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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

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**FORM 8-K**

**CURRENT REPORT  
PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

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Date of Report (Date of earliest event reported): December 8, 2006

**Idera Pharmaceuticals, Inc.**

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(Exact name of Registrant as Specified in its Charter)

Delaware (State or Other Jurisdiction of Incorporation)	001-31918 (Commission File Number)	04-3072298 (IRS Employer Identification No.)
345 Vassar Street, Cambridge, Massachusetts (Address of Principal Executive Offices)		02139 (Zip Code)

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

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(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 1.01. Entry Into a Material Definitive Agreement**

### *Exclusive License and Research Collaboration Agreement*

On December 8, 2006, Idera Pharmaceuticals, Inc. (“Idera”) entered into an Exclusive License and Research Collaboration Agreement (the “Collaboration Agreement”) with Merck & Co., Inc. (“Merck”) to research, develop and commercialize vaccine products containing Idera’s agonist compounds targeting toll-like receptors (“TLR”) 7, 8 and 9 in the fields of oncology, infectious diseases and Alzheimer’s disease (the “Licensed Fields”).

Under the terms of the agreement, Idera granted Merck worldwide exclusive rights to a number of Idera’s agonist compounds targeting TLR 7, 8 and 9 for use in combination with Merck’s therapeutic and prophylactic vaccines under development in the Licensed Fields. There is no limit to the number of vaccines to which Merck can apply Idera’s agonists within the Licensed Fields. In addition, Idera agreed that it would not develop or commercialize, either directly or through a third party, any agonist targeting TLR 7, 8 or 9 for use in connection with vaccine products in the Licensed Fields. Merck and Idera also agreed to engage in a two-year research and development collaboration to generate novel agonists targeting TLR 7 and TLR 8 and incorporating both Merck and Idera chemistry for use in the Licensed Fields, which collaboration may be extended by Merck for two additional one-year periods.

Under the terms of the agreement,

- Merck agreed to pay Idera a \$20 million upfront license fee;
- Merck purchased \$10 million of Idera’s common stock on the terms and subject to the conditions set forth in a stock purchase agreement between Idera and Merck, described below;
- Merck agreed to fund the research and development collaboration;
- Merck agreed to pay Idera milestone payments as follows:
  - up to \$165 million if vaccines containing Idera’s TLR9 agonist compounds are successfully developed and marketed in each of the oncology, infectious disease and Alzheimer’s disease fields;
  - up to \$260 million if vaccines containing Idera’s TLR9 agonist compounds are successfully developed and marketed for follow-on indications in the oncology field and if vaccines containing Idera’s TLR 7 and 8 agonists are successfully developed and marketed in each of the oncology, infectious disease and Alzheimer’s disease fields; and
  - if Merck develops and commercializes additional vaccines using Idera’s agonists, Idera would be entitled to receive additional milestone payments.
- Merck agreed to pay Idera royalties on net product sales of vaccines using Idera’s TLR agonist technology that are developed and marketed.

Under the agreement, Merck is obligated to pay Idera royalties, on a product-by-product and country-by-country basis, until the later of the expiration of the patent rights licensed to Merck and the expiration of regulatory-based exclusivity for the vaccine product. If the patent rights and regulatory-based exclusivity expire in a particular country before the 10<sup>th</sup> anniversary of the product’s first

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commercial sale in such country, Merck shall continue to pay Idera royalties at a reduced royalty rate until such anniversary, except that Merck's royalty obligation will terminate upon the achievement of a specified market share in such country by a competing vaccine containing an agonist targeting the same toll-like receptor as that targeted by the agonist in the Merck vaccine. In addition, the applicable royalties may be reduced if Merck is required to pay royalties to third parties for licenses to intellectual property rights, which royalties exceed a specified threshold. Merck's royalty and milestone obligations may also be reduced if Merck terminates the agreement based on specified uncured material breaches by Idera.

The agreement may be terminated by either party based upon specified uncured breaches by the other party or by Merck at any time after providing Idera with advance notice of termination.

During the research phase of the agreement, the parties' research activities are governed by a joint research committee, consisting of an equal number of representatives of Idera and Merck. Ultimate decision-making authority is vested in Merck as to most matters.

The Company believes, based on its current operating plan, that its existing cash, cash equivalents and short-term investments, including the \$30 million in upfront payments from Merck and the \$2.25 million that the Company expects to receive from the drawdown described below, will be sufficient to fund its operations for at least two years.

#### *Stock Purchase Agreement*

On December 8, 2006, in connection with the execution of the Collaboration Agreement, Idera entered into a Stock Purchase Agreement, dated December 8, 2006, with Merck. Pursuant to the purchase agreement, Idera issued and sold to Merck 1,818,182 shares of Idera's common stock for a price of \$5.50 per share resulting in an aggregate purchase price of \$10.0 million. Merck has agreed, subject to certain exceptions, that it will not sell any of the shares of Idera common stock acquired by it pursuant to the purchase agreement prior to Dec. 8, 2007 and that, during the balance of the research and collaboration term, its ability to sell such shares will be subject to specified volume limitations.

#### *Registration Rights Agreement*

In connection with the sale of its common stock to Merck pursuant to the purchase agreement, Idera entered into Registration Rights Agreement, dated December 8, 2006, with Merck. Pursuant to this registration rights agreement, Idera has agreed to file a registration statement with the Securities and Exchange Commission registering the resale of the shares of common stock issued and sold to Merck. Idera is required to use its commercially reasonable efforts to maintain the registration statement's effectiveness until all the shares of common stock sold pursuant to the Purchase Agreement may be sold under Rule 144(k) of the Securities Act of 1933, as amended (the "Securities Act"), or have been sold by Merck

### **Item 3.02. Unregistered Sales of Equities Securities**

#### *Merck Stock Issuance*

On December 8, 2006, Idera issued and sold to Merck 1,818,182 shares of Idera's common stock for a price of \$5.50 per share resulting in an aggregate purchase price of \$10.0 million. The shares of common stock offered and sold to Merck were offered and sold to an "accredited investor" without registration under the Securities Act or the securities laws of certain states, in reliance on the exemption provided by Section 4(2) of the Securities Act.

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### *\$2.25 Million Drawdown*

On March 24, 2006, the Company secured a commitment (the "Commitment") from Biotech Shares Ltd. ("Biotech Shares") to purchase from the Company up to a total of \$9.75 million of common stock. In connection with the Commitment, the Company entered into a Common Stock Purchase Agreement, dated March 24, 2006 and as amended on July 10, 2006, between the Company and Biotech Shares (the "Purchase Agreement"). Under the Purchase Agreement, Biotech Shares agreed to purchase the common stock during the period from June 24, 2006 through December 31, 2006 in up to three drawdowns made by the Company, at the Company's discretion. The Company has sold \$7.5 million of its common stock pursuant to the Purchase Agreement to date.

On December 12, 2006, the Company delivered to Biotech Shares a drawdown notice under the Purchase Agreement, pursuant to which the Company will sell Biotech Shares 439,453 shares of the Company's common stock at a price of \$5.12 per share of common stock for total proceeds of \$2.25 million. The sale of these shares is scheduled to occur on December 28, 2006. With this drawdown, the Company will have drawn down the full amount available under the Commitment and will have no further rights to draw down any additional amounts from Biotech Shares under the Commitment.

The Company expects to sell the common stock in reliance on the exemptions provided by Section 4(2) of the Securities Act and Regulation S promulgated under the Securities Act.

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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: December 13, 2006

By: /s/ Robert G. Andersen  
Robert G. Andersen  
Chief Financial Officer and  
Vice President of Operations