

CORTEX PHARMACEUTICALS INC/DE/  
Form 424B3  
May 22, 2007

Filed Pursuant to Rule 424(b)(3)

Registration No. 333-122026

**PROSPECTUS SUPPLEMENT NO. 2**  
(To Prospectus Dated January 26, 2005)

**CORTEX PHARMACEUTICALS, INC.**

**6,562,288 Shares of Common Stock**

**(\$0.001 par value)**

This prospectus supplement supplements information contained in that certain prospectus dated January 26, 2005 of Cortex Pharmaceuticals, Inc. (the "Company"), relating to the offer and sale from time to time of up to 4,233,333 shares of the Company's outstanding common stock, and up to 2,328,955 shares of the Company's common stock issuable upon exercise of warrants, which are held by certain stockholders and warrant holders named in the prospectus under the section entitled "Selling Stockholders." This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the prospectus, including any amendments or supplements thereto.

The following amends and supplements the information set forth on the prospectus under the caption "Selling Stockholders" with respect to the selling stockholders named below and the respective shares of common stock beneficially owned by such selling stockholders that may be offered pursuant to the prospectus:

Name	Common Stock Owned Prior to the Offering	Common Stock Being Offered Pursuant to this Prospectus	Common Stock Owned Upon Completion of this Offering	Percentage of Common Stock Owned Upon Completion of this Offering
Silverback Life Sciences Master Fund Ltd <sup>(13)</sup>	451,114	451,114	0	0
SRG Capital LLC <sup>(17)(28)</sup>	100,000	100,000	0	0
Hudson Bay Fund, LP <sup>(28)(31)</sup>	216,035	50,000	166,035	*
Elliot G. Bossen <sup>(30)</sup>	225,557	225,557	0	0

(13) Elliot Bossen, whose business address is 1414 Raleigh Road, Suite 250, Chapel Hill, NC 27517-8834, is Chief Investment Officer of Silverback Life Sciences Master Fund Ltd and has voting and dispositive control over the securities held by such Fund. As of the date of this prospectus supplement no. 2 to the prospectus dated January 26, 2005, Silverback Life Sciences Master Fund Ltd no longer owns any shares of the Company's common stock subject to such prospectus.

(17) As of the date of this prospectus supplement no. 2 to the prospectus dated January 26, 2005, SRG Capital LLC no longer owns any shares of the Company's common stock subject to such prospectus.

(28) The selling stockholder is an affiliate of a broker dealer and purchased the securities in the ordinary course of business. At the time this selling stockholder purchased the securities, it had no agreements or understandings, directly or indirectly, with any person to distribute the securities.

- (30) Consists of 225,557 shares subject to warrants held prior to the offering that are currently exercisable, all of which are being offered pursuant to this prospectus. Silverback Life Sciences Master Fund Ltd assigned the foregoing warrants to Elliot G. Bossen in November 2006.
- (31) Consists of 216,035 shares subject to warrants held prior to this offering that are currently exercisable, of which 50,000 shares subject to warrants are being offered pursuant to this prospectus. Sander Gerber, Yoav Roth and John Doscas share voting and investment power over these securities. Each of Sander Gerber, Yoav Roth and John Doscas disclaims beneficial ownership of these securities. SRG Capital LLC assigned warrants to purchase up to 50,000 shares subject to this prospectus to Hudson Bay Fund, LP in May 2007. Percentage ownership upon completion of this offering is based on 40,012,448 shares of common stock outstanding as of March 22, 2007.

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All information in this prospectus supplement is as of May 22, 2007.

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**The date of this prospectus supplement is May 22, 2007.**