

IDERA PHARMACEUTICALS, INC.

Form S-8

September 29, 2006

As filed with the Securities and Exchange Commission on September 29, 2006

Registration No. 333-_____

**SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM S-8
REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933
Idera Pharmaceuticals, Inc.
(Exact Name of Registrant as Specified in Its Charter)**

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

04-3072298
(I.R.S. Employer
Identification No.)

345 Vassar Street
Cambridge, Massachusetts
(Address of Principal Executive Offices)

02139
(Zip Code)

1995 Employee Stock Purchase Plan
(Full Title of the Plan)

Sudhir Agrawal, D. Phil.
Chief Executive Officer

Idera Pharmaceuticals, Inc.
345 Vassar Street

Cambridge, Massachusetts 02139
(Name and Address of Agent For Service)

(617) 679-5500
(Telephone Number, Including Area Code, of Agent For Service)

CALCULATION OF REGISTRATION FEE

| Title of Securities to be Registered | Amount to be Registered(1) | Proposed Maximum Offering Price Per Share | Proposed Maximum Aggregate Offering Price | Amount of Registration Fee |
|--|----------------------------------|---|--|----------------------------------|
| Common Stock, \$0.001 par value per share (including the associated Preferred Stock Purchase Rights) | 62,500 shares | \$3.43(2) | \$214,375(2) | \$22.94 |

(1) In accordance with Rule 416 under the Securities Act of 1933, as amended, this registration statement shall

be deemed to cover any additional securities that may from time to time be offered or issued to prevent dilution resulting from stock splits, stock dividends or similar transactions.

- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act of 1933, as amended, and based upon the average of the high and low prices of the Registrant's common stock as reported on the American Stock Exchange on September 26, 2006.

STATEMENT OF INCORPORATION BY REFERENCE

This Registration Statement on Form S-8 is filed to register the offer and sale of an additional 62,500 shares of the Registrant's common stock, \$0.001 par value per share, to be issued under the Registrant's 1995 Employee Stock Purchase Plan. This Registration Statement incorporates by reference the contents of the registration statements on form S-8, File Nos. 333-03896 and 333-116011, filed by the Registrant on April 23, 1996 and May 28, 2004, relating to the Registrant's 1995 Employee Stock Purchase Plan.

Item 5. Interests of Named Experts and Counsel.

Wilmer Cutler Pickering Hale and Dorr LLP has opined as to the legality of the securities being offered by this registration statement.

Item 8. Exhibits.

The Exhibit Index immediately preceding the exhibits is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Cambridge, Massachusetts, on September 21, 2006.

Idera Pharmaceuticals, Inc.

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

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Idera Pharmaceuticals, Inc., hereby severally constitute and appoint Robert G. Andersen and Sudhir Agrawal, and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities indicated below, the registration statement on Form S-8 filed herewith and any and all subsequent amendments to said registration statement, and generally to do all such things in our names and on our behalf in our capacities as officers and directors to enable Idera Pharmaceuticals, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said registration statement and any and all amendments thereto.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

| <u>Signature</u> | <u>Title</u> | <u>Date</u> |
|--|---|--------------------|
| /s/ James B. Wyngaarden James B. Wyngaarden, M.D. | Chairman of the Board of Directors | September 21, 2006 |
| /s/ Sudhir Agrawal Sudhir Agrawal, D. Phil. | Chief Executive Officer, Chief Scientific Officer and Director (Principal Executive Officer) | September 21, 2006 |
| /s/ Robert W. Karr Robert W. Karr, M.D. | President and Director | September 21, 2006 |
| /s/ Robert G. Andersen Robert G. Andersen | Chief Financial Officer, Vice President of Operations, Treasurer and Secretary (Principal Financial and Accounting Officer) | September 21, 2006 |
| /s/ Youssef El-Zein Youssef El-Zein | Director | September 21, 2006 |

| <u>Signature</u> | <u>Title</u> | <u>Date</u> |
|-----------------------------|--------------|--------------------|
| /s/ C. Keith Hartley | Director | September 21, 2006 |
| C. Keith Hartley | | |
| /s/ William S. Reardon | Director | September 21, 2006 |
| William S. Reardon | | |
| /s/ Alison Taunton-Rigby | Director | September 21, 2006 |
| Alison Taunton-Rigby, Ph.D. | | |

INDEX TO EXHIBITS

| <u>EXHIBIT NUMBER</u> | <u>DESCRIPTION</u> |
|---------------------------|--|
| 4.1 (1) | Restated Certificate of Incorporation of the Registrant, as amended. |
| 4.2 (2) | Amended and Restated By-laws of the Registrant. |
| 4.3 (3) | Rights Agreement dated December 10, 2001 between the Registrant and Mellon Investor Services LLC, as rights agent. |
| 4.4 (4) | Amendment No. 1 to Rights Agreement dated as of August 27, 2003 between the Registrant and Mellon Investor Services LLC. |
| 4.5 (5) | Amendment No. 2 to Rights Agreement dated as of March 24, 2006 between the Registrant and Mellon Investor Services LLC. |
| 5.1 | Opinion of Wilmer Cutler Pickering Hale and Dorr LLP. |
| 23.1 | Consent of Ernst & Young LLP. |
| 23.2 | Consent of Wilmer Cutler Pickering Hale and Dorr LLP, included in Exhibit 5.1 filed herewith. |
| 24.1 | Power of Attorney (See signature page of this Registration Statement). |
| (1) | Previously filed with the Securities and Exchange Commission as an Exhibit to the Registrant's Quarterly Report on Form 10-Q, for the quarter ended June 30, 2006 (File No. 001-31918) and incorporated herein by reference. |
| (2) | Previously filed with the Securities and Exchange Commission as an Exhibit to the |

Registrant's
Registration
Statement on
Form S-1, dated
November 6,
1995, as amended
(File No.
33-99024) and
incorporated
herein by
reference.

(3) Previously filed
with the
Securities and
Exchange
Commission as
an Exhibit to the
Registrant's
Registration
Statement on
Form S-2, dated
October 10, 2003
(File
No. 333-109630)
and incorporated
herein by
reference.

(4) Previously filed
with the
Securities and
Exchange
Commission as
an Exhibit to the
Registrant's
Current Report
on Form 8-K,
dated August 29,
2003 (File
No. 000-27352)
and incorporated
herein by
reference.

(5) Previously filed
with the
Securities and
Exchange
Commission as
an Exhibit to the

Registrant's
Current Report
on Form 8-K,
dated March 29,
2006 (File
No. 001-31918)
and incorporated
herein by
reference.