

PROSPECTUS SUPPLEMENT NO. 5 DATED JANUARY 17, 2001 TO THE
PROSPECTUS DATED AUGUST 1, 2000 OF

VERTEX PHARMACEUTICALS INCORPORATED

This Prospectus Supplement No. 5 amends the information in the table under the caption "Selling Holders" in the Prospectus dated August 1, 2000, as previously amended, by deleting the information contained in the table regarding the Selling Security Holders with respect to the principal amount of notes and common stock of Vertex Pharmaceuticals Incorporated and substituting therefor the following table:

NAME OF SECURITY HOLDER	NUMBER OF SHARES OF COMMON STOCK THAT MAY BE OFFERED(1)(2)
Fain & Company	84,821
Hare & Company	275,644
Societe Generale	24,801
UBS O'Connor LLC	37,202 (3)
TOTAL	422,468

(1) The number of securities beneficially owned is determined under the rules of the SEC and the information is not necessarily indicative of beneficial ownership for any other purpose. Under those rules, beneficial ownership includes any securities as to which the individual has sole or shared voting power or investment power and also any securities which the individual has the right to acquire within 60 days through the exercise of any stock option or other right. The inclusion in the table of securities, however, does not constitute an admission that the selling holders are direct or indirect beneficial owners of those securities. The selling holders have sole voting power and investment power with respect to all securities or capital stock listed as owned by the selling holders.

(2) Represents shares of common stock issued upon conversion of our 5% Convertible Subordinated Notes due March 2007. All of our 5% Convertible Subordinated Notes due March 2007 were converted into common stock on or before October 4, 2000.

(3) As of December 16, 2000, UBS O'Connor LLC was also the beneficial owner of 188,548 additional shares of our common stock and \$2,500,000 principal amount of our 5% Convertible Subordinated Notes due September 2007 that are not offered under this Prospectus.

This Prospectus Supplement No. 5 should be read in conjunction with the Prospectus dated August 1, 2000.