

CORTEX PHARMACEUTICALS INC/DE/  
 Form 424B3  
 August 02, 2007

Filed Pursuant to Rule 424(b)(3)  
 Registration No. 333-108948

**PROSPECTUS SUPPLEMENT NO. 5**

(To Prospectus Dated March 2, 2004)

**CORTEX PHARMACEUTICALS, INC.**

**5,164,366 Shares of Common Stock**

**(\$0.001 par value)**

This prospectus supplement supplements information contained in that certain prospectus dated March 2, 2004 of Cortex Pharmaceuticals, Inc. (the Company), relating to the offer and sale from time to time of up to 1,664,968 shares of the Company's outstanding common stock, and up to 3,499,398 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 the Selling Stockholders section set forth in the prospectus:

The table setting forth the names of the selling stockholders shall be amended to change the name Basso Equity Opportunity Holding Fund Ltd. to Basso Private Opportunities Holding Fund Ltd. The entry for Basso Equity Opportunity Holding Fund Ltd. shall be amended as follows:

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
Basso Private Opportunities Holding Fund Ltd. <sup>(1)</sup>	133,334	133,334	53,500	*

(1) The last two columns in the foregoing table consist of 53,500 shares subject to warrants that are currently exercisable and are not being offered pursuant to this prospectus. Basso Private Opportunities Holding Fund Ltd. was formerly known as Basso Equity Opportunity Holding Fund Ltd. Basso Capital Management, L.P. ( Basso ) is the Investment Manager to Basso Private Opportunities Holding Fund Ltd. Howard I. Fischer is a managing member of Basso GP, LLC, the General Partner of Basso.

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 All information in this prospectus supplement is as of August 2, 2007.

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**The date of this prospectus supplement is August 2, 2007.**