
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-A/A
(Amendment No. 2)

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) OR 12(g) OF THE
SECURITIES EXCHANGE ACT OF 1934

Idera Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State of Incorporation or Organization)

04-3072298

(I.R.S. Employer Identification No.)

**167 Sidney Street
Cambridge, Massachusetts**

(Address of Principal Executive Offices)

02139

(Zip Code)

Securities to be registered pursuant to Section 12(b) of the Act:

Title of each class
to be so registered

**Common Stock (and associated Series C Junior
Participating Preferred purchase rights),
\$0.001 par value per share**

Name of each exchange on which
each class is to be registered

The NASDAQ Stock Market LLC

If this form relates to the registration of a class of securities pursuant to
Section 12(b) of the Exchange Act and is effective pursuant to General
Instruction A.(c), please check the following box.

If this form relates to the registration of a class of securities pursuant to
Section 12(g) of the Exchange Act and is effective pursuant to General
Instruction A.(d), check the following box.

Securities Act registration statement file number to which this form relates: **N/A** (if applicable)

Securities to be registered pursuant to Section 12(g) of the Act: **None**

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INFORMATION REQUIRED IN REGISTRATION STATEMENT

This Amendment No. 2 on Form 8-A/A amends the Form 8-A (File No. 001-31918) filed by the registrant with the Securities and Exchange Commission on December 4, 2003. The Company is filing this amendment in connection with the transfer of the listing of its Common Stock from the American Stock Exchange to the NASDAQ Stock Market LLC, which is expected to become effective on December 10, 2007.

Item 1. Description of Registrant's Securities to be Registered.

The description of the common stock, par value \$0.001 per share and preferred stock, par value \$.01 per share of Idera Pharmaceuticals, Inc. (the "Registrant") contained in its Registration Statement on Form 8-A (File No. 001-31918) filed with the Securities and Exchange Commission on December 4, 2003, pursuant to Section 12 of the Exchange Act, including any subsequently filed amendments and reports updating such description, is incorporated by reference into this registration statement.

Item 2. Exhibits.

In accordance with the "Instructions as to Exhibits" section of Form 8-A, no exhibits are required to be filed because no other securities of the Registrant are registered on The Nasdaq Stock Market LLC, and the securities registered hereby are not to be registered pursuant to Section 12(g) of the Securities Exchange Act of 1934.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant has duly caused this Amendment No. 2 to the Registration Statement on Form 8-A to be signed on its behalf by the undersigned, thereto duly authorized.

IDERA PHARMACEUTICALS, INC.

Date: December 7, 2007

By: /s/ Sudhir Agrawal
Sudhir Agrawal, D. Phil.
Chief Executive Officer and
Chief Scientific Officer