Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

VERTEX PHARMACEUTICALS INCORPORATED

(Exact name of registrant as specified in its charter)

Massachusetts

(State or other jurisdiction of incorporation or organization)

04-3039129 (I.R.S. Employer Identification Number)

50 Northern Avenue Boston, Massachusetts 02210 (617) 341-6100

(Address of Principal Executive Offices)
AMENDED AND RESTATED

2013 STOCK AND OPTION PLAN (Full Title of Plan)

Jeffrey M. Leiden Chief Executive Officer

Vertex Pharmaceuticals Incorporated 50 Northern Avenue Boston, Massachusetts 02210

(617) 341-6100

(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 or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer X

Accelerated filer 0

Non-accelerated filer O (Do not check if a smaller reporting company) Smaller reporting company O

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.01 par value	8,997,196	\$127.13	\$1,143,813,528	\$132,912

(1) The number of shares of common stock, par value \$.01 per share, stated above consists of the aggregate number of additional shares that may be issued under the Vertex Pharmaceuticals Incorporated Amended and Restated 2013 Stock and Option Plan (the "2013 Plan") pursuant to an amendment and restatement of the 2013 Plan that became effective June 4, 2015 (the "Effective Date"). It includes: (i) an additional 7,800,000 shares authorized under the 2013 Plan, plus (ii) 525,861 additional shares that were available for issuance under the Vertex Pharmaceuticals Incorporated Amended and Restated 2006 Stock and Option Plan (the "2006 Plan") as of the Effective Date or that expired, terminated or were otherwise surrendered, canceled, forfeited or repurchased by the Registrant subsequent to the Effective Date, each of which rolled-over into the 2013 Plan, plus (iii) 671,335 additional shares representing a good-faith estimate of awards made under the 2006 plan which will expire, terminate or will otherwise be surrendered, canceled, forfeited or repurchased subsequent to the date of this registration statement, each of which will roll-over into the 2013 Plan. The maximum number of shares that may be issued under the plan is subject to adjustment in accordance with certain anti-dilution and other provisions of the plan. Accordingly, pursuant to Rule 416 under the Securities Act of 1933, as amended, this Registration Statement covers, in addition to the number of shares stated above, an indeterminate number of shares that may be subject to grant or otherwise issuable after the operation of any such anti-dilution or other provisions.

(2)

Estimated solely for purposes of determining the registration fee pursuant to Rule 457(c) and (h) under the Securities Act of 1933, as amended, based on the average of the high and low sale prices of the Registrant's common stock as reported by The NASDAQ Global Select Market on July 29, 2015.

Statement of Incorporation by Reference

This Registration Statement on Form S-8 is being filed to register the offer and sale of an additional 8,997,196 shares of Common Stock, \$0.01 par value per share (the "Common Stock"), of Vertex Pharmaceuticals Incorporated (the "Registrant") to be issued under the Amended and Restated 2013 Stock and Option Plan (the "2013 Plan") of the Registrant. In accordance with General Instruction E to Form S-8, this Registration Statement incorporates by reference the contents of the Registration Statement on Form S-8 filed by the Registrant on May 21, 2013 (File No. 333-188737), relating to the Registrant's 2013 Plan.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, 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 this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Boston, Massachusetts on August 4, 2015.

VERTEX PHARMACEUTICALS INCORPORATED

/s/ JEFFREY M. LEIDEN

Jeffrey M. Leiden Chief Executive Officer and President

POWER OF ATTORNEY

By:

Each person whose signature appears below constitutes and appoints Jeffrey M. Leiden, Ian F. Smith and Michael J. LaCascia and each of them singly, his/her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them singly, for him/her and in his/her name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8 of Vertex Pharmaceuticals Incorporated, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting to the attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in or about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that the attorneys-in-fact and agents or any of each of them or their substitute may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, 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 this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Boston, Massachusetts on August 4, 2015.

	Signature	Title	Date
By:	/s/ JEFFREY M. LEIDEN	Chairman, Chief Executive Officer and President (principal	August 4, 2015
	Jeffrey M. Leiden	executive officer)	
By:	/s/ IAN F. SMITH	Executive Vice President and Chief Financial Officer (principal	August 4, 2015
	Ian F. Smith	financial officer)	
By:	/s/ PAUL M. SILVA	Senior Vice President and Corporate Controller (principal	August 4, 2015
-	Paul M. Silva	accounting officer)	
By:	/s/ SANGEETA N. BHATIA	Director	August 4, 2015
-	Sangeeta N. Bhatia	_	
By:	/s/ JOSHUA S. BOGER	Director	August 4, 2015
-	Joshua S. Boger	_	
By:	/s/ TERRENCE C. KEARNEY	Director	August 4, 2015
	Terrence C. Kearney	_	
By:	/s/ YUCHUN LEE	Director	August 4, 2015
-	Yuchun Lee	_	
By:	/s/ MARGARET G. MCGLYNN	Director	August 4, 2015
-	Margaret G. McGlynn	_	
By:	/s/ BRUCE I. SACHS	Director	August 4, 2015
-	Bruce I. Sachs	_	
By:	/s/ ELAINE S. ULLIAN	Director	August 4, 2015
-	Elaine S. Ullian	_	
By:	/s/ WILLIAM D. YOUNG	Director	August 4, 2015
	William D. Young	_	

VERTEX PHARMACEUTICALS INCORPORATED INDEX TO EXHIBITS FILED WITH FORM S-8 REGISTRATION STATEMENT

Exhibit Number	Exhibit Description	Filed with this Registration Statement	Incorporated by Reference herein from—Form or Schedule	Filing Date/ Period Covered	SEC File/ Reg. Number
4.1	Restated Articles of Organization of Vertex Pharmaceuticals Incorporated, as amended.		10-Q (Exhibit 10.2)	August 4, 2015	000-19319
4.2	By-laws of Vertex, as amended and restated as of February 5, 2013.		8-K (Exhibit 3.1)	February 11, 2013	000-19319
4.3	Specimen stock certificate.		S-1 (Exhibit 4.1)	July 18, 1991	33-40966
5.1	Opinion of counsel as to the legality of the shares being registered.	Х			
23.1	Consent of Ernst & Young LLP.	. X			
23.2	Consent of counsel (included as part of Exhibit 5.1).	Х			
24.1	Power of Attorney to file future amendments (set forth on signature page of this Registration Statement).	Х			
99.1	Vertex Pharmaceuticals Incorporated Amended and Restated 2013 Stock and Option Plan.		DEF-14A (Appendix A)	April 30, 2015	000-19319

August 4, 2015

Vertex Pharmaceuticals Incorporated 50 Northern Avenue Boston, Massachusetts 02210

Re: Vertex Pharmaceuticals Incorporated Amended and Restated 2013 Stock and Option Plan

Ladies and Gentlemen:

I have assisted in the preparation of the Registration Statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), relating to an aggregate of 8,997,196 shares of common stock, \$0.01 par value per share (the "Shares"), of Vertex Pharmaceuticals Incorporated, a Massachusetts corporation (the "Company"), issuable under the Company's Amended and Restated 2013 Stock and Option Plan (the "Plan").

I have examined the Articles of Organization and By-Laws of the Company, each as amended and restated to date, and originals, or copies certified to my satisfaction, of all pertinent records of the meetings of the directors and shareholders of the Company, the Registration Statement and such other documents relating to the Company as I have deemed material for the purposes of this opinion.

In my examination of the foregoing documents, I have assumed the genuineness of all signatures, the authenticity of all documents submitted to me as originals, the conformity to original documents of all documents submitted to me as certified, photostatic or other copies, the authenticity of the originals of any such documents and the legal competence of all signatories to such documents.

I express no opinion herein as to the laws of any state or jurisdiction other than the state laws of The Commonwealth of Massachusetts and the federal laws of the United States of America. It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Please note I am opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. I assume no obligation to revise or supplement this opinion should the present laws, or the interpretation thereof, be changed in respect of any circumstances or events that occur subsequent to the date hereof.

Based on the foregoing, I am of the opinion that the Shares have been duly authorized for issuance and, when the Shares are issued and paid for in accordance with the terms and conditions of the Plan, the Shares will be validly issued, fully paid and nonassessable.

I hereby consent to the filing of this opinion with the Commission in connection with the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act. In giving such consent, I do not hereby admit that I am in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

<u>/s/ Michael J. LaCascia</u> Michael J. LaCascia Vice President and Interim General Counsel

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement on Form S-8 pertaining to the Amended and Restated 2013 Stock and Option Plan of Vertex Pharmaceuticals Incorporated of our reports dated February 13, 2015, with respect to the consolidated financial statements of Vertex Pharmaceuticals Incorporated and the effectiveness of internal control over financial reporting of Vertex Pharmaceuticals Incorporated in its Annual Report (Form 10-K) for the year ended December 31, 2014, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts August 4, 2015