

Stuart M. Falber

+1 617 526 6663(t)

+1 617 526 5000(f)

stuart.falber@wilmerhale.com

January 6, 2011

Via EDGAR

SECURITIES AND EXCHANGE COMMISSION
Division of Corporation Finance
100 F Street, N.E.
Washington, DC 20549
Attention: Michael Rosenthal, Esq.

Re: Idera Pharmaceuticals, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2009
Filed March 10, 2010
Proxy Statement on Schedule 14A
Filed April 29, 2010
File Number: 001-31918

Dear Mr. Rosenthal:

On behalf of our client, Idera Pharmaceuticals, Inc. (the "Company"), set forth below is the response of the Company to the comments of the staff (the "Staff") of the Securities Exchange Commission (the "Commission") set forth in the letter to Sudhir Agrawal, dated December 14, 2010, from Jeffrey P. Riedler, Assistant Director (the "Letter").

We have set forth below in italics the Staff's comments contained in the Letter. The responses are based on information provided to us by representatives of the Company.

Definitive Proxy Statement on Schedule 14A**Director Nomination Process, page 12**

- 1. We note your disclosure here that your, "nominating and corporate governance committee considers the value of diversity of the board of directors when evaluating particular candidates." Please provide draft disclosure for future filings which explains how the committee considers diversity in evaluating particular candidates.*

As noted in the disclosure in the Proxy Statement filed with the Commission on April 29, 2010 (the "2010 Proxy Statement"), the Company's corporate governance guidelines provide that the value of diversity will be considered when the nominating and corporate governance committee evaluates candidates for election to the board of directors. However, the Company does not have a formal or informal policy on diversity for members of its board of directors. In evaluating candidates for election to the board of directors, the nominating and corporate governance committee considers various criteria enumerated in the corporate governance guidelines and

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109

Beijing Berlin Boston Brussels Frankfurt London Los Angeles New York Oxford Palo Alto Waltham Washington

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disclosed in the 2010 Proxy Statement, including diversity, business acumen, knowledge of the Company's business and industry, and experience. The nominating and corporate governance committee does not assign any particular weight to diversity or any other characteristic in evaluating candidates for election to the board of directors.

The Company proposes the following clarifying disclosures in its future filings (blacklining reflects changes from the 2010 Proxy Statement):

In considering whether to recommend any particular candidate for inclusion in the board's slate of recommended director nominees, the nominating and corporate governance committee applies the criteria set forth in our corporate governance guidelines. These criteria include the candidate's:

- business acumen;
- knowledge of our business and industry;
- age;
- experience;
- diligence;
- conflicts of interest;
- ability to act in the interests of all stockholders; and
- in the case of the renomination of existing directors, the performance of the director on our board of directors and on any committee of which the director was a member.

~~Also, pursuant to~~ Our corporate governance guidelines also provide that candidates should not be discriminated against on the basis of race, religion, national origin, sex, sexual orientation, disability or any other basis proscribed by law and that our nominating and corporate governance committee should considers the value of diversity of the board of directors when evaluating particular candidates. The committee has not adopted any formal or informal diversity policy and treats diversity as one of the criteria to be considered by the committee. The committee does not assign specific weights ~~are not assigned~~ to particular criteria that the committee reviews and no particular criterion is a prerequisite for the consideration of any prospective nominee. We believe that the backgrounds and

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qualifications of our directors, considered as a group, should provide a composite and diverse mix of experience, knowledge and abilities that will allow the board of directors to fulfill its responsibilities.

Compensation Discussion and Analysis, page 18

2. *We note that you have not included any disclosure in response to Item 402(s) of Regulation S-K. Please advise us of the basis for your conclusion that disclosure is not necessary and describe the process you undertook to reach that conclusion.*

After evaluating the Company's compensation policies and practices, the Company's compensation committee determined that risks arising from its compensation policies and practices are not reasonably likely to have a material adverse effect on the Company. The Company notes that Securities Act Release 33-9089 states with respect to Item 402(s) that ". . . the final rule does not require a company to make an affirmative statement that it has determined that the risks arising from its compensation policies and practices are not reasonably likely to have a material adverse effect on the company." As such, the Company included no such disclosure in the 2010 Proxy Statement.

In assessing whether its compensation policies and practices created any risk issues, the Company considered the types of factors discussed in Item 402(s) of Regulation S-K. Specifically, the Company notes that it does not have a bonus plan based upon the achievement of financial performance metrics or earnings and that the bulk of the cash compensation paid to its employees, including to its executive officers, is salary and not performance-based compensation. While the Company sets goals for bonus determinations, these goals target the achievement of specific research, clinical and operational milestones, are intended to be challenging and reasonably achieved in the applicable year and not over a longer period of time, are company-wide goals and do not incentivize any group of employees of the Company differently than any other and are reviewed with the board of directors over the course of the year, such as the decision to commence or continue a clinical trial. Additionally, the Company's equity awards are typically stock options with time-based vesting and a ten-year term.

Elements of Compensation, page 20

3. *Please describe how the compensation committee determined each executive officer's cash bonus and equity grant based on corporate goals and performance criteria identified. Your discussion should describe the factors the committee considered in determining the bonus percentages and option awards.*

As discussed in the 2010 Proxy Statement, in determining each executive officer's cash bonus for 2009, the compensation committee considered the Company's performance against the 2009 corporate goals and determined that the Company had achieved these goals. On this basis, the compensation committee awarded the Company's chief executive officer a bonus equal to 100% of his 70% bonus target in his employment agreement. Because no target bonus levels had been

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established for other executive officers, the compensation committee determined to use bonus levels at approximately the same percentage of base salary as had been awarded in 2008, excluding hiring bonuses, and awarded bonuses at 100% of those levels. No formula was applied to the analysis of the achievement of corporate goals and the goals were not weighted. In addition, there were no other factors that were individually material to the determination of the bonus award for each named executive officer in 2009.

As noted in the 2010 Proxy Statement, following determination of 2009 bonuses, the compensation committee established bonus targets for 2010 after considering survey and peer group data presented by its compensation consultant, Radford, the roles of each officer, the recommendations of the chief executive officer, the terms of the chief executive officer's employment agreement and 2009 bonus amounts as a percentage of salary. As a result, in the proxy statement for the 2011 Annual Meeting of Stockholders, the Company will disclose that the compensation committee determined the level of achievement of the corporate goals and applied that level of achievement against the 2010 bonus targets to determine the bonus amounts for each executive officer.

In determining 2009 option awards, as described in the 2010 Proxy Statement, the compensation committee reviewed industry survey and peer group data provided by its compensation consultant, Radford, regarding annual option grants, and considered the performance of each executive officer during 2009, its determination that the Company had achieved the 2009 corporate goals and the recommendations of its chief executive officer. In addition, the compensation committee considered the need to address the fact that certain of its executive officers held options with exercise prices that were predominantly or wholly out-of-the-money and that certain of its executive officers held options that were predominantly vested. The 2010 Proxy Statement identified the affected named executive officers. The option awards were not determined formulaically and no other factors were individually material to the determination of the option awards for any named executive officer.

In its response to Staff comments to the Company's Compensation Discussion and Analysis in the Proxy Statement for the 2009 Annual Meeting of Stockholders, the Company agreed that it would disclose any factors that are individually material to the determination of the bonus award or equity grant to each named executive officer and that, if the Company used specific targeted percentiles to set overall compensation or specific elements of compensation for its executive officers, it would specify the target percentiles in its proxy statement. The Company complied with this commitment in the 2010 Proxy Statement and will in future filings.

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The Company acknowledges 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.

Please do not hesitate to telephone the undersigned at 617-526-6663 if you have any questions regarding this response letter.

Very truly yours,

/s/ Stuart M. Falber
Stuart M. Falber, Esq.

cc: Sudhir Agrawal, D. Phil.
Louis J. Arcudi, III