Registration No. 333-130080 Registration No. 333-193007 Registration No. 333-197465 Registration No. 333-204939 Registration No. 333-210285 Registration No. 333-217218 Registration No. 333-222483 Registration No. 333-223851 Registration No. 333-239469

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-130080 POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-193007 POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-197465 POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-204939 POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-210285 POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-217218 POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-22483 POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-22483 POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-223851 POST-EFFECTIVE AMENDMENT NO. 1 TO FORM S-8 REGISTRATION STATEMENT NO. 333-223851

UNDER THE SECURITIES ACT OF 1933

AYALA PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

84-1521955 (I.R.S. Employer Identification No.)

9 Deer Park Drive, Suite K-1 Monmouth Junction, NJ 08852 (Address and Zip Code of Principal Executive Office)

Advaxis, Inc. 2004 Stock Option Plan Advaxis, Inc. 2005 Stock Option Plan Advaxis, Inc. Amended and Restated 2009 Stock Option Plan Advaxis, Inc. 2011 Omnibus Incentive Plan Advaxis, Inc. 2011 Employee Stock Purchase Plan Advaxis, Inc. 2011 Omnibus Incentive Plan, as amended Advaxis, Inc. 2015 Incentive Plan Advaxis, Inc. 2018 Employee Stock Purchase Plan (Full titles of the plans)

> Kenneth A. Berlin, Chief Executive Officer Ayala Pharmaceuticals, Inc. 9 Deer Park Drive, Suite K-1 Monmouth Junction, NJ 08852 (732) 545-1590 (Name, address, and telephone number, including area code, of agent for service)

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. \Box

DEREGISTRATION OF SECURITIES

This Post-Effective Amendment (the "Post-Effective Amendment") filed by Ayala Pharmaceuticals, Inc., a Delaware corporation (the "Company"), deregisters all shares of common stock of the Company, par value \$0.001 per share (the "Common Stock"), that remain unsold under the following Registration Statements on Form S-8 (each a "Registration Statement," and collectively, the "Registration Statements") filed by the Company with the U.S. Securities and Exchange Commission (the "Commission"):

- Registration Statement on Form S-8 (No. 333-130080), which was filed with the Commission on December 1, 2005, pertaining to the registration of 2,381,525 shares of Common Stock issuable under the Advaxis, Inc. 2004 Stock Option Plan.
- <u>Registration Statement on Form S-8 (No. 333-193007)</u>, which was filed with the Commission on December 20, 2013, pertaining to the registration of 698,611 shares of Common Stock issuable under the Advaxis, Inc. 2005 Stock Option Plan, the Advaxis, Inc. 2009 Amended and Restated Stock Option Plan, the Advaxis, Inc. 2011 Omnibus Incentive Plan and the Advaxis, Inc. 2011 Employee Stock Purchase Plan.
- <u>Registration Statement on Form S-8 (No. 333-197465)</u>, which was filed with the Commission on July 16, 2014, pertaining to the registration of 1,600,000 shares of Common Stock issuable under the Advaxis, Inc. 2011 Omnibus Incentive Plan, as amended.
- <u>Registration Statement on Form S-8 (No. 333-204939)</u>, which was filed with the Commission on June 15, 2015, pertaining to the registration of <u>4,250,000 shares of Common Stock issuable under the Advaxis, Inc. 2015 Incentive Plan.</u>
- <u>Registration Statement on Form S-8 (No. 333-210285)</u>, which was filed with the Commission on March 18, 2016, pertaining to the registration of 1,000,000 shares of Common Stock issuable under the Advaxis, Inc. 2015 Incentive Plan.
- Registration Statement on Form S-8 (No. 333-217218), which was filed with the Commission on April 7, 2017, pertaining to the registration of 1,520,000 shares of Common Stock issuable under the Advaxis, Inc. 2015 Incentive Plan and the Advaxis, Inc. 2011 Employee Stock Purchase Plan.
- <u>Registration Statement on Form S-8 (No. 333-222483)</u>, which was filed with the Commission on January 9, 2018, pertaining to the registration of 2,070,147 shares of Common Stock issuable under the Advaxis, Inc. 2015 Incentive Plan and the Advaxis, Inc. 2011 Employee Stock Purchase Plan.
- <u>Registration Statement on Form S-8 (No. 333-223851)</u>, which was filed with the Commission on March 22, 2018, pertaining to the registration of 1,000,000 shares of Common Stock issuable under the Advaxis, Inc. 2018 Employee Stock Purchase Plan.
- Registration Statement on Form S-8 (No. 333-293469), which was filed with the Commission on June 26, 2020, pertaining to the registration of 6,062,257 shares of Common Stock issuable under the Advaxis, Inc. 2015 Incentive Plan.

On March 25, 2024, the Company and Immunome, Inc. ("Purchaser") consummated the transactions contemplated by that certain Asset Purchase Agreement, dated as of March 5, 2024 (the "Asset Purchase Agreement") pursuant to which Purchaser agreed to acquire, and the Company agreed to sell, certain of the Company's assets and liabilities related to its AL101 and AL102 programs (the "Asset Sale"), which constitute substantially all of the Company's assets.

Following the completion of the Asset Sale, the Company wishes to terminate the offerings pursuant to the above-referenced Registration Statements. In accordance with undertakings made by the Company in the Registration Statements to remove from registration, by means of a post-effective amendment, any of the securities that remain unsold at the termination of the offerings, the Company hereby removes from registration any and all securities registered but unsold under each of the Registration Statements. Each of the Registration Statements is hereby amended, as appropriate, to reflect the deregistration of such securities.

SIGNATURE

Pursuant to the requirements of the Securities Act of 1933, as amended, the Company 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 this Post-Effective Amendment to the above-referenced Registration Statements to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Monmouth Junction, State of New Jersey, on this 15th day of April, 2024.

Ayala Pharmaceuticals, Inc.

By: /s/ Kenneth A. Berlin

Name:Kenneth A. BerlinTitle:President and Chief Executive Officer

* Pursuant to Rule 478 under the Securities Act of 1933, as amended, no other person is required to sign this Post-Effective Amendment to the Registration Statement.