

CORTEX PHARMACEUTICALS INC/DE/

Form 424B3

February 28, 2006

PROSPECTUS SUPPLEMENT NO. 3

(To Prospectus Dated March 2, 2004)

Filed Pursuant to Rule 424(b)(3)

Registration No. 333-108948

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 table 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 |
|---------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Orion Biomedical Fund, LP ⁽⁸⁾ | 410,750 | 410,750 | 0 | 0 |
| Orion Biomedical Offshore Fund, LP ⁽⁹⁾ | 89,250 | 89,250 | 0 | 0 |
| Xmark Opportunity Fund, L.P. ⁽³¹⁾ | 412,990 | 125,000 | 287,990 | * |
| Xmark Opportunity Fund, Ltd. ⁽³²⁾ | 452,310 | 125,000 | 327,310 | * |
| Xmark JV Investment Partners, LLC ⁽³³⁾ | 368,182 | 250,000 | 118,182 | * |

- (8) Consists of 410,750 shares that are being offered pursuant to this prospectus. Orion Biomedical GP, LLC is a General Partner of Orion Biomedical Fund, LP. Lindsay A. Rosenwald, M.D. is a Managing Member of Orion Biomedical GP, LLC, and as such, Dr. Rosenwald possesses the power to vote and direct the disposition of the securities held by Orion Biomedical Fund, LP.
- (9) Consists of 89,250 shares that are being offered pursuant to this prospectus. Orion Biomedical GP, LLC is a General Partner of Orion Biomedical Offshore Fund, LP. Lindsay A. Rosenwald, M.D. is a Managing Member of Orion Biomedical GP, LLC, and as such, Dr. Rosenwald possesses the power to vote and direct the disposition of the securities held by Orion Biomedical Offshore Fund, LP.
- (31) Includes 200,000 shares subject to warrants held prior to the offering that are currently exercisable, of which 125,000 shares subject to warrants are being offered pursuant to this prospectus. Mitchell D. Kaye,

whose business address is c/o Xmark Funds, 301 Tresser Blvd., Suite 1320, Stamford, CT 06901, is the Chief Investment Officer of Xmark Opportunity Fund, L.P., and as such, Mr. Kaye possesses the power to vote and direct the disposition of the securities held by Xmark Opportunity Fund, L.P. Orion Biomedical Fund, LP and Orion Biomedical Offshore Fund, LP assigned the foregoing warrants to Xmark Opportunity Fund, L.P. in February 2006. Percentage ownership upon completion of this Offering is based on 33,128,293 shares of Common Stock outstanding as of February 15, 2006.

- (32) Includes 200,000 shares subject to warrants held prior to the offering that are currently exercisable, of which 125,000 shares subject to warrants are being offered pursuant to this prospectus. Mitchell D. Kaye, whose business address is c/o Xmark Funds, 301 Tresser Blvd., Suite 1320, Stamford, CT 06901, is the Chief Investment Officer of Xmark Opportunity Fund, Ltd., and as such, Mr. Kaye possesses the power to vote and direct the disposition of the securities held by Xmark Opportunity Fund, Ltd. Orion Biomedical Fund, LP and Orion Biomedical Offshore Fund, LP assigned the foregoing warrants to Xmark Opportunity Fund, Ltd. in February 2006. Percentage ownership upon completion of this Offering is based on 33,128,293 shares of Common Stock outstanding as of February 15, 2006.
- (33) Consists of 368,182 shares subject to warrants held prior to the offering that are currently exercisable, of which 250,000 shares subject to warrants are being offered pursuant to this prospectus. Mitchell D. Kaye, whose business address is c/o Xmark Funds, 301 Tresser Blvd., Suite 1320, Stamford, CT 06901, is the Chief Investment Officer of Xmark JV Investment Partners, LLC, and as such, Mr. Kaye possesses the power to vote and direct the disposition of the securities held by Xmark JV Investment Partners, LLC. Orion Biomedical Fund, LP and Orion Biomedical Offshore Fund, LP assigned the foregoing warrants to Xmark JV Investment Partners, LLC in February 2006. Percentage ownership upon completion of this Offering is based on 33,128,293 shares of Common Stock outstanding as of February 15, 2006.

All information in this prospectus supplement is as of February 28, 2006.

The date of this prospectus supplement is February 28, 2006.