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

Post-Effective Amendment No. 1 to Form S-8 Registration Statement No. 333-278131

Post-Effective Amendment No. 1 to Form S-8 Registration Statement No. 333-270768

Post-Effective Amendment No. 1 to Form S-8 Registration Statement No. 333-263832

Post-Effective Amendment No. 1 to Form S-8 Registration Statement No. 333-256185

> FORM S-8 POS REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Landos Biopharma, Inc.

(Exact name of Registrant as Specified in Its Charter)

Delaware (State or other jurisdiction of Incorporation or organization) 81-5085535 (I.R.S. Employer Identification No.)

P.O. Box 11239 Blacksburg, VA 24062 (Address of principal executive offices)

2019 Equity Incentive Plan 2021 Employee Stock Purchase Plan 2022 Inducement Plan (Full titles of the plans)

Gregory Oakes Chief Executive Officer Landos Biopharma, Inc. P.O. Box 11239 Blacksburg, VA 24062 (Name and address of agent for service)

(540) 218-2232 (Telephone number, including area code, of agent for service)

> Copies to: Eric Blanchard Madison A. Jones Cooley LLP 500 Boylston St, Boston, MA 02116 (617) 937-2300

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	\boxtimes	Smaller reporting company	\mathbf{X}
		Emerging growth company	X

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.

TERMINATION OF REGISTRATION

These Post-Effective Amendments related to the following Registration Statements on Form S-8 (collectively, the "Registration Statements") previously filed by Landos Biopharma, Inc. (the "Registrant" or the "Company") with the Securities and Exchange Commission (the "SEC") are being filed to deregister any and all shares of the Company's common stock, par value \$0.01 per share ("Common Stock"), registered but unsold or otherwise unissued under each such Registration Statement as of the date hereof:

- 1. Registration File No. <u>333-256185</u>, filed with the SEC on May 17, 2021, relating to the registration of 8,542,276 shares of Common Stock for issuance under the Landos Biopharma, Inc. 2019 Equity Incentive Plan, as amended, and 388,703 shares of Common Stock for issuance under the Landos Biopharma, Inc. 2021 Employee Stock Purchase Plan;
- Registration File No. <u>333-263832</u>, filed with the SEC on March 24, 2022, relating to the registration of 1,824,900 shares of Common Stock for issuance under the Landos Biopharma, Inc. 2019 Equity Incentive Plan, as amended, 402,548 shares of Common Stock for issuance under the Landos Biopharma, Inc. 2021 Employee Stock Purchase Plan and 1,000,000 shares of Common Stock for issuance under the Landos Biopharma, Inc. 2022 Inducement Plan;
- 3. Registration File No. <u>333-270768</u>, filed with the SEC on March 23, 2023, relating to the registration of 1,824,900 shares of Common Stock for issuance under the Landos Biopharma, Inc. 2019 Equity Incentive Plan, as amended, and 402,548 shares of Common Stock for issuance under the Landos Biopharma, Inc. 2021 Employee Stock Purchase Plan; and
- 4. Registration File No. <u>333-278131</u>, filed with the SEC on March 21, 2024, relating to the registration of 155,836 shares of Common Stock for issuance under the Landos Biopharma, Inc. 2019 Equity Incentive Plan, as amended, and 31,167 shares of Common Stock for issuance under the Landos Biopharma, Inc. 2021 Employee Stock Purchase Plan.

On May 23, 2024, pursuant to the Agreement and Plan of Merger, dated as of March 24, 2024 (the "Merger Agreement"), by and among the Company, Bespin Subsidiary, LLC, a Delaware limited liability company and a wholly owned Subsidiary of Guarantor ("Parent"), Bespin Merger Sub, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), and solely for the limited purposes set forth therein, AbbVie Inc. ("Guarantor"), the Company became a wholly owned subsidiary of Parent.

As a result of the consummation of the transactions contemplated by the Merger Agreement, the Registrant has terminated all offerings of its securities pursuant to the Registration Statements. In accordance with an undertaking made by the Registrant in each of the Registration Statements to remove from registration, by means of a post-effective amendment, any securities which remain unsold at the termination of the offerings, the Registrant hereby removes and withdraws from registration any and all securities of the Registrant registered pursuant to the Registration Statements that remain unsold or otherwise unissued as of the date hereof, if any. The Registration Statements are hereby amended, as appropriate, to reflect the deregistration of such securities, and the Registrant hereby terminates the effectiveness of the Registration Statements.

The foregoing description of the Merger, the Merger Agreement and the transactions contemplated thereby does not purport to be complete and is subject to, and qualified in its entirety by, the Merger Agreement, which is attached as Exhibit 2.1 to the Company's Current Report on Form 8-K filed with the SEC on May 23, 2024.

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 the Registration Statements on Form S-8 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Blacksburg, Commonwealth of Virginia on May 23, 2024.

LANDOS BIOPHARMA, INC.

By: /s/ Fabio Cataldi

Fabio Cataldi Authorized Officer

Pursuant to Rule 478 under the Securities Act of 1933, as amended, no other person is required to sign these Post-Effective Amendments to the specified registration statements on Form S-8.