

**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)

**130 Waverly Street
Cambridge, Massachusetts 02139
(617) 444-6100**
(Address of Principal Executive Offices)

EMPLOYEE STOCK PURCHASE PLAN
(Full Title of Plan)

**Joshua S. Boger
Chief Executive Officer
Vertex Pharmaceuticals Incorporated
130 Waverly Street
Cambridge, Massachusetts 02139
(617) 444-6100**

(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 Accelerated filer Non-accelerated filer
(do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered(1)	Amount to Be Registered(2)	Proposed Maximum Offering Price Per Share(3)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$.01 par value	2,000,000	\$26.59	\$53,180,000	\$2,090

(1) Each share of common stock includes a right to purchase series A junior participating preferred stock of the Registrant, which are initially attached to and trade with the shares of the common stock being registered hereby. No separate consideration will be received for these rights.

(2) 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 Employee Stock Purchase Plan pursuant to an amendment to the plan that became effective on May 13, 2008. 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 and other provisions.

(3) 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 prices of the Registrant's common stock as reported by the Nasdaq Global Select Market on May 9, 2008.



PART I
INFORMATION REQUIRED IN THE SECTION 10(A) PROSPECTUS

Item 1. Plan Information.

The information required by Item 1 is included in documents sent or given to participants in the plan covered by this registration statement pursuant to Rule 428(b)(1) of the Securities Act of 1933, as amended (the "Securities Act").

Item 2. Registrant Information and Employee Plan Annual Information.

The written statement required by Item 2 is included in documents sent or given to participants in the plan covered by this registration statement pursuant to Rule 428(b)(1) of the Securities Act.

PART II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Registrant with the Commission are incorporated herein by reference:

- (a) The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2007 (filing date February 11, 2008).
- (b) The Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2008 (filing date May 12, 2008).
- (c) All other reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the document referred to in (a) above.
- (d) The description of the Common Stock and the Rights contained in the Registrant's Registration Statement on Form 8-A (filing date May 30, 1991), as amended from time to time.

All documents subsequently filed by the registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment that indicates that all securities offered hereby have been sold or that deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be part hereof from the date of the filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

The validity of the issuance of the shares of Common Stock registered under this Registration Statement has been passed upon for the Registrant by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

Item 6. Indemnification of Directors and Officers.

Part D of Article 6 of the Articles of Organization of the Registrant provides that no director of the Registrant shall be personally liable to the Registrant or its stockholders for monetary damages for any breach of fiduciary duty as a director. Such paragraph provides further, however, that to the extent provided by applicable law it will not eliminate or limit the liability of a director "(i) for any breach of the director's duty of loyalty to the Registrant or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 61 or 62 of the Massachusetts Business Corporation Law, or (iv) for any transactions from which the director derived an improper personal benefit."

Article V of the Registrant's By-laws provides that the Registrant shall indemnify each of its directors and officers (including persons who serve at the Registrant's request as a director, officer, or trustee of another organization in which the Registrant has any interest, direct or indirect, as a stockholder, creditor, or otherwise or who serve at the Registrant's request in any capacity with respect to any employee benefit plan) against all liabilities and expenses, including amounts paid in satisfaction of judgments, in compromise, or as fines and penalties, and counsel fees reasonably incurred by such director or officer in connection with the defense or disposition of any action, suit, or other proceeding, whether civil or criminal, in which such director or officer may be involved or with which such person may be threatened, while in office or thereafter, by reason of such person's being or having been such a director, officer, or trustee, except with respect to any matter as to which such director or officer shall have been adjudicated in any proceeding not to have acted in good faith in the reasonable belief that such director's or officer's action was in the best interest of the Registrant or, to the extent that such matter relates to service with respect to an employee benefit plan, in the best interest of the participants or beneficiaries of such employee benefit plan.

As to any matter disposed of by a compromise payment by any such person, pursuant to a consent decree or otherwise, Article V of the Registrant's By-laws provides that no indemnification shall be provided to such person for such payment or for any other expenses unless such compromise has been approved as in the best interests of the Registrant, after notice that it involves such indemnification (i) by a disinterested majority of the directors then in office or (ii) by a majority of the disinterested directors then in office provided there has been obtained an opinion in writing of independent legal counsel to the effect that such director or officer appeared to have acted in good faith in the reasonable belief that such person's action as in the best interest of the Registrant, or (iii) by the holders of a majority of the outstanding stock at the time entitled to vote for directors, voting as a single class, exclusive of any stock owned by any interested director or officer.

Article V of the Registrant's By-laws provides that expenses, including counsel fees, reasonably incurred by any director or officer in connection with the defense or disposition of any such action, suit or other proceeding may be paid from time to time by the Registrant at the discretion of a majority of the disinterested directors then in office, in advance of the final disposition thereof, upon receipt of an undertaking by such director or officer to repay the Registrant the amounts so paid if it is ultimately determined that indemnification for such expenses is not authorized under Article V of the By-laws, which undertaking may be accepted by the Registrant without reference to the financial ability of such director or officer to make repayment.

Article V of the Registrant's By-laws gives the Board of Directors of the Registrant the power to authorize the purchase and maintenance of insurance, in such amounts as the Board of Directors may from time to time deem appropriate, on behalf of any person who is or was a director, officer, or agent of the Registrant, or who is or was serving at the request of the Registrant as a director, officer or agent of another organization in which the Registrant has any interest, direct or indirect, as a shareholder, creditor or otherwise, or with respect to any employee benefit plan, against any liability incurred by such person in any such capacity, or arising out of such person's status as such agent,

whether or not such person is entitled to indemnification by the Registrant pursuant to Article V or otherwise and whether or not the Registrant would have the power to indemnify the person against such liability.

Subdivision E of Part 8 of the Massachusetts Business Corporation Act (the "MBCA") authorizes the provisions, described above, contained in Part D, Article 6 of the Articles of Organization of the Registrant.

Sections 8.30 and 8.42 of the MBCA provide that if an officer or director discharges his or her duties in good faith and with the care that a person in a like position would reasonably exercise under similar circumstances and in a manner the officer or director reasonably believes to be in the best interests of the corporation, he or she will not be liable for such actions.

Item 7. Exemption From Registration Claimed.

Not applicable

Item 8. Exhibits.

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
3.1	Restated Articles of Organization of Vertex, filed with the Secretary of State of The Commonwealth of Massachusetts on July 31, 1991.		10-K (Exhibit 3.1)	March 26, 1998	000-19319
3.2	Certificate of Vote of Directors Establishing a Series of a Class of Stock, filed with the Secretary of State of The Commonwealth of Massachusetts on July 31, 1991.		10-K (Exhibit 3.3)	March 26, 1998	000-19319
3.3	Articles of Amendment of the Articles of Organization of Vertex, filed with the Secretary of State of The Commonwealth of Massachusetts on May 17, 1995.		S-3 (Exhibit 3.3)	April 1, 2005	333-123731
3.4	Articles of Amendment of the Articles of Organization of Vertex, filed with the Secretary of State of The Commonwealth of Massachusetts on June 4, 1997.		10-K (Exhibit 3.2)	March 26, 1998	000-19319
3.5	Articles of Amendment of the Articles of Organization of Vertex, filed with the Secretary of State of The Commonwealth of Massachusetts on May 21, 2001		S-4 (Exhibit 3.4)	May 23, 2001	333-61480
3.6	Form of Articles of Amendment of the Articles of Organization of Vertex, to be filed with the Secretary of State of The Commonwealth of Massachusetts on May 16, 2008.	X			
3.7	By-laws of Vertex, as amended and restated as of May 11, 2005.		10-Q (Exhibit 3.1)	August 9, 2005	000-19319
4.1	Specimen stock certificate.		S-1 (Exhibit 4.1)	July 18, 1991	33-40966
4.2	Rights Agreement, dated as of July 1, 1991.		S-1 (Exhibit 4.2)	July 5, 1991	33-40966
4.3	First Amendment to Rights Agreement, dated as of February 21, 1997.		10-K (Exhibit 4.3)	March 28, 1997	000-19319
4.4	Second Amendment to Rights Agreement, dated as of June 30, 2001.		10-Q (Exhibit 4.4)	August 14, 2001	000-19319
5.1	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. as to the legality of the shares being registered	X			
10.1	Vertex Pharmaceuticals Incorporated Employee Stock Purchase Plan	X			
23.1	Consent of Independent Registered Public Accounting Firm Ernst & Young LLP.	X			
23.2	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included as part of Exhibit 5.1)	X			
24.1	Power of Attorney to file future amendments (set forth on signature page of this Registration Statement)	X			

Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

Provided, however, That:

(A) Paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the registration statement is on Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

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

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5.1	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. as to the legality of the shares being registered	X			
10.1	Vertex Pharmaceuticals Incorporated Employee Stock Purchase Plan	X			
23.1	Consent of Independent Registered Public Accounting Firm Ernst & Young LLP.	X			
23.2	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included as part of Exhibit 5.1)	X			
24.1	Power of Attorney to file future amendments (set forth on signature page of this Registration Statement)	X			

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[PART I INFORMATION REQUIRED IN THE SECTION 10\(A\) PROSPECTUS](#)

[Item 1. Plan Information.](#)

[Item 2. Registrant Information and Employee Plan Annual Information.](#)

[PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT](#)

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[VERTEX PHARMACEUTICALS INCORPORATED INDEX TO EXHIBITS FILED WITH FORM S-8 REGISTRATION STATEMENT](#)

D
PC

The Commonwealth of Massachusetts
William Francis Galvin
Secretary of the Commonwealth
One Ashburton Place, Boston, Massachusetts 02108-1512

FORM MUST BE TYPED

Articles of Amendment
(General Laws Chapter 156D, Section 10.06; 950 CMR 113.34)

FORM MUST BE TYPED

- (1) Exact name of corporation: **Vertex Pharmaceuticals Incorporated**
- (2) Registered office address: **130 Waverly Street, Cambridge, Massachusetts 02139**
(number, street, city or town, state, zip code)
- (3) These articles of amendment affect article(s): **3**
(specify the number(s) of article(s) being amended (I–VI))
- (4) Date adopted: **May 15, 2008**
(month, day, year)
- (5) Approved by:
(check appropriate box)
- the incorporators.
 - the board of directors without shareholder approval and shareholder approval was not required.
 - the board of directors and the shareholders in the manner required by law and the articles of organization.
- (6) State the article number and the text of the amendment. Unless contained in the text of the amendment, state the provisions for implementing the exchange, reclassification or cancellation of issued shares.

VOTED: To increase the number of shares of Common Stock, \$.01 par value per share, that the Corporation shall have authorized to issue from 200,000,000 shares to 300,000,000 shares; and that ARTICLE 3 of the Corporation's Restated Articles of Organization be, and hereby is, amended to read as follows:

3. The total number of shares and the par value, if any, of each class of stock that the Corporation shall be authorized to issue is as follows; 1,000,000 shares of Preferred Stock, \$.01 par value per share, and 300,000,000 shares of Common Stock, \$.01 par value per share.

COMMONWEALTH OF MASSACHUSETTS

William Francis Galvin
Secretary of the Commonwealth
One Ashburton Place, Boston, Massachusetts 02108-1512

Articles of Amendment
(General Laws Chapter 156D, Section 10.06; 950 CMR 113.34)

I hereby certify that upon examination of these articles of amendment, it appears that the provisions of the General Laws relative thereto have been complied with, and the filing fee in the amount of \$ _____ having been paid, said articles are deemed to have been filed with me this _____ day of May, 2008, at _____ a.m./p.m.

time

Effective date: _____, 2008

(must be within 90 days of date submitted)

WILLIAM FRANCIS GALVIN
Secretary of the Commonwealth

Filing fee: Minimum filing fee \$100 per article amended, stock increases \$100 per 100,000 shares, plus \$100 for each additional 100,000 shares or any fraction thereof.

Examiner

Name approval TO BE FILLED IN BY CORPORATION
Contact Information:

C Kenneth S. Boger
M Senior Vice President and General Counsel
Vertex Pharmaceuticals Incorporated
Telephone: (617) 444-6417
Email: Ken_Boger@vrtx.com

Upon filing, a copy of this filing will be available at www.sec.state.ma.us/cor. If the document is rejected, a copy of the rejection sheet and rejected document will be available in the rejected queue.

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[Exhibit 3.6](#)

MINTZ LEVIN LETTERHEAD

May 15, 2008

Vertex Pharmaceuticals Incorporated
130 Waverly Street
Cambridge, Massachusetts 02139-4242

Ladies and Gentlemen:

We have acted as counsel to Vertex Pharmaceuticals Incorporated, a Massachusetts corporation (the "Company"), in connection with the preparation and filing with the Securities and Exchange Commission of a Registration Statement on Form S-8 (the "Registration Statement"), pursuant to which the Company is registering the issuance under the Securities Act of 1933, as amended, of a total of 2,000,000 shares (the "Shares") of its common stock, \$.01 par value per share (the "Common Stock"). This opinion is being rendered in connection with the filing of the Registration Statement. All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the Registration Statement. All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the Registration Statement.

In connection with this opinion, we have examined the Company's Restated Articles of Organization, as amended, and By-Laws, as amended and restated, both as currently in effect; such other records of the corporate proceedings of the Company and certificates of the Company's officers as we have deemed relevant; and the Registration Statement and the exhibits thereto.

In our examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies and the authenticity of the originals of such copies.

Based upon the foregoing, we are of the opinion that (i) the Shares have been duly and validly authorized by the Company and (ii) the Shares, when sold, will have been duly and validly issued, fully paid and non-assessable shares of the Common Stock, free of preemptive rights.

Our opinion is limited to the General Corporation Laws of the State of Massachusetts and the reported judicial decisions interpreting those laws, and we express no opinion with respect to the laws of any other jurisdiction. No opinion is expressed herein with respect to the qualification of the Shares under the securities or blue sky laws of any state or any foreign jurisdiction.

We understand that you wish to file this opinion as an exhibit to the Registration Statement, and we hereby consent thereto.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

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[EXHIBIT 5.1](#)

VERTEX PHARMACEUTICALS INCORPORATED
EMPLOYEE STOCK PURCHASE PLAN
(as amended and restated)

ARTICLE 1
PURPOSE AND DEFINITIONS

SECTION 1.1. PURPOSE. The purpose of the Vertex Pharmaceuticals Incorporated Employee Stock Purchase Plan is to provide employees with an opportunity to purchase Common Stock in the Company through payroll deductions, thereby encouraging employees to share in the economic growth and success of the Company through stock ownership.

SECTION 1.2. DEFINITIONS. Whenever used in the Plan, unless the context clearly indicates otherwise, the following terms shall have the following meanings:

- (a) "BENEFICIARY" with respect to a Participant, means the beneficiary designated by the Participant under the group term life insurance plan maintained by the Company or such other beneficiary as may be designated by a Participant for purposes of this Plan.
- (b) "BOARD OF DIRECTORS" means the Board of Directors of the Company.
- (c) "CODE" means the Internal Revenue Code of 1986, as the same may be amended from time to time, and references thereto shall include the valid Treasury regulations issued thereunder.
- (d) "COMMITTEE" means the Management Development and Compensation Committee of the Board of Directors or such other committee of the Board of Directors designated by the Board of Directors to administer the Company's equity compensation plans.
- (e) "COMMON STOCK" means shares of the \$.01 par value common stock of the Company and any other stock or securities resulting from the adjustment thereof or substitution therefor as described in Section 3.4.
- (f) "COMPANY" means Vertex Pharmaceuticals Incorporated or any successor by merger, purchase, or otherwise.
- (g) "COMPENSATION" means the cash compensation received by an Employee for services, including pre-tax employee compensation made to the Company's 401(k) savings plan, but not including overtime or bonuses.
- (h) "EFFECTIVE DATE" means July 1, 1992.
- (i) "ELECTION" means an election by a Participant to terminate an Offering Period on the first Purchase Date of such Offering Period, which election shall be made within such Offering Period and prior to such First Purchase Date and shall be in writing on a form furnished by the Company for such purpose and shall be made by having such Participant complete, sign and file such form with the Company in the manner prescribed by the Company.
- (j) "EMPLOYEE" means any person who receives a regular stated compensation from the Company or a Subsidiary other than a pension, severance pay, retainer, or fee under contract.
- (k) "FAIR MARKET VALUE" of a Share of Common Stock on a particular date shall be the average of the highest and lowest quoted selling prices on such date (the "valuation date") on the securities market where the Common Stock of the Company is traded, or if there were no sales on the valuation date, on the next preceding date within a reasonable period (as

determined in the sole discretion of the Committee) on which there were sales. In the event that there were no sales in such a market within a reasonable period, the fair market value shall be as determined in good faith by the Committee in its sole discretion. The Fair Market Value as determined in this paragraph shall be rounded down to the next lower whole cent if the foregoing calculation results in fractional cents.

- (l) "OFFERING" means the offering of shares of Common Stock to Participants pursuant to this Plan.
- (m) "OFFERING DATE" means each May 15 and November 15. If any such date shall fall other than on a business day, then the Offering Date shall be the next succeeding business day.
- (n) "OFFERING PERIOD" means either (i) the period from an Offering Date through the second Purchase Date following such Offering Date or (ii) if a Participant validly exercises an Election, the period from an Offering Date through the first Purchase Date following such Offering Date.
- (o) "PARTICIPANT" means an Employee who has elected to participate in the Plan.
- (p) "PURCHASE DATE" means each May 14 and November 14.
- (q) "PLAN" means the Vertex Pharmaceuticals Incorporated Employee Stock Purchase Plan, an "employee stock purchase plan" within the meaning of Section 423(b) of the Code, together with any and all amendments thereto.
- (r) "STOCK PURCHASE ACCOUNT," with respect to a Participant, means the account established on the books and records of the Company or a Subsidiary for such Participant representing the payroll deductions credited to such account in accordance with the provisions of the Plan.
- (s) "SUBSIDIARY" means any corporation, fifty percent (50%) or more of the total combined voting power of all classes of stock of which is beneficially owned, directly or indirectly, by the Company.

ARTICLE II PARTICIPATION

SECTION 2.1. PARTICIPATION REQUIREMENTS.

- (a) **COMMENCEMENT OF PARTICIPATION.** Subject to Section 2.2 and Section 3.2(b), each person who becomes an Employee after the Effective Date may become a Participant in the Plan on any Offering Date following the date on which such person becomes an Employee.
- (b) **ELIGIBILITY OF FORMER PARTICIPANTS.** If a person terminates employment with the Company after becoming a Participant and subsequently resumes employment with the Company, such person will again become eligible to participate on the Offering Date next following such resumption of employment with the Company.

SECTION 2.2. EXCLUSIONS. Notwithstanding any provision of the Plan to the contrary, in no event shall the following persons be eligible to participate in the Plan:

- (a) Any Employee whose customary employment is twenty (20) hours or less per week;
- (b) Any Employee whose customary employment is for not more than five (5) months in any calendar year; or
- (c) Any Employee who, as of the beginning of an Offering Period, owns (or under Section 423(b)(3) of the Code would be deemed to own) stock possessing five percent (5%)

or more of the total combined voting power or value of all classes of stock of the Company or a Subsidiary.

ARTICLE III OFFERING OF COMMON STOCK

SECTION 3.1. RESERVATION OF COMMON STOCK. The Board of Directors shall reserve 1,748,660 shares of Common Stock for issuance under the Plan after March 17, 2004, subject to adjustment in accordance with Section 3.4, provided that no more than 248,660 of such shares shall be issued prior to May 15, 2004. On May 13, 2008, the Board of Directors shall reserve an additional 2,000,000 shares of Common Stock for issuance under the Plan.

SECTION 3.2. OFFERING OF COMMON STOCK.

- (a) GENERAL. Subject to Section 3.2(b), each Participant in the Plan on an Offering Date shall be entitled to purchase shares of Common Stock on each Purchase Date within the Offering Period that begins with such Offering Date with the amounts deducted from such Participant's Compensation during such Offering Period pursuant to Article IV, provided, however, that a Participant shall not participate in more than one Offering Period simultaneously. The purchase price for such shares of Common Stock shall be determined under Section 3.3.
- (b) LIMITATIONS. Notwithstanding Section 3.2(a), no employee may accrue rights to purchase shares of Common Stock attributable to an Offering Period in excess of \$25,000 of fair market value of such shares (measured as of the relevant Offering Date) for each calendar year during which such rights are outstanding. For any year, this limit shall be further reduced by the fair market value of stock (measured as of the relevant Offering Date for such stock) purchasable under any prior outstanding rights relating to such calendar year under this Plan and all other Code section 423 employee stock purchase plans of the Company or any Subsidiary. This paragraph is intended to be consistent with the limitation of Code section 423(b)(8) and shall be interpreted accordingly.

SECTION 3.3. DETERMINATION OF PURCHASE PRICE FOR OFFERED COMMON STOCK. The purchase price per share of the shares of Common Stock to be acquired by a Participant on a Purchase Date pursuant to an Offering shall be equal to eighty-five percent (85%) of the lesser of:

- (a) the Fair Market Value of a share of Common Stock on the Offering Date for such Offering Period; or
- (b) the Fair Market Value of a share of Common Stock on such Purchase Date;

provided, however, in no event shall the purchase price be less than the par value of a share of Common Stock.

SECTION 3.4. EFFECT OF CERTAIN TRANSACTIONS. The number of shares of Common Stock reserved for the Plan pursuant to Section 3.1, the maximum number of shares of Common Stock offered pursuant to Section 3.2(b), and the determination under Section 3.3 of the purchase price per share of the shares of Common Stock offered to Participants pursuant to an Offering shall be appropriately adjusted to reflect any increase or decrease in the number of issued shares of Common Stock resulting from a stock split, a consolidation of shares, the payment of a stock dividend, or any other capital adjustment affecting the number of issued shares of Common Stock. In the event that the outstanding shares of Common Stock shall be changed into or exchanged for a different number or kind of shares of stock or other securities of the Company or another corporation, whether through reorganization, recapitalization, merger, consolidation, or otherwise, then there shall be substituted for each share of Common Stock reserved for issuance under the Plan but not yet purchased by

Participants, the number and kind of shares of stock or other securities into which each outstanding share of Common Stock shall be so changed or for which each such share shall be exchanged.

ARTICLE IV PAYROLL DEDUCTIONS

SECTION 4.1. PAYROLL DEDUCTION ELECTIONS. Any Employee eligible to participate in the Plan may elect to have the Company deduct from the Compensation payable to such Employee during each Offering Period any amount between one percent (1%) and fifteen percent (15%) of such Participant's Compensation, in whole multiples of one percent (1%). Such election shall be made during the thirty day period preceding the Offering Period to which it first relates. Such election shall become effective as of the first day of such Participant's first pay period that begins on or after the first day of such Offering Period and shall remain effective for each successive pay period and for each subsequent Offering until changed or terminated pursuant to this Article IV. The percentage deduction specified by the Participant will be deducted from each payment of Compensation made to the Participant.

SECTION 4.2. ELECTION TO INCREASE OR DECREASE PAYROLL DEDUCTIONS. Subject to Section 4.4, a Participant who has a payroll deduction election in effect under Section 4.1 may prospectively increase or decrease during an Offering Period the percentage amount of the deductions being made by the Company from such Participant's Compensation (including a decrease to zero) by delivering to the Company written direction to make such change. Such change shall become effective as soon as practicable after the Company's receipt of such written direction and shall remain in effect until changed or terminated pursuant to this Article IV. A Participant shall be permitted to increase or decrease the percentage amount of the deductions being made from such Participant's Compensation only once during each of the portions of an Offering Period that ends on a Purchase Date; provided, however, a Participant may terminate the deductions being made from such Participant's Compensation at any time during such Offering Period. If a Participant terminates deductions, such Participant cannot resume deductions during that Offering Period.

SECTION 4.3. TERMINATION OF ELECTION UPON TERMINATION OF EMPLOYMENT. The termination of employment of a Participant for any reason shall automatically terminate the election of such Participant to have amounts deducted from such Participant's Compensation pursuant to this Article IV that is then in effect. Such termination shall be effective immediately following the pay period during which such termination of employment occurs, but shall not affect the deduction from Compensation for that pay period.

SECTION 4.4. FORM OF ELECTIONS. Except as otherwise permitted by the Company, any election by a Participant regarding participation in or withdrawal from the Plan or deductions from Compensation pursuant to this Article IV shall be in writing on a form furnished by the Company for such purpose and shall be made by having such Participant file such form with the Company in the manner prescribed from time to time by the Company.

ARTICLE V STOCK PURCHASE ACCOUNTS AND PURCHASE OF COMMON STOCK

SECTION 5.1. STOCK PURCHASE ACCOUNTS. A Stock Purchase Account shall be established and maintained on the books and records of the Company for each Participant. Amounts deducted from a Participant's Compensation pursuant to Article IV shall be credited to such Participant's Stock Purchase Account. No interest or other increment shall accrue or be payable to any Participant with respect to any amounts credited to such Stock Purchase Accounts. All amounts credited to such Stock Purchase Accounts shall be withdrawn, paid, or applied toward the purchase of Common Stock pursuant to the provisions of this Article V.

SECTION 5.2. PURCHASE OF COMMON STOCK.

- (a) **GENERAL.** As of each Purchase Date, the amount to the credit of a Participant in such Participant's Stock Purchase Account shall be used to purchase from the Company on such Participant's behalf the largest number of whole shares of Common Stock which can be purchased at the price determined under Section 3.3 with the amount then credited to such Participant's Stock Purchase Account, subject to the limitations set forth in Article III on the maximum number of shares of Common Stock such Participant may purchase. As of such date, such Participant's Stock Purchase Account shall be charged with the aggregate purchase price of the shares of Common Stock purchased on such Participant's behalf. No brokerage or other fees are to be charged upon a purchase. Stock transfer taxes, if any, shall be paid by the Company. The remaining balance, if any, credited to such Participant's Stock Purchase Account shall be carried forward and used to purchase shares of Common Stock on the next succeeding Purchase Date; provided that any excess balance remaining in a Participant's Stock Purchase Account after the application of the limitations in Section 3.2 shall be refunded to the Participant.
- (b) **ISSUANCE OF COMMON STOCK.** The shares of Common Stock purchased for a Participant as of a Purchase Date shall be deemed to have been issued by the Company for all purposes as of the close of business on such date. Prior to such date, none of the rights and privileges of a stockholder of the Company shall exist with respect to such shares of Common Stock. As soon as practicable after such a Purchase Date the Company shall issue and deliver, or shall cause its stock transfer agent to issue and deliver, a certificate for the number of shares of Common Stock purchased for a Participant, which certificate shall be issued in the Participant's name or, if so specified by the Participant, in the name of the Participant and such other person as the Participant shall designate as joint tenants with right of survivorship. In lieu of issuing a certificate, the Company may elect to deliver to the Participant a statement which shall indicate the number of shares of Common Stock purchased for such Participant and the aggregate number of shares of Common Stock held on behalf of such Participant under the Plan.
- (c) **INSUFFICIENT COMMON STOCK AVAILABLE.** If, as of any Purchase Date, the aggregate Stock Purchase Accounts available for the purchase of shares of Common Stock pursuant to Section 5.2(a) would purchase a number of shares of Common Stock in excess of the number of shares of Common Stock then available for purchase under the Plan, (i) the number of shares of Common Stock which would otherwise be purchased for each Participant on such date shall be reduced proportionately to the extent necessary to eliminate such excess, (ii) the remaining balance to the credit of each Participant in each such Participant's Stock Purchase Accounts shall be distributed to each such Participant, and (iii) the Plan shall terminate automatically upon the distribution of the remaining balance in such Stock Purchase Accounts.

SECTION 5.3. **WITHDRAWAL FROM PLAN PRIOR TO PURCHASE OF COMMON STOCK.** In the event (i) a Participant elects in writing for any reason to withdraw from the Plan during an Offering Period or (ii) a Participant's employment with the Company terminates for any reason prior to the end of an Offering Period, then the entire amount remaining to the credit of such Participant in such Participant's Stock Purchase Account shall be distributed to such Participant (or, if such Participant is deceased, to such Participant's Beneficiary) as soon as administratively practicable after such withdrawal or termination of employment (as the case may be).

**ARTICLE VI
COMMITTEE**

SECTION 6.1. **POWERS OF THE COMMITTEE.** The Committee shall administer the Plan. The Committee shall have all powers necessary to enable it to carry out its duties under the Plan properly. Not in limitation of the foregoing, the Committee shall have the power to construe and interpret the Plan and to determine all questions that shall arise thereunder. The decision of the Committee upon all matters within the scope of its authority shall be final and conclusive on all persons, except to the extent otherwise provided by law.

SECTION 6.2. **INDEMNIFICATION OF THE COMMITTEE.** The Company agrees to indemnify and hold harmless the members of the Committee against any liabilities, loss, costs, or damage that they may incur in acting as such members and to assume the defense of any and allocations, suits, or proceedings against the members of the Committee, to the extent permitted by applicable law.

**ARTICLE VII
AMENDMENT AND TERMINATION**

SECTION 7.1. **AMENDMENT OF THE PLAN.** The Company expressly reserves the right, at any time and from time to time, to amend in whole or in part any of the terms and provisions of the Plan; provided, however, no amendment may without the approval of the shareholders of the Company increase the number of shares of Common Stock reserved under the Plan.

SECTION 7.2. **TERMINATION OF PLAN.** The Company expressly reserves the right, at any time and for whatever reason it may deem appropriate, to terminate the Plan. The Plan shall continue in effect until terminated pursuant to (i) the preceding sentence or (ii) Section 5.2(c). Upon any termination of the Plan, the entire amount credited to the Stock Purchase Account of each Participant shall be distributed to each such Participant.

SECTION 7.3. **PROCEDURE FOR AMENDMENT OR TERMINATION.** Any amendment to the Plan or termination of the Plan may be retroactive to the extent not prohibited by applicable law. Any amendment to the Plan or termination of the Plan shall be made by the Company by resolution of the Board of Directors (subject to Section 7.1) and shall not require the approval or consent of any Participant or Beneficiary in order to be effective.

**ARTICLE VIII
MISCELLANEOUS**

SECTION 8.1. **ADOPTION BY A SUBSIDIARY.** A Subsidiary may, with the approval of the Board of Directors and the board of directors of such Subsidiary, elect to adopt the Plan as of a date mutually agreeable to the Board of Directors and the board of directors of such Subsidiary. Any such adoption of the Plan by a Subsidiary shall be evidenced by an appropriate instrument of adoption executed by such Subsidiary.

SECTION 8.2. **AUTHORIZATION AND DELEGATION TO THE BOARD OF DIRECTORS.** Each Subsidiary that hereafter adopts the Plan authorizes the Board of Directors (i) to amend or terminate the Plan without further action by said Subsidiary as provided in Article VII and (ii) to perform such other acts and to do such other things as the Board of Directors is expressly directed, authorized, or permitted to perform or do as provided herein.

SECTION 8.3. **TRANSFERABILITY OF RIGHTS.** Rights under the Plan are not transferable by a Participant other than by will or the laws of descent and distribution and are exercisable during a Participant's lifetime only by the Participant.

SECTION 8.4. NO EMPLOYMENT RIGHTS. Participation in the Plan shall not give any employee of the Company or any Subsidiary any right to remain employed or, upon termination of employment, any right or interest in the Plan, except as expressly provided herein.

SECTION 8.5. COMPLIANCE WITH LAW. No shares of Common Stock shall be issued under the Plan prior to compliance by the Company to the satisfaction of its counsel with any applicable laws.

SECTION 8.6. CONSTRUCTION. Article, Section, and paragraph headings have been inserted in the Plan for convenience of reference only and are to be ignored in any construction of the provisions hereof. If any provision of the Plan shall be invalid or unenforceable, the remaining provisions shall nevertheless be valid, enforceable, and fully effective. It is the intent that the Plan shall at all times constitute an "employee stock purchase plan" within the meaning of Section 423(b) of the Code, and the Plan shall be construed, and interpreted to remain such. The Plan shall be construed, administered, regulated, and governed by the laws of the United States to the extent applicable, and to the extent such laws are not applicable, by the laws of The Commonwealth of Massachusetts. Without limiting the foregoing, all Participants for an Offering Period shall have the same rights and privileges with respect to their rights to acquire Common Stock under the Plan for such period, subject to the express terms hereof.

QuickLinks

[Exhibit 10.1](#)

[VERTEX PHARMACEUTICALS INCORPORATED EMPLOYEE STOCK PURCHASE PLAN \(as amended and restated\)](#)

[ARTICLE 1 PURPOSE AND DEFINITIONS](#)

[ARTICLE II PARTICIPATION](#)

[ARTICLE III OFFERING OF COMMON STOCK](#)

[ARTICLE IV PAYROLL DEDUCTIONS](#)

[ARTICLE V STOCK PURCHASE ACCOUNTS AND PURCHASE OF COMMON STOCK](#)

[ARTICLE VI COMMITTEE](#)

[ARTICLE VII AMENDMENT AND TERMINATION](#)

[ARTICLE VIII MISCELLANEOUS](#)

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 Employee Stock Purchase Plan of Vertex Pharmaceuticals Incorporated, of our reports dated February 11, 2008, with respect to the consolidated financial statements of Vertex Pharmaceuticals Incorporated and the effectiveness of internal control over financial reporting of Vertex Pharmaceuticals Incorporated included in its Annual Report (Form 10-K) for the year ended December 31, 2007, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts
May 12, 2008

QuickLinks

[Exhibit 23.1](#)