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): September 5, 2008

Idera Pharmaceuticals, Inc.

(Exact name of Registrant as Specified in its Charter)

001-31918

Delaware (State or Other Jurisdiction of Incorporation)

(Commission File Number)

04-3072298 (IRS Employer Identification No.)

167 Sidney Street, Cambridge, Massachusetts

(Address of Principal Executive Offices)

Zip Code)

02139

Registrant's telephone number, including area code: (617) 679-5500

(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 (see General Instruction A.2. below):

□ 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))

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Item 3.02 Unregistered Sale of Equity Securities SIGNATURE

Item 3.02 Unregistered Sale of Equity Securities.

On September 5, 2008, Idera Pharmaceuticals, Inc. ("Idera") issued 70,684 shares of its common stock upon the exercise of common stock purchase warrants for an exercise price of \$7.12 per share. As a result of the warrant exercise on September 5, 2008, Idera has issued in unregistered sales more than 1% of its outstanding shares of common stock since August 1, 2008, the date Idera filed its quarterly report on Form 10-Q for the quarter ended June 30, 2008 with the Securities and Exchange Commission.

Including the issuance of the 70,684 shares referred to above and an additional 53,397 shares issued on September 8, 2008 and September 10, 2008, since August 1, 2008, Idera has issued a total of 339,141 shares of its common stock in unregistered sales of its equity securities, all of which were issued upon the exercise of common stock purchase warrants. Idera issued the 339,141 shares of common stock as follows:

Cash Exercises:

- 125,000 shares were issued upon payment of a warrant exercise price of \$5.20 per share;
- 70,684 shares were issued upon payment of a warrant exercise price of \$7.12 per share;
- 7,976 shares were issued upon payment of a warrant exercise price of \$5.84 per share; and
- 76,792 shares were issued upon the payment of a warrant exercise price of \$8.00 per share.

Cashless Exercises:

- 16,110 shares were issued pursuant to the cashless exercise provisions of the warrants through the surrender of the right to purchase 10,813 shares at \$5.84 per share; and
- 42,579 shares were issued pursuant to the cashless exercise provisions of the warrants through the surrender of the right to purchase 52,342 shares at \$8.00 per share.

Idera received approximately \$1.8 million of aggregate cash proceeds from these exercises of the warrants.

The issuances of shares of Idera's common stock upon exercise of warrants as described above were exempt from registration under the Securities Act of 1933 pursuant to an exemption from registration under Section 4(2) of the Securities Act of 1933, as amended, Rule 506 of Regulation D promulgated thereunder, and/or Regulation S promulgated thereunder as not involving a public offering. The shares of common stock issued by Idera upon these warrant exercises have been registered for resale by the holders under Idera's Registration Statements on Form S-3, File Nos. 333-109630, 333-126634 and 333-133455.

SIGNATURE

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

IDERA PHARMACEUTICALS, INC.

Date: September 11, 2008

By: /s/ Sudhir Agrawal Sudhir Agrawal Chief Executive Officer