

CORTEX PHARMACEUTICALS INC/DE/

Form 424B3

December 20, 2005

PROSPECTUS SUPPLEMENT NO. 2

(To Prospectus Dated March 18, 2004)

Filed Pursuant to Rule 424(b)(3)

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 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 of CC LifeScience, Ltd. to D3 LifeScience Ltd. The entry for CC LifeScience, 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 |
|---|---|---|---|---|
| D3 LifeScience Ltd. ⁽¹¹⁾⁽⁴⁵⁾ | 480,000 | 480,000 | 0 | 0 |

(11) Includes 189,091 share subject to warrants held prior to the offering that are currently exercisable and are being offered pursuant to this prospectus. As investment manager under a management agreement, D3 Capital Management, LLC may exercise dispositive and voting power with respect to the shares owned by D3 LifeScience Ltd. D3 Capital Management, LLC disclaims beneficial ownership of such shares. Nathan Fischel and Fariba Ghodsian are the managing members of D3 Capital Management, LLC. Mr. Fischel and Ms. Ghodsian disclaim beneficial ownership of the shares owned by D3 LifeScience Ltd.

All information in this prospectus supplement is as of December 20, 2005.

The date of this prospectus supplement is December 20, 2005.