January 19, 2007

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

Current Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported):

January 16, 2007

CORTEX PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of

1-16467 (Commission File Number) 33-0303583 (I.R.S Employer Identification No.)

incorporation)

15241 Barranca Parkway

Irvine, California (Address of principal executive offices)

92618 (Zip Code)

Registrant s telephone number, including area code: (949) 727-3157

N/A

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- " Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- " Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- " Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 1.01 Entry into a Material Definitive Agreement.

On January 16, 2007, Cortex Pharmaceuticals, Inc. (the <u>Company</u>) entered into a placement agency agreement with Roth Capital Partners, LLC (<u>Roth Capital</u>), pursuant to which Roth Capital agreed to act as the Company s exclusive placement agent and to use its best efforts to arrange for the sale of 5,021,427 shares of the Company s common stock and warrants to purchase an additional 3,263,927 shares of common stock in a registered direct public offering. Assuming the sale of all of the shares of common stock and warrants in the offering, at the closing of the offering the Company will pay Roth Capital a fee equal to approximately \$393,680 (7.0% of the gross proceeds from the sale of the securities) and reimburse Roth Capital s expenses up to \$35,000.

On January 16, 2007, the Company and certain investors entered into individual subscription agreements, pursuant to which the Company agreed to sell an aggregate of 5,021,427 shares of its common stock and warrants to purchase an additional 3,263,927 shares of common stock to such investors. The purchase price per share of common stock and warrant to purchase 0.65 shares of common stock is \$1.12. The warrants to purchase common stock have an exercise price of \$1.66 per share and will be exercisable in accordance with their terms at any time on or after July 22, 2007 and on or before the close of the Company s business on January 21, 2012. The net proceeds to the Company from the registered direct public offering, after deducting placement agent fees and its estimated offering expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in the offering, are expected to be approximately \$5,084,000. The transaction is expected to close on January 22, 2007, subject to satisfaction of customary closing conditions.

The common stock and warrants to purchase common stock will be issued pursuant to a prospectus supplement filed with the Securities and Exchange Commission on January 18, 2007, in connection with a takedown from the Company s shelf registration statement on Form S-3 (File No. 333-138844), which became effective on November 30, 2006. A copy of the opinion of Stradling Yocca Carlson & Rauth relating to the legality of the issuance and sale of the shares of common stock and warrants in the offering is attached as Exhibit 5.1 hereto.

The foregoing summaries of the terms of the placement agency agreement, the subscription agreements and the warrants are subject to, and qualified in their entirety by, such documents attached hereto as Exhibits 1.1, 1.2 and 4.1, respectively, and are incorporated herein by reference. A copy of the press release announcing the registered direct public offering is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit

Number 1.1	Description Placement Agency Agreement, dated January 16, 2007, by and between Cortex Pharmaceuticals, Inc. and Roth Capital Partners, LLC.
1.2	Form of Subscription Agreement, dated January 16, 2007, entered into between Cortex Pharmaceuticals, Inc. and each investor in the offering.
4.1	Form of Common Stock Purchase Warrant to be issued by Cortex Pharmaceuticals, Inc. to the investors in the offering.
5.1	Opinion of Stradling Yocca Carlson & Rauth.
23.1	Consent of Stradling Yocca Carlson & Rauth (included in Exhibit 5.1).
99.1	Press Release, dated January 17, 2007.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

CORTEX PHARMACEUTICALS, INC.

Date: January 19, 2007 /s/ Maria S. Messinger Maria S. Messinger

Vice President, Chief Financial Officer and Corporate Secretary

EXHIBIT INDEX

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