

September 7, 2017

**By EDGAR Submission**

Securities and Exchange Commission  
Division of Corporation Finance  
100 F Street, N.E.  
Washington, D.C. 20549  
Attention: Christine Westbrook

**Re: Idera Pharmaceuticals, Inc.  
Amendment No. 1 to Registration Statement on Form S-3  
Filed September 1, 2017  
File No. 333-219851**

Ladies and Gentlemen:

On behalf of Idera Pharmaceuticals, Inc. (the "Company"), set forth below is the Company's response to the comment of the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") provided orally by Christine Westbrook of the Staff on September 7, 2017 (the "Oral Comment") with respect to Amendment No. 1 to the Company's Registration Statement on Form S-3 (File No. 333-219851) (the "Registration Statement").

This letter is being filed with Amendment No. 2 to the Registration Statement ("Amendment No. 2"). For convenience, a summary of the Oral Comment is set forth below.

1. *We note your response to our prior Comment 1 and we reissue our comment in part. Your disclosure under "Description of Warrants" states that the applicable prospectus supplement for any warrants issued with other securities would (1) specify whether warrants may be separated from other securities issued in combination with the warrants prior to the expiration date of the warrants and (2) describe the date from and after which the warrants and other securities issued with the warrants will be separately transferrable. Please amend your registration statement to register the units as a separate security or remove the reference to securities that may be sold in combination and may not be separated or separately transferrable prior to a specified date.*

**Response:** In response to the Staff's comment, the Company has revised the disclosure on page 18 of Amendment No. 2.

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

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

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If you have any further questions or comments, or if you require any additional information, please contact the undersigned by telephone at (617) 526-6663 or facsimile at (617) 526-5000. Thank you for your assistance.

Best regards,

/s/ Stuart M. Falber

Stuart M. Falber

cc: Louis J. Arcudi, III, *Idera Pharmaceuticals, Inc.*  
Mark J. Casey, *Idera Pharmaceuticals, Inc.*