas-Kyriazi

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Theo Melas-Kyriazi

Director