

CORTEX PHARMACEUTICALS INC/DE/  
Form 424B3

September 18, 2008

PROSPECTUS SUPPLEMENT NO. 8

Filed Pursuant to Rule 424(b)(3)

(To Prospectus Dated March 18, 2004)

Registration No. 333-112043

# CORTEX PHARMACEUTICALS, INC.

## 11,743,710 Shares of Common Stock

(\$0.001 par value)

This prospectus supplement supplements information contained in that certain prospectus dated March 18, 2004 of Cortex Pharmaceuticals, Inc. (the Company), relating to the offer and sale from time to time of up to 6,909,091 shares of the Company's outstanding common stock, and up to 4,834,619 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 in 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
Omicron Master Trust <sup>(21)</sup>	200,000	200,000	0	0
RHP Master Fund, Ltd. <sup>(25)</sup>	150,000	150,000	0	0
Warrant Strategies Fund, LLC <sup>(57)</sup>	538,090	147,911	390,179	*

(21) As of the date of this prospectus supplement no. 8 to the prospectus dated March 18, 2004, Omicron Master Trust no longer owns any shares of the Company's common stock subject to such prospectus.

(25) As of the date of this prospectus supplement no. 8 to the prospectus dated March 18, 2004, RHP Master Fund, Ltd. no longer owns any shares of the Company's common stock subject to such prospectus.

(57) Consists of 538,090 shares subject to warrants held prior to the offering that are currently exercisable, of which 147,911 shares subject to warrants are being offered pursuant to this prospectus. As of the date of prospectus supplement no. 8 to the prospectus dated March 18, 2004, Mr. Sean Molloy, as a portfolio manager of Warrant Strategies Fund, LLC, and whose business address is 350 Madison Avenue, 11<sup>th</sup> Floor, New York, New York 10017, exercises voting and dispositive power over the shares of common stock beneficially owned by Warrant Strategies Fund, LLC, which is a Delaware limited liability company. Mr. Molloy disclaims beneficial ownership of such shares of the Company's common stock. Omicron Master Trust assigned warrants to purchase up to 88,820 shares subject to this prospectus to Warrant Strategies Fund, LLC in June 2008 and RHP Master Fund, Ltd. assigned warrants to purchase up to 59,091 shares subject to this prospectus to Warrant Strategies Fund, LLC in September 2008.

All information in this prospectus supplement is as of September 18, 2008.

**The date of this prospectus supplement is September 18, 2008.**