

Mail Stop 4720

September 28, 2009

Sudhir Agrawal, D. Phil.
Chief Executive Officer
Idera Pharmaceuticals, Inc.
167 Sidney Street
Cambridge, Massachusetts 02139

**Re: Idera Pharmaceuticals, Inc.
Form 10-K for the year ended 12/31/2008
Filed March 11, 2009
File No. 001-31918**

Dear Dr. Agrawal:

We have reviewed your filing and have the following comments. Where the comments request you to revise disclosure, the information you provide should show us what the revised disclosure will look like and identify the annual or quarterly filing, as applicable, in which you intend to first include it. If you do not believe that revised disclosure is necessary, explain the reason in your response. After reviewing the information provided, we may raise additional comments and/or request that you amend your filing.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comment or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Overview of Compensation Program and Philosophy, page 15

1. We note that in your draft disclosure for your 2010 proxy statement you state, "The individual performance goals of each named executive officer consist primarily of the key objectives and goals from our annual business plan that relate to the functional area or business unit for which the named executive officer is responsible." Please expand your draft disclosure here further to include each of the individual goals that were set for each named executive officer. While you may not consider any individual goals to be material, we consider these goals material to an understanding of the process by which bonuses are determined.

Exhibits

2. We note your response to comment 4. Please note that we will not be in a position to clear this comment until the exhibit has been filed.

* * *

Please respond to these comments within 10 business days or tell us when you will provide us with responses. Please furnish a letter that keys your response to our comments and provide the requested information. Detailed letters greatly facilitate our review. Please furnish your letter on EDGAR under the form type label CORRESP.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in your letter, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comment on your filing.

Please contact Michael Rosenthal at (202) 551-3674 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

Sudhir Agrawal, D. Phil.
Idera Pharmaceuticals, Inc.
September 28, 2009
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cc: Louis J. Arcudi, III
Rosemary G. Reilly
Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
Fax: 617-526-5000