

September 1, 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.
Registration Statement on Form S-3
Filed August 10, 2017
File No. 333-219851**

Ladies and Gentlemen:

On behalf of Idera Pharmaceuticals, Inc. (the "Company"), set forth below are the Company's responses to the comments of the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") provided orally by Christine Westbrook of the Staff on August 17, 2017 (the "Oral Comments") with respect 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. 1 to the Registration Statement ("Amendment No. 1"). For convenience, a summary of the Oral Comments is set forth below.

1. *On page 18, you state that you may offer warrants as part of a unit. Please include units as a class of securities to be registered or please revise this disclosure.*

Response: In response to the Staff's comment, the Company has revised the disclosure on pages 18 and 20 of Amendment No. 1.

2. *Please be advised that we will not be in a position to declare this registration statement effective until we resolve all issues concerning the confidential treatment request.*

Response: The Company notes the Commission's order, dated August 31, 2017, granting confidential treatment under the Securities Exchange Act of 1934.

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

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.*