

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

**FORM S-1  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

**SALARIUS PHARMACEUTICALS, 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)

46-5087339  
(I.R.S. Employer  
Identification Number)

2450 Holcombe Blvd.  
Suite J-608  
Houston, TX 77021  
(346) 772-0346

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

David J. Arthur  
President and Chief Executive Officer  
2450 Holcombe Blvd.  
Suite J-608  
Houston, TX 77021  
(346) 772-0346

(Name, address, including zip code, and telephone number, including area code, of agent for service)

*Copies to:*

Andrew L. Strong  
Davina K. Kaile  
Pillsbury Winthrop Shaw Pittman LLP  
2550 Hanover Street  
Palo Alto, CA 94304  
(650) 233-4564

Michael F. Nertney, Esq.  
Ellenoff Grossman & Schole LLP  
1345 Avenue of the Americas  
New York, New York 10105  
(212) 370-1300

**Approximate date of commencement of proposed sale to the public:** As soon as practicable after the effective date of the registration statement.

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, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  333-235879

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, 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.

**CALCULATION OF REGISTRATION FEE**

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(2)
Class A Units consisting of: (i) Common Stock, par value \$0.0001 per share(3) (ii) Warrants to purchase Common Stock(3)		
Class B Units consisting of: (i) Series A Preferred Stock, par value \$0.0001 per share(3) (ii) Common Stock issuable on conversion of Series A Preferred Stock(3) (iii) Warrants to purchase Common Stock(3)		
Common Stock issuable upon exercise of warrants(3)		
<b>Total</b>	<b>\$3,680,000</b>	<b>\$478.00(4)</b>

- (1) Estimated solely for the purpose of computing the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. Also includes the offering price of additional units that the underwriter has the option to purchase. Represents only the additional number of securities being registered, including the price of additional shares of common stock and warrants to purchase shares of common stock that the underwriters have the option to purchase to cover over-allotments, if any. Does not include the securities that the Registrant previously registered on the registration statement on Form S-1 (File No. 333-235879).
- (2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price of all securities being registered.
- (3) Pursuant to Rule 416, the securities being registered hereunder include such indeterminate number of additional securities as may be issued after the date hereof as a result of stock splits, stock dividends or similar transactions.
- (4) The Registrant previously paid a filing fee of \$2,390 in connection with previous filings of its registration statement on Form S-1 (File No. 333-235879).

**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 OF CERTAIN INFORMATION BY REFERENCE**

This Registration Statement is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and includes the registration statement facing page, this page, the signature page, an exhibit index and the required opinion and consents. This Registration Statement is being filed solely to register up to an aggregate of \$3,680,000 in (i) additional Class A Units, with each Class A Unit consisting of one share of the Company's common stock, par value \$0.0001 per share (the "common stock"), one warrant to purchase one share of common stock, (ii) additional Class B Units, with each Class B Unit consisting of one share of the Company's Series A convertible preferred stock, par value \$0.0001 per share (the "Series A Preferred Stock"), one warrant to purchase one share of common stock, (iii) shares of Common Stock issuable upon conversion of the additional shares of Series A Preferred Stock and (iv) shares of Common Stock issuable upon exercise of the warrants included in the additional Class A Units and Class B Units. [This Registration Statement incorporates by reference the contents of, including all amendments and exhibits thereto, the Registration Statement on Form S-1 \(Registration No. 333-235879\), which was declared effective by the Securities and Exchange Commission on February 6, 2020 \(the "Prior Registration Statement"\).](#)

The additional securities that are being registered 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 required opinions and consents are listed on the Exhibit Index attached hereto and filed herewith.

**EXHIBIT INDEX**

<u>Exhibit No.</u>	<u>Description</u>
5.1	<a href="#"><u>Opinion of Pillsbury Winthrop Shaw Pittman LLP.</u></a>
23.1	<a href="#"><u>Consent of Weaver and Tidwell, L.L.P.</u></a>
23.2	<a href="#"><u>Consent of Ernst &amp; Young LLP.</u></a>
23.3	<a href="#"><u>Consent of Pillsbury Winthrop Shaw Pittman LLP (included in Exhibit 5.1).</u></a>
24.1†	<a href="#"><u>Power of attorney (incorporated by reference to Exhibit 24.1 to the Form S-1 Registration Statement (Registration No. 333-235879), filed by Salarius Pharmaceuticals, Inc. on January 10, 2020).</u></a>

† Previously filed.

**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 Houston, State of Texas on February 6, 2020.

**Salarius Pharmaceuticals, Inc.**

By: /s/ David J. Arthur  
David J. Arthur  
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 indicated on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ David J. Arthur</u> David J. Arthur	President, Chief Executive Officer, and Director <i>(Principal Executive Officer)</i>	February 6, 2020
<u>/s/ Mark J. Rosenblum</u> Mark J. Rosenblum	Executive Vice President, Finance and Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	February 6, 2020
<u>*</u> Jonathan P. Northrup	Chairman and Director	February 6, 2020
<u>*</u> Tess Burleson	Director	February 6, 2020
<u>*</u> Arnold Hanish	Director	February 6, 2020
<u>*</u> Paul Lammers	Director	February 6, 2020
<u>*</u> Bruce J. McCreedy	Director	February 6, 2020
<u>*</u> William K. McVicar	Director	February 6, 2020

\*By: /s/ David J. Arthur  
David J. Arthur  
Attorney-in-fact

Pillsbury Winthrop Shaw Pittman LLP  
2550 Hanover Street | Palo Alto, CA 94304-1115 | tel 650.233.4500 | fax 650.233.4545

February 7, 2020

Salarius Pharmaceuticals, Inc.  
2450 Holcombe Blvd., Suite J-608  
Houston, TX 77021

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

We are acting as counsel for Salarius Pharmaceuticals, Inc., a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-1 (the "Registration Statement") filed on February 7, 2020 with the Securities and Exchange Commission (the "Commission") pursuant to Rule 462(b) under the Securities Act of 1933 (the "Act"), relating to the registration under the Act of the following securities of the Company having an aggregate public offering price of up to \$3,680,000: (a) shares (the "Shares") of the Company's common stock, par value \$0.0001 per share (the "Common Stock"), all of which are authorized but heretofore unissued shares, (b) warrants (the "Warrants") to purchase shares of Common Stock, all of which are authorized but heretofore unissued shares (the "Warrant Shares"), (c) the Warrant Shares, (d) shares (the "Preferred Shares") of the Company's Series A Preferred Stock, par value \$0.0001 per share (the "Series A Preferred Stock"), all of which are authorized but heretofore unissued shares, and (e) shares of Common Stock issuable upon conversion of the Series A Preferred Stock, all of which are authorized but heretofore unissued shares (the "Conversion Shares"). The Registration Statement incorporates by reference the Registration Statement on Form S-1 (File No. 333-235879), filed with the Commission on January 10, 2020, as amended on January 28, 2020 and February 6, 2020, and declared effective by the Commission on February 6, 2020 (the "Related Registration Statement").

We have reviewed and are familiar with such corporate proceedings and other matters as we have considered relevant or necessary for the opinions expressed in this letter. On the basis of the foregoing, and subject to the other qualifications and limitations set forth herein, we are of the opinion that:

1. The Shares have been duly authorized and, when issued and sold by the Company against payment therefor in the manner described in the Registration Statement and in accordance with the resolutions adopted by the Board of Directors of the Company, will be validly issued, fully paid and nonassessable.
2. The Warrants, when duly executed and delivered by the Company and issued and sold by the Company in the manner described in the Registration Statement and in accordance with the resolutions adopted by the Board of Directors of the Company, will constitute valid and legally binding obligations of the Company, except as may be limited by the

effect of (a) applicable bankruptcy, insolvency, fraudulent conveyance and transfer, receivership, conservatorship, arrangement, moratorium and other similar laws affecting or relating to the rights of creditors generally, (b) general equitable principles (whether considered in a proceeding in equity or at law) and (c) requirements of reasonableness, good faith, materiality and fair dealing and the discretion of the court before which any matter may be brought.

3. The Warrant Shares have been duly authorized and, if issued on the date hereof upon exercise of the Warrants in accordance with the terms of the Warrants and the resolutions adopted by the Board of Directors of the Company, would be validly issued, fully paid and nonassessable.
4. The Preferred Shares have been duly authorized and, upon the filing of a certificate of designations conforming to the General Corporation Law of the State of Delaware regarding the Series A Preferred Stock with the Secretary of State of the State of Delaware (the "Certificate of Designations") and when issued and sold by the Company against payment therefor in the manner described in the Registration Statement and in accordance with the resolutions adopted by the Board of Directors of the Company, will be validly issued, fully paid and nonassessable.
5. The Conversion Shares have been duly authorized and, if issued on the date hereof upon conversion of the Preferred Shares in accordance with the terms of the Preferred Shares and the Certificate of Designations and the resolutions adopted by the Board of Directors of the Company, would be validly issued, fully paid and nonassessable.

The opinions set forth in this letter are limited to the General Corporation Law of the State of Delaware and the law of the State of New York, in each case as in effect on the date hereof.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the use of our name under the caption "Legal Matters" in the Registration Statement and in the Prospectus included therein. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

Very truly yours,

/s/ Pillsbury Winthrop Shaw Pittman LLP

**Consent of Independent Registered Public Accounting Firm**

We consent to the inclusion by reference of our reports in the Registration Statement (Form S-1) filed by Salarius Pharmaceuticals, Inc. (formerly Flex Pharma, Inc.) pursuant to Rule 462(b) under the Securities Act of 1933, as amended, included in Amendment No. 1 to the Registration Statement (Form S-1 No. 333-235879) and the related Prospectus of Salarius Pharmaceuticals, Inc. The specific reports subject to this consent are dated as follows:

- March 25, 2019, except for the effects of the recast of equity to which the date is January 10, 2020 with respect to the audit of the balance sheets of Salarius Pharmaceuticals, LLC as of December 31, 2018 and December 31, 2017 and the related statements of operations, changes in stockholders' deficit and cash flows for the years ended December 31, 2018 and 2017.

We also consent to the reference to our firm under the caption "Experts" in such Registration Statement.

/s/ WEAVER AND TIDWELL, L.L.P.

WEAVER AND TIDWELL, L.L.P.

Houston, Texas  
February 6, 2020



**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 March 6, 2019, with respect to the consolidated financial statements of Flex Pharma, Inc. incorporated by reference in the Registration Statement (Amendment No. 2 to Form S-1 No. 333-235879) and related Prospectus of Salarius Pharmaceuticals, Inc. dated February 6, 2020.

/s/ Ernst & Young LLP

Houston, Texas  
February 5, 2020