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

FORM S-8

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

APREA THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

84-2246769
(I.R.S. Employer Identification No.)

3805 Old Easton Road
Doylestown, PA
(Address of Principal Executive Offices)

18902
(Zip Code)

Aprea Therapeutics, Inc. 2019 Equity Incentive Plan
(Full title of the plan)

Oren Gilad, Ph.D.
President and Chief Executive Officer
3805 Old Easton Road
Doylestown, PA 18902
215-948-4119
(Name, address and telephone number, including area code, of agent for service)

Copies to:

Fahd M.T. Riaz, Esq.
DLA Piper LLP (US)
One Liberty Place
1650 Market Street, Suite 5000
Philadelphia, PA 19103-7300
215-948-4119

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting 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.

Part II

Information Required In The Registration Statement

This Registration Statement relates to the registration of an additional 219,242 shares (the "**Shares**") of Aprea Therapeutics, Inc. (the "**Registrant**") Common Stock, par value \$0.001 per share. The Shares are securities of the same class and relate to the same employee benefit plan, the Aprea Therapeutics, Inc. 2019 Equity Incentive Plan (in the form attached hereto as Exhibit 99.1) (the "**2019 Plan**"), as those registered pursuant to the Registrant's registration statements on Form S-8, previously filed with the Securities and Exchange Commission on [November 18, 2019 \(Registration No. 333-234765\)](#), [November 12, 2020 \(Registration No. 333-250043\)](#), [November 9, 2021 \(Registration No. 333-260884\)](#), [December 15, 2022 \(Registration No. 333-268816\)](#), [November 9, 2023 \(Registration No. 333-275440\)](#), and [August 21, 2024 \(Registration No. 333-281683\)](#).

In accordance with General Instruction E of Form S-8, the contents of the Registrant's registration statements filed with the Securities and Exchange Commission on [November 18, 2019 \(Registration No. 333-234765\)](#), [November 12, 2020 \(Registration No. 333-250043\)](#), [November 9, 2021 \(Registration No. 333-260884\)](#), [December 15, 2022 \(Registration No. 333-268816\)](#), [November 9, 2023 \(Registration No. 333-275440\)](#), and [August 21, 2024 \(Registration No. 333-281683\)](#) are incorporated herein by reference (solely to the extent the contents of such registration statements relate to the 2019 Plan) and the information required by Part II is omitted, except as supplemented by the information set forth below.



DLA Piper LLP (US)
One Liberty Place
1650 Market Street, Suite 5000
Philadelphia, PA 19103-7300
www.dlapiper.com

December 8, 2025

Aprea Therapeutics, Inc.
3805 Old Easton Road
Doylestown, PA 18902

RE: Aprea Therapeutics, Inc. - Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to Aprea Therapeutics, Inc., a Delaware corporation (the "**Company**"), in connection with the filing by the Company of a Registration Statement on Form S-8 (the "**Registration Statement**") with the Securities and Exchange Commission (the "**Commission**") covering the offering of up to 219,242 shares (the "**Plan Shares**") of the Registrant's common stock, par value \$0.001 per share (the "**Common Stock**") that may be issued pursuant to equity awards granted pursuant to the Aprea Therapeutics, Inc. 2019 Equity Incentive Plan (the "**Plan**").

In connection with this opinion, we have examined and relied upon (a) the Registration Statement and related prospectus, (b) the Company's certificate of incorporation and bylaws, each as currently in effect, and (c) such other records, documents, opinions, certificates, memoranda and instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness of all signatures (including, without limitation, all signatures via DocuSign, eSignature or similar technology), the authenticity and completeness of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as certified or photostatic copies or telecopies or portable document file ("**PDF**") copies (and the authenticity of the originals of such copies), the accuracy, completeness and authenticity of certificates of public officials, and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are prerequisites to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company, which we assume to be accurate and complete, and have not independently verified such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware (without regard for decisional law). We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Plan Shares have been duly authorized and, when and to the extent issued in accordance with the terms of the Plan and any award agreement entered into under the Plan, the Plan Shares will be validly issued, fully paid and nonassessable.

This opinion is limited to the matters expressly set forth in this letter, and no opinion has been or should be implied, or may be inferred, beyond the matters expressly stated. This opinion speaks only as to law and facts in effect or existing as of the date hereof and we disclaim any undertaking to advise you hereafter of any facts, circumstances, events or developments hereafter occurring or coming to our attention which may alter, affect or modify the opinions expressed herein.

We consent to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Commission thereunder.

Very truly yours,
/s/ DLA Piper LLP (US)

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement of Aprea Therapeutics, Inc. on Form S-8 to be filed on or about December 5, 2025 of our report dated March 24, 2025, on our audits of the financial statements as of December 31, 2024 and 2023 and for each of the years then ended, which report was included in the Annual Report on Form 10-K filed March 25, 2025. Our report includes an explanatory paragraph about the existence of substantial doubt concerning the Company's ability to continue as a going concern.

/s/ EisnerAmper LLP

EISNERAMPER LLP
Philadelphia, Pennsylvania
December 5, 2025
