

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

FORM S-1
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)

2834
 (Primary Standard Industrial
 Classification Code Number)

84-2246769
 (I.R.S. Employer
 Identification Number)

535 Boylston Street
Boston, MA 02116
(617) 463-9385
 (Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Christian S. Schade
President and Chief Executive Officer
Aprea Therapeutics, Inc.
535 Boylston Street
Boston, MA 02116
(617) 463-9385
 (Name, address, including zip code, and telephone number, including area code, of agent for service)

With copies to:

Geoffrey W. Levin, Esq.
Samir A. Gandhi, Esq.
Istvan A. Hajdu, Esq.
 Sidley Austin LLP
 787 Seventh Avenue
 New York, NY 10019
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Richard D. Truesdell, Jr., Esq.
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 Davis Polk & Wardwell LLP
 450 Lexington Avenue
 New York, NY 10017
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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

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 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, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. **333- 233662**

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 post-effective amendment filed pursuant to Rule 462(d) 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.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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. (Check one):

Large accelerated filer	<input type="radio"/>	Accelerated filer	<input type="radio"/>
Non-accelerated filer	(Do not check if a smaller reporting company) <input type="radio"/>	Smaller reporting company	<input checked="" type="radio"/>
Emerging growth company	<input checked="" type="radio"/>		

If an emerging growth company, indicate by checkmark if the registrant has not elected 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.

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED (1)	PROPOSED MAXIMUM OFFERING PRICE PER SHARE	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE (2)	AMOUNT OF REGISTRATION FEE (2)(3)
Common stock, par value \$0.001 per share	766,667	15.00	11,500,005	1,492.71

- (1) The Registrant is registering 766,667 shares of common stock pursuant to this Registration Statement, which includes 100,000 shares which the underwriters have the option to purchase. Does not include shares of common stock that the Registrant previously registered on Registration Statement on Form S-1 (File No. 333-233662), as amended (the "Registration Statement").
- (2) The registration fee is calculated in accordance with Rule 457(a) under the Securities Act of 1933, as amended (the "Securities Act").
- (3) The Registrant previously registered 5,750,000 shares of its common stock at \$16.00 per share on the Registration Statement, which was declared effective by the Securities and Exchange Commission on October 2, 2019, for which a filing fee of \$11,150.40 was paid. In accordance with Rule 462(b) under the Securities Act, an additional amount of securities having the proposed maximum aggregate offering price of \$11,500,005 is hereby registered.

This Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) under the Securities Act of 1933, as amended.

EXPLANATORY NOTE AND INCORPORATION BY REFERENCE

Pursuant to Rule 462(b) under the Securities Act of 1933, as amended (“Securities Act”), Aprea Therapeutics, Inc. (“Registrant”) is filing this Registration Statement on Form S-1 (this “Registration Statement”) with the Securities and Exchange Commission (“Commission”). This Registration Statement relates to the public offering of securities contemplated by the Registration Statement on Form S-1, as amended (File No. 333-233662) (the “Prior Registration Statement”), which the Registrant originally filed with the Commission on September 6, 2019, and subsequently amended on September 23, 2019, September 25, 2019, September 27, 2019 and October 2, 2019, and which the Commission declared effective on October 2, 2019.

The Registrant is filing this Registration Statement for the sole purpose of increasing the aggregate number of shares of common stock, par value \$0.001 per share, offered by the Registrant by 766,667 shares, 100,000 of which are subject to purchase upon exercise of the underwriters’ option to purchase additional shares of the Registrant’s common stock. The additional shares that are being registered for issuance and sale are in an amount and at a price that together represent no more than 20% of the maximum aggregate offering price set forth in the Calculation of Registration Fee table contained in the Prior Registration Statement. The information set forth in the Prior Registration Statement, including all amendments and exhibits thereto, are incorporated by reference herein.

The required opinion and consents are listed on the Exhibit Index attached hereto and filed herewith.

EXHIBIT INDEX

Exhibit number	Description
5.1*	Opinion of Sidley Austin LLP
23.1*	Consent of Independent Registered Public Accounting Firm
23.2*	Consent of Sidley Austin LLP (included in Exhibit 5.1)
24.1†	Power of Attorney

* Filed herewith.

† Incorporated by reference to the Registrant’s Registration Statement on Form S-1 (File No. 333-233662).

Signatures

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Boston, Commonwealth of Massachusetts, on this 2nd day of October, 2019.

APREA THERAPEUTICS, INC.

By: /s/ CHRISTIAN S. SCHADE
Christian S. Schade
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ CHRISTIAN S. SCHADE</u> Christian S. Schade	President and Chief Executive Officer and Director (principal executive officer)	October 2, 2019
<u>/s/SCOTT M. COIANTE</u> Scott M. Coiante	Chief Financial Officer (principal financial and accounting officer)	October 2, 2019
<u>*</u> Scott M. Rocklage, Ph.D.	Chairman of the Board of Directors	October 2, 2019
<u>*</u> Johan Christenson, M.D., Ph.D.	Director	October 2, 2019
<u>*</u> Jonathan Hepple, Ph.D.	Director	October 2, 2019
<u>*</u> Guido Magni, M.D., Ph.D.	Director	October 2, 2019
<u>*</u> Bernd R. Seizinger, M.D., Ph.D.	Director	October 2, 2019
<u>*</u> John B. Henneman III	Director	October 2, 2019

*By: /s/ SCOTT M. COIANTE
Scott M. Coiante
Attorney-in-fact

SIDLEYSIDLEY AUSTIN LLP
787 SEVENTH AVENUE
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+1 212 839 5599 FAX

AMERICA · ASIA PACIFIC · EUROPE

October 2, 2019

Aprea Therapeutics, Inc.
535 Boylston Street
Boston, MA 02116Re: 766,667 shares of common stock, \$0.001 par value per share

Ladies and Gentlemen:

We refer to the Registration Statement on Form S-1 filed by Aprea Therapeutics, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "SEC") on the date hereof pursuant to Rule 462(b) (the "Additional Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act"). The Additional Registration Statement relates to the registration under the Securities Act of 766,667 shares of common stock, \$0.001 par value per share (the "Additional Shares"), of the Company. The Additional Registration Statement incorporates by reference the Registration Statement on Form S-1, File No. 333-233662, filed by the Company with the SEC under the Securities Act, as amended to the date hereof (as so amended, the "Original Registration Statement"). This opinion letter is in addition to our opinion letter that was filed as Exhibit 5.1 to the Original Registration Statement. The Additional Shares are to be sold by the Company pursuant to an underwriting agreement among the Company and the Underwriters named therein, the form of which has been filed as Exhibit 1.1 to the Original Registration Statement (the "Underwriting Agreement").

This opinion letter is being delivered in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act.

We have examined (i) the Original Registration Statement; (ii) the form of the Amended and Restated Certificate of Incorporation (the "Certificate of Incorporation") of the Company to be filed with the Secretary of State of the State of Delaware prior to the closing of the sale of the shares contemplated by the Original Registration Statement and the Additional Registration Statement, filed as Exhibit 3.5 to the Original Registration Statement; (iii) the form of the Amended and Restated Bylaws of the Company to be effective prior to the closing of the sale of the shares contemplated by the Original Registration Statement and the Additional Registration Statement, filed as Exhibit 3.6 to the Original Registration Statement; (iv) the form of the Underwriting Agreement; (v) the Additional Registration Statement; and (vi) the resolutions adopted by the board of directors of the Company relating to the Original Registration Statement and the Additional Registration Statement and the issuance by the Company of the shares contemplated by the Original Registration Statement and the Additional Registration Statement. We have also examined originals, or copies of originals certified to our

Sidley Austin (NY) LLP is a Delaware limited liability partnership doing business as Sidley Austin LLP and practicing in affiliation with other Sidley Austin partnerships.

satisfaction, of such agreements, documents, certificates and statements of the Company and other corporate documents and instruments, and have examined such questions of law, as we have considered relevant and necessary as a basis for this opinion letter. We have assumed the authenticity of all documents submitted to us as originals, the genuineness of all signatures, the legal capacity of all persons and the conformity with the original documents of any copies thereof submitted to us for examination. As to facts relevant to the opinions expressed herein, we have relied without independent investigation or verification upon, and assumed the accuracy and completeness of certificates, letters and oral and written statements and representations of public officials and officers and other representatives of the Company. We have also assumed that the Certificate of Incorporation will be approved by all requisite action of the stockholders of the Company and will be duly filed with the Secretary of State of the State of Delaware prior to the sale of the Additional Shares.

Based on the foregoing, we are of the opinion that the Additional Shares will be validly issued, fully paid and non-assessable when: (i) the Company's board of directors or a duly authorized committee thereof shall have duly adopted final resolutions setting the price of the Additional Shares; and (ii) certificates representing the Additional Shares shall have been duly executed, countersigned and registered and duly delivered to the purchasers thereof against payment of the agreed consideration therefor in an amount not less than the par value thereof or, if any Additional Shares are to be issued in uncertificated form, the Company's books shall reflect the issuance of such Additional Shares to the purchasers thereof against payment of the agreed consideration therefor in an amount not less than the par value thereof, all in accordance with the Underwriting Agreement as executed and delivered by the parties thereto.

This opinion letter is limited to the General Corporation Law of the State of Delaware. We express no opinion as to the laws, rules or regulations of any other jurisdiction, including, without limitation, the federal laws of the United States of America or any state securities or blue sky laws.

We hereby consent to the filing of this opinion letter as an Exhibit to the Additional Registration Statement and to all references to our Firm included in or made a part of the Additional 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.

Very truly yours,

/s/ Sidley Austin LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement on Form S-1 filed pursuant to Rule 462(b) of the Securities Act of 1933 of the reference to our firm under the caption "Experts" and to the incorporation by reference of our report dated August 20, 2019 (except for the retroactive effect of the 1-for-1.6045 stock split of the Company's common stock as described in Note I, as to which the date is September 27, 2019), with respect to the balance sheet as of July 11, 2019 of Aprea Therapeutics, Inc., and our report dated August 20, 2019 (except for the retroactive effect of the 1-for-1.6045 stock split of the Company's preferred and common stock as described in Note 1, as to which the date is September 27, 2019), with respect to the consolidated financial statements of Aprea Therapeutics AB for the years ended December 31, 2017 and 2018, in the Registration Statement (Form S-1 No. 333-233662) and related Prospectus of Aprea Therapeutics, Inc., for the registration of shares of its common stock.

/s/ Ernst & Young AB

Stockholm, Sweden

October 2, 2019
