August 30, 2006  (WilmerHale Letter Head)

By EDGAR Transmission

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, NE
Washington, D.C. 20549
Attention: Jim B. Rosenberg

RE: Idera Pharmaceuticals, Inc. (File No. 011-31918)
Form 10-K for the Fiscal Year Ended December 31, 2005
Filed March 31, 2006
Form 10-Q for the Fiscal Quarter Ended June 30, 2006
Filed August 14, 2006

Ladies and Gentlemen:

On behalf of our client Idera Pharmaceuticals, Inc. ("Idera" or the "Company"), we have set forth below responses to the comments provided to Mr. Robert G. Andersen by Mr. Jim B. Rosenberg, a Senior Assistant Chief Accountant of the staff of the Commission (the "Staff") in a letter dated August 16, 2006 (the "Letter"). Such responses are based upon information provided to us by the Company. The responses are keyed to the numbering of the comments in the Letter and to the headings used in the Letter. The share and per share information contained in the responses contained in this Letter reflect the one-for-eight reverse stock split of the Company's issued and outstanding common stock that the Company effected on June 29, 2006.

Form 10-KSB for the Fiscal Year Ended December 31, 2005

Management's Discussion and Analysis of Financial Condition and Results of Operations
Research and Development Expenses, page 30

1. *We acknowledge your table included in the section entitled "Our Product Pipeline" on page 2, as well as the information included in your "Results of Operations" discussion. However, we believe that your disclosures about historical research and development expenses and estimated future expenses related to your major research and development projects could be enhanced for investors. Please refer to the Division of Corporation Finance "Current Issues and Rulemaking Projects Quarterly Update" under section VIII — Industry Specific Issues — Accounting and Disclosure by Companies Engaged in Research and Development Activities. You can find it at the following website address: http://www.sec.gov/divisions/corpfin/cfcrg032001.htm#secviii.*

Please then provide us with the following information, in a disclosure-type format, for each of your major research and development projects:

a. The costs incurred during each period presented and to date on the project;

b. The nature, timing and estimated costs of the efforts necessary to complete the project;

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c. The anticipated completion date;

d. The risks and uncertainties associated with completing development on schedule and the consequences to your operations, financial position and liquidity if the project is not completed timely; and, finally

e. The period in which material net cash inflows from your significant projects are expected to commence.

Regarding a., if you do not maintain research and development costs by project, please tell us why management does not maintain and evaluate research and development costs by project. Include other quantitative or qualitative analyses that indicate the amount of the company's resources being used on these projects.

Regarding b. and c., please provide us with the amount or range of estimated costs and timing to complete the phase in process and each future phase. To the extent that information is not estimable, please tell us the facts and circumstances indicating the uncertainties that preclude you from making a reasonable estimate.

Response: The Company is aware of the Commission's guidance regarding accounting and disclosure by biotechnology companies engaged in research and development activities. In preparing the Company's disclosure regarding its research and development activities for its Annual Report on Form 10-K for the year ended December 31, 2005 (the "2005 10-K"), the Company determined, for purposes of the disclosure, that its only major research and development project was its development activities with respect to IMO-2055, the immune modulatory compound that the Company is developing for oncology applications.

The Company also considered whether IMO-2125, an IMO compound that is being studied as a potential treatment for infectious diseases, should be considered a separate major research and development project. However, because IMO-2125 was only in preclinical studies and because the expenses that the Company incurred with respect to IMO-2125 in each period presented were not material, the Company determined that it was not a major research and development project at that point. As the development program for IMO-2125 continues, the Company will assess on an ongoing basis whether it constitutes a second major research and development program.

Having determined that IMO-2055 was its sole major research and development program, the Company disclosed third party expenses for the IMO-2055 program in the applicable periods and the status of the clinical development of the product candidate. In addition, the Company noted that because of "the early stage of development and given the technological and regulatory hurdles likely to be encountered in the development and commercialization of our products, the future timing and costs of our various research and development programs are uncertain."

However, as the IMO-2055 program progresses, the Company believes that it can enhance its disclosure regarding this program in its future filings under the Securities

Exchange Act of 1934, as amended. As part of enhancing its disclosure the Company will:

- add disclosure regarding the aggregate direct expenses for the IMO-2055 program since the Company commenced clinical trials of IMO-2055;
- add disclosure regarding the clinical development plan for IMO-2055 as then in effect, the anticipated timing of planned clinical activities and the anticipated costs of those activities to the extent known and material;
- provide greater detail regarding the current status of the clinical development program for IMO-2055;
- continue to disclose direct expenses (and the types of activities for which these expenses were incurred) for the IMO-2055 program during the applicable periods;
- enhance the disclosure regarding the risks and uncertainties associated with completing clinical activities in accordance with the plan; and
- address the anticipated completion date of the project and the period in which material net cash inflows are expected to commence to the extent it is able or state why it is unable to address such matters.

On this basis, the Company anticipates its disclosure for its research and development expenses in its Quarterly Report on Form 10-Q for the quarter ending September 30, 2006, would be similar to the following, subject to changing facts:

"Research and Development Expenses"

Research and development expenses increased by $_____, or ___% from $_____ for the three months ended September 30, 2005 to $_____ for the three months ended September 30, 2006 and increased by $_____ or ___% from $_____ for the nine months ended September 30, 2005 to $_____ for the nine months ended September 30, 2006. The increase in the three and nine months ended September 30, 2006 was primarily attributable to _____.

Our current research and development efforts relate primarily to IMO-2055, which we are developing for oncology applications under the name IMOxine. In the three and nine month periods ended September 30, 2006, we incurred approximately $_____ and $_____, respectively, in direct expenses in connection with developing IMO-2055. In the three and nine month periods ended September 30, 2005, we incurred approximately $_____ and $_____, respectively, in direct expenses in connection with developing IMO-2055. In addition, since March 2003, the date we commenced clinical development of IMO-2055, we have incurred approximately $_____ in direct expenses in connection with IMO-2055. These direct expenses reflect payments

to independent contractors and vendors for clinical and preclinical studies and drug manufacturing and related costs but exclude internal costs such as payroll and overhead.

In October 2004, we commenced patient recruitment for an open label, multi-center Phase 2 clinical trial of IMO-2055 as monotherapy in patients with metastatic or recurrent clear cell renal carcinoma. The primary endpoint of the trial is to determine the tumor response, measured by the increase or decrease in size, by a standard approach referred to as RECIST, which stands for Response Evaluation Criteria in Solid Tumors. Secondary objectives include safety, duration of response, time to progression, survival through 12 months after the last dose, and the effect of the treatment on quality of life. The trial was designed as a two-stage trial. Stage A of the trial provided for the evaluation of IMO-2055 at two dose levels, 0.16 mg/kg, and 0.64 mg/kg, administered by weekly subcutaneous injection. Based on tumor response rates experienced with drugs in clinical use for kidney cancer as of the initiation date for our Phase 2 trial, the statistical design for Stage A of the trial required 23 patients for each dose level. We originally planned to recruit into Stage A of the trial a minimum of 46 patients who had previously failed one prior therapy for the treatment of metastatic or recurrent clear cell renal carcinoma, who we refer to as second-line patients. We also expected to enroll in Stage A of the trial some patients who had received no prior therapy for metastatic or recurrent clear cell renal carcinoma, who we refer to as treatment-naïve patients. We expected a low number of treatment-naïve patients, and the original protocol did not specify a target enrollment for treatment-naïve patients. In October 2005, in response to a higher than expected enrollment rate of treatment-naïve patients in the Phase 2 trial, we submitted to the FDA a protocol amendment that provided for the enrollment of up to 46 treatment-naïve patients in Stage A, in addition to the 46 second-line patients provided for by the original study design. Recruitment has been slower than we projected, in part due to the clinical trial activities of other companies and the recent approval of two new therapies, Nexavar® and Sutent®, for the treatment of the same patient population. We expect to complete enrollment for Stage A of the trial in ___. Since we cannot predict how long patients will remain on IMO-2055 treatment, we cannot estimate when we will have final results for Stage A of the trial. Decisions with regard to Stage B of the trial will depend on the Stage A results.

In October 2005, we initiated a Phase 1/2 clinical trial of IMO-2055 in combination with the chemotherapy agents gemcitabine, marketed by Eli Lilly as Gemzar®, and carboplatin at the Lombardi Comprehensive Cancer Center at Georgetown University Medical Center. We enrolled eight refractory solid tumor patients in the original Phase 1 part of the trial. We are seeking to enroll 12 to 18 additional refractory solid tumor patients in the amended Phase 1 portion of the trial for further evaluation of the safety of the combination. If successful, we plan to use Phase 1 data for dose selection for the subsequent Phase 2 portion of the trial as first-line treatment of non-small cell lung cancer patients.

We recently announced the formation of an Oncology Clinical Advisory Board to advise us on additional clinical programs with IMO-2055. We plan to consider the advisory board's recommendations, and determine which cancer indications to pursue based on the IMO-2055 mechanism of action and clinical and preclinical data. Once we make this determination, we plan to develop one or more appropriate protocols for FDA review and plan to initiate one or more new trials commencing at the earliest in 2007. If we were to commence such a trial in 2007, our research and development expenses would increase significantly commencing in 2007.

We do not know if we will be successful in developing IMO-2055 or any of our other product candidates. At this time without having completed our ongoing clinical trials of IMO-2055 and without having agreed upon a development strategy and pathway with the FDA, we cannot reasonably estimate the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of, or the period, if any, in which material net cash inflows may commence from IMO-2055. Moreover, the clinical development of IMO-2055 or any of our other product candidates is subject to numerous risks and uncertainties associated with the duration and cost of clinical trials, which vary significantly over the life of a project as a result of unanticipated events arising during clinical development, including with respect to:

- the number of clinical sites included in the trials;
- the length of time required to enroll suitable subjects;
- the number of subjects that ultimately participate in the trials; and
- the efficacy and safety results of our clinical trials and the number of additional required clinical trials."

Balance Sheets, page F-3

2. *Please tell us how you determined that the presentation of a pro forma balance sheet as of December 31, 2005 to reflect your March 24, 2006 private placement transaction is appropriate in your Form 10-K or revise your filing accordingly to remove the pro forma information.*

Response: The Company determined that the presentation of a pro forma balance sheet as of December 31, 2005 reflecting the Company's March 24, 2006 private placement transaction (the "March 2006 Private Placement") was appropriate based upon the following considerations:

1. Article 11 of Regulation S-X describes the Commission's requirements for registrants to provide pro forma financial information including in situations where the "consummation of other events or transactions has occurred or is probable for which disclosure of pro forma financial information would be material to investors." While pro forma information pursuant to Article 11 of Regulation S-X is not required in Annual Reports on Form 10-K, such presentation is not prohibited by Article 11 of Regulation-S-X nor by the SEC Staff Training Manual. As a result of the significance of

the March 2006 Private Placement (which occurred prior to the Company filing the 2005 10-K) to the Company's liquidity, capitalization and ongoing operations and the fact that a registration statement associated with the March 2006 Private Placement was to be filed shortly after the filing of the 2005 10-K, the Company determined that this pro forma financial information was material to the Company's investors. The Company notes that as of December 31, 2005, the Company had approximately $8.2 million in cash, cash equivalents and short-term investments, which as of December 31, 2005 would only have been sufficient to fund the Company's ongoing operations through June 2006. As a result, the financing was an important consideration to the Company's auditors as to the form of audit opinion that would be delivered in connection with the financial statements included in the 2005 10-K. Specifically, the Company was informed that its auditors would have been required to issue an unqualified opinion with a going concern explanatory paragraph if the Company had not completed the financing, prior to filing the 2005 10-K. With the completion of the March 2006 Private Placement, the Company had available cash, cash equivalents and short-term investments sufficient to fund operations through January 2007 and a going concern explanatory paragraph was not included in the audit opinion. As a result, the Company concluded that prominent disclosure of the financing on the face of the balance sheet was warranted.

2. Staff Accounting Bulletin (Topic 1.B.2), which states that, in a situation where the registrant's historical financial statements are not indicative of the ongoing entity, a registration statement should include pro forma financial information that is in accordance with Article 11 of Regulation S-X and reflects the impact of other significant changes. For the reasons described in paragraph 1 above, the Company determined that the March 2006 Private Placement constituted a significant change warranting the inclusion of the pro forma information. While this SAB specifically addresses registration statements, the Company believes that the SAB provides analogous support for a pro forma balance sheet in the 2005 10-K.

3. Within the last three years, Company has consistently provided pro forma balance sheet information in its previous filings when a material financing transaction has occurred in the interval between period close and the filing deadline. For example, in its Quarterly Report on Form 10-Q for the quarter ended March 31, 2004, the Company reflected a $11.8 million registered direct financing that closed on April 16, 2004 in a pro forma balance sheet.

Notes to Consolidated Financial Statements
(7) Stockholders' Equity, page F-18
(a) Common Stock, page F-18

3. *Please clarify, in disclosure-type format, your accounting treatment for the put rights related to your May 5, 1998 common stock issuance. Tell us the specific accounting guidance you are using. Refer to SFAS No. 150 and any other applicable literature, as appropriate. Please also clarify why you cannot determine at this time how many put rights have terminated and how this impacts your accounting treatment.*

Response: Pursuant to the terms of a unit purchase agreement dated as of May 5, 1998, the Company issued and sold a total of 1,199,684 shares of common stock (the "Put Shares")

at a price of $16.00 per share. Under the terms of the unit purchase agreement, the initial purchasers (the "Put Holders") of the Put Shares have the right (the "Put Right") to require the Company to repurchase the Put Shares. The Put Right may not be exercised by any Put Holder unless:

(1) the Company liquidates, dissolves or winds up its affairs pursuant to applicable bankruptcy law, whether voluntarily or involuntarily;

(2) all of the Company's indebtedness and obligations, including without limitation the indebtedness under the Company's then outstanding notes, has been paid in full; and

(3) all rights of the holders of any series or class of capital stock ranking prior and senior to the common stock with respect to liquidation, including without limitation the Series A convertible preferred stock, have been satisfied in full.

The Company may terminate the Put Right upon written notice to the Put Holders if the closing sales price of its common stock exceeds $32.00 per share of common stock for the 20 consecutive trading days prior to the date of notice of termination. Because the Put Right is not transferable, in the event that a Put Holder has transferred Put Shares since May 5, 1998, the Put Right with respect to those shares has terminated. As a consequence of the Put Right, in the event the Company is liquidated, holders of shares of common stock that do not have Put Rights with respect to such shares may receive smaller distributions per share of common stock upon the liquidation than if there were no Put Rights outstanding.

In February 2003, the Company repurchased 301,985 Put Shares. As of December 31, 2005, 135,890 of the Put Shares continued to be held in the name of Put Holders. The Company cannot determine at this time what portion of the Put Rights of the remaining 761,809 Put Shares have terminated.

The Company has determined that the Put Shares are properly classified as equity based upon the following considerations:

(1) Because the conditions described above that would allow a Put Holder to exercise the Put Right are not certain to occur, paragraphs 9 and 10 of SFAS No. 150 indicate that the Put Shares are not required to be classified as a liability.

(2) The conditions of FRR 1 (Section 211.01-.06), Redeemable Preferred Stocks ("ASR 268") have not been met; therefore, the Put Shares are properly included within stockholders' equity. The basis for this conclusion is as follows:

ASR 268 requires that a public company's stock subject to redemption requirements that are outside the control of the issuer be excluded from the caption "stockholders' equity" and presented separately in the issuer's balance sheet. ASR 268 applies to all equity securities that satisfy the conditions set forth in clauses (a) and (b) below:

(a) Equity securities that are redeemable:

(i) at a fixed or determinable price on a fixed or determinable date;

This condition is not met because while the put price is known, the date is not determinable (i.e. upon liquidation).

(ii) at the option of the holder; or

This condition is not met because the Put Right is not exercisable at the option of the holder because the three conditions set forth in the first paragraph of this response must be met before the holder can exercise the Put Share.

(iii) upon the occurrence of an event that is not solely within the control of the issuer.

This condition is not met. The SEC's Frequently Requested Accounting and Financial Reporting Interpretations And Guidance (March 31, 2001) I. Guidance About Accounting Rules A. Redeemable Equity Securities and paragraph 5 of EITF D-98 state that "ordinary" liquidation events, which involve the redemption and liquidation of all equity securities, do not result in a security being classified as redeemable equity. However, "deemed" liquidation events that would require one or more particular classes or types of equity security to be redeemed cause those securities to be classified outside of permanent equity.

As noted above, one of the conditions necessary for the Put Shares to be exercised is that "the Company liquidates, dissolves or winds up its affairs pursuant to applicable bankruptcy law, whether voluntarily or involuntarily". As this condition does not include any "deemed" liquidation events (i.e. a change of control), the Company has concluded that this condition represents an "ordinary" liquidation event.

(b) Equity securities that are not otherwise required to be classified as liabilities by FASB Statement No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity;

This condition is not met. As discussed above, SFAS No. 150 is not applicable.

(3) The Company also reviewed the provisions of EITF Topic D-98 and determined that it supports the conclusions set forth above.

Additionally, in response to the Staff's comment that the Company clarify why it cannot determine at this time how many Put Rights have terminated, the Company notes the following:

The Company issued 1,199,684 Put Shares under the terms of a unit purchase agreement dated as of May 5, 1998. Under the agreement, the Put Rights terminate if the underlying shares are transferred or sold. In February 2003, the Company repurchased 301,985 Put Shares, which terminated the Put Rights with respect to those shares. As of December 31, 2005, 135,890 Put Shares continued to be held in the name of Put Holders. The remaining 761,809 Put Shares have been placed in "street name", and no longer appear on the registered stockholder list. Because the shares are in "street name," the Company cannot determine whether the shares have been sold or continue to be held by the original investor. As a result, it is no longer possible for the Company to determine what portion of these remaining shares continue to have Put Rights.

Based upon the Company's review of the relevant accounting literature, the Company does not believe this inability impacts our conclusion above to classify the Put Shares within stockholders' equity.

(15) Equity Financings, page F-28

4. *You disclose that the warrants issued pursuant to your August 2003 private placement transaction may be settled by the holders via a cashless exercise feature. Please provide us with your analysis, in a disclosure-type format, as to whether the warrants issued in your August 2003 private placement transaction qualify as a derivative instrument within the scope of SFAS No. 133, which would necessitate that you account for those warrants at fair market value and record changes in the fair market value within earnings. Additionally, please provide us with an analysis under EITF No. 00-19 that supports your classification of these warrants as an equity instrument.*

Response: In August 2003, the Company raised approximately $14.6 million in gross proceeds from a Private Placement (the "August 2003 Private Placement"). In the August 2003 Private Placement, the Company sold 2,506,627 shares of common stock and warrants to purchase 751,991 shares of common stock. The warrants to purchase common stock have an exercise price of $8.00 per share and will expire if not exercised by August 28, 2008. The warrants may be exercised, at the investor's election, through (a) physical settlement by paying cash equal to the exercise price in return for the underlying shares or (b) net share settlement by canceling a portion of the warrants in payment of the exercise price of the number of warrants exercised in return for the net underlying shares.

The Company has evaluated the provisions of EITF Issue 00-19, Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company's Own Stock, ("EITF 00-19") and has determined that these warrants should be classified as equity. This determination was based upon the following considerations:

(1) The warrants do not contain a "net cash settlement" feature;

(2) The warrants can be settled in unregistered shares. However, the Company has a "best efforts" obligation, under a separate registration rights agreement, to register the shares underlying these warrants. Failure to file a registration statement covering the shares issued in the private placement and issuable upon exercise of the warrants within 135 days after the issuance of the

warrants would have resulted in a penalty of 1% of the private placement purchase price for every month after the deadline has expired. The Company considers this penalty as (i) a discount between the value of a registered and an unregistered share and (ii) not a settlement of the warrant. Accordingly, the Company has concluded that this penalty does not effect its assessment of the classification of these warrants as equity;

(3) The Company has sufficient authorized and unissued shares available to settle the warrants after considering all other commitments that may require the issuance of stock during the maximum period the warrants could remain outstanding;

(4) The contract contains an explicit limit on the number of shares to be delivered in a share settlement;

(5) There are no required cash payments (i.e. net cash settlement) to the counterparty in the event the company fails to make timely filings with the Commission;

(6) There are no required cash payments to the counterparty if the shares initially delivered upon settlement are subsequently sold by the counterparty, and the sales proceeds are insufficient to provide the counterparty with full return of the amount due;

(7) The contract requires net-cash settlement only in specific circumstances in which holders of shares of the same class as those underlying the contract also would receive cash in exchange for their shares (as noted above there is no cash settlement);

(8) There are no provisions in the contract that indicate that the counterparty has rights that rank higher than those of a shareholder of the stock underlying the contract; and

(9) There is no requirement in the contract to post collateral (other than the company's shares underlying the contract, but limited to the maximum number of shares that could be delivered under the contract) at any point or for any reason.

As a result of this determination, all of the proceeds from the August 2003 Private Placement were classified as equity and were initially measured at fair value and reported in permanent equity (e.g., paid-in capital). As these warrants continued to be classified as equity, subsequent changes in fair value were not recognized.

Additionally, paragraph 11(a) of SFAS No. 133, as amended, specifically excludes from its scope "contracts issued or held by that reporting entity that are both (1) indexed to its own stock and (2) classified in stockholders' equity in its statement of financial position." Accordingly, classification of these warrants as equity under EITF 00-19 also exempts the warrants from the scope of SFAS No. 133.

5. *For warrants issued that do not have a cashless exercise feature, please provide us your detailed analysis, in a disclosure-type format, as to how you accounted for the warrants under EITF No. 00-19.*

Response: In April 2004, the Company raised approximately $11.8 million in gross proceeds through a registered direct offering (the "April 2004 Offering"). In the April 2004 Offering, the Company sold 2,112,475 shares of common stock and warrants to purchase 380,245 shares of common stock to investors. The warrants to purchase common stock have an exercise price of $9.12 per share and are exercisable at any time on or after October 21, 2004 and on or prior to April 20, 2009. Additionally, in August 2004, the Company raised approximately $5.1 million in gross proceeds from a private placement (the "August 2004 Private Placement"). In the August 2004 Private Placement, the Company sold 1,102,925 shares of common stock and warrants to purchase 220,585 shares of common stock to investors. The warrants to purchase common stock have an exercise price of $5.36 per share and will expire if not exercised on or prior to August 27, 2009. The warrants issued in the April 2004 Offering and the August 2004 Private Placement may only be exercised through physical settlement by paying cash equal to the exercise price in return for the underlying shares.

The Company has evaluated the provisions of EITF Issue 00-19, Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company's Own Stock, ("EITF 00-19") and has determined that the warrants issued in the April 2004 Offering and August 2004 Private Placement should be classified as equity. This determination was based upon the following considerations:

(1) The warrants do not contain a "net cash settlement" feature;

(2) The shares underlying the warrants issued in the April 2004 Offering were previously registered under an effective shelf registration statement in January 2004.

The warrants issued in the August 2004 Private Placement can be settled in unregistered shares. However, the Company has a "best efforts" obligation, under a separate registration rights agreement, to register the shares underlying these warrants. There is no penalty for failure to satisfy this "best efforts" obligation. As this is only a 'best efforts" obligation, the Company has concluded that it does not effect its assessment of the classification of these warrants as equity;

(3) The Company has sufficient authorized and unissued shares available to settle the warrants after considering all other commitments that may require the issuance of stock during the maximum period the warrants could remain outstanding;

(4) The contract contains an explicit limit on the number of shares to be delivered in a share settlement;

(5) There are no required cash payments to the counterparty (i.e. net cash settlement) in the event the company fails to make timely filings with the Commission;

(6) There are no required cash payments to the counterparty if the shares initially delivered upon settlement are subsequently sold by the counterparty, and the sales proceeds are insufficient to provide the counterparty with full return of the amount due;

(7) The contract requires net-cash settlement only in specific circumstances in which holders of shares of the same class as those underlying the contract also would receive cash in exchange for their shares;

(8) There are no provisions in the contract that indicate that the counterparty has rights that rank higher than those of a shareholder of the stock underlying the contract; and

(9) There is no requirement in the contract to post collateral (other than the company's shares underlying the contract, but limited to the maximum number of shares that could be delivered under the contract) at any point or for any reason.

As a result of this determination, all of the proceeds from the April 2004 Offering and the August 2004 Private Placement were classified as equity and were initially measured at fair value and reported in permanent equity (e.g., paid-in capital). As these warrants continued to be classified as equity, subsequent changes in fair value were not recognized.

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(12) Private Financing, page 11

6. *Please provide us with your analysis, in a disclosure-type format, as to the basis for your accounting for the warrants issued in your March 24, 2006 transactions under EITF No. 00-19.*

Response: On March 24, 2006, the Company raised approximately $9.8 million in gross proceeds from a private placement. In the March 2006 Private Placement, the Company sold for a purchase price of $3.52 per share 2,769,886 shares of common stock and warrants to purchase 2,077,414 shares of common stock. The warrants to purchase common stock have an exercise price of $5.20 per share and will expire if not exercised on or prior to September 24, 2011. The warrants issued in the March 2006 Private Placement may only be exercised by the investor through physical settlement by paying cash equal to the exercise price in return for the underlying shares and are exercisable any time on or after September 24, 2006. After March 24, 2010, the Company may redeem the warrants for $0.08 per warrant share following notice to the warrant holders if the volume weighted average of the closing sales price of the common stock exceeds 300% of the warrant exercise price for the 15-day period preceding the notice. The Company may exercise its right to redeem the warrants by providing 20 days prior written notice to the holders of the warrants. The net proceeds to the Company from the March 2006 Private Placement,

excluding the proceeds of any future exercise of the warrants, total approximately $8.9 million.

On March 24, 2006, in connection with a purchase commitment (the “2006 Purchase Commitment”) from an investor to purchase from the Company up to $9.8 million of the Company’s common stock, the Company issued warrants to the investor to purchase 761,718 shares of common stock at an exercise price of $5.92 per share. The warrants issued in connection with the 2006 Purchase Commitment may only be exercised by the investor through physical settlement by paying cash equal to the exercise price in return for the underlying shares. The warrants are exercisable beginning September 24, 2006. The warrants expire if not exercised by September 24, 2011. On or after March 24, 2010, Idera may redeem the warrants for $0.08 per warrant share following notice to the warrant holders if the closing sales price of the common stock exceeds 250% of the warrant exercise price for 15 consecutive trading days prior to the notice. The Company may exercise its right to redeem the warrants by providing at least 30 days prior written notice to the holders of the warrants.

The Company has evaluated the provisions of EITF Issue 00-19, Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company’s Own Stock, (“EITF 00-19”) and has determined that the warrants issued in connection with the March 2006 Private Placement and the 2006 Purchase Commitment should be classified as equity. This determination was based upon the following considerations:

(1) The warrants do not contain a “net cash settlement” feature;

(2) The warrants can be settled in unregistered shares. However, the Company has a “best efforts” obligation, under a separate registration rights agreement, to register the shares underlying the warrants. Failure (1) to file a registration statement covering the shares underlying the warrants associated with the March 2006 Private Placement within 30 days after the March 2006 Private Placement was consummated or to have such registration statement declared effective within 120 days after the March 2006 Private Placement was consummated or (2) to maintain the effectiveness of such registration statement (subject to certain exceptions), would result in a penalty of 1% of the purchase price for the common stock sold in the March 2006 Private Placement for every month after a deadline has expired (or effectiveness of the registration statement is not maintained). This penalty is subject to a maximum amount of 10% of the purchase price paid under the March 2006 Private Placement. The Company views this penalty as (i) a discount between the value of a registered and an unregistered share and (ii) not a settlement of the warrant. Accordingly, the Company has concluded that this penalty does not effect its assessment of the classification of these warrants as equity. There is no penalty for failing to register the shares underlying the warrants associated with the 2006 Purchase Commitment;

(3) The Company has sufficient authorized and unissued shares available to settle the warrants after considering all other commitments that may require the

issuance of stock during the maximum period the warrants could remain outstanding;

(4) The contract contains an explicit limit on the number of shares to be delivered in a share settlement;

(5) There are no required cash payments (i.e. net cash settlement) to the counterparty in the event the company fails to make timely filings with the Commission;

(6) There are no required cash payments to the counterparty if the shares initially delivered upon settlement are subsequently sold by the counterparty, and the sales proceeds are insufficient to provide the counterparty with full return of the amount due;

(7) The contract requires net-cash settlement only in specific circumstances in which holders of shares of the same class as those underlying the contract also would receive cash in exchange for their shares;

(8) There are no provisions in the contract that indicate that the counterparty has rights that rank higher than those of a shareholder of the stock underlying the contract; and

(9) There is no requirement in the contract to post collateral (other than the company's shares underlying the contract, but limited to the maximum number of shares that could be delivered under the contract) at any point or for any reason.

As a result of this determination, all of the proceeds from the March 2006 Private Placement and the 2006 Purchase Commitment were classified as equity and were initially measured at fair value and reported in permanent equity (e.g., paid-in capital). As these warrants continued to be classified as equity, subsequent changes in fair value were not recognized.

(14) Pro Forma Balance Sheet, page 12

7. *Please tell us how you determined that the presentation of a pro forma balance sheet as of June 30, 2006 to reflect the July 2006 sale of common stock under the March 24, 2006 financing commitment is appropriate in your Form 10-Q or revise your filing accordingly to remove the pro forma information.*

Response: The Company determined that the presentation of a pro forma balance sheet as of June 30, 2006 reflecting its July 2006 sale of common stock under the 2006 Purchase Commitment was appropriate based upon the following considerations:

1. Article 11 of Regulation S-X describes the SEC's requirements for registrants to provide pro forma financial information including in situations where the "consummation of other events or transactions has occurred or is probable for which disclosure of pro forma financial information would be material to investors." While pro forma information pursuant to Article 11 of

Regulation S-X is not required in Form 10-Q such presentation is not specifically prohibited by Article 11 nor by the SEC Staff Training Manual. Given the significance of the sale of common stock (which occurred prior to the filing of its Quarterly Report on Form 10-Q for the quarter ended June 30, 2006 (the "Second Quarter 2006 10-Q")) to the Company's liquidity, capitalization and ongoing operations and the fact that a registration statement associated with the 2006 Purchase Commitment was to be filed shortly after the filing of the Second Quarter 2006 10-Q, the Company determined that this pro forma financial information would be material to its investors. The Company notes that as of June 30, 2006, the Company's cash, cash equivalents and short-term investments, would only have been sufficient to fund the Company's ongoing operations through January 2007. As a result of the first drawdown of the 2006 Purchase Commitment, the Company had available cash, cash equivalents and short-term investments sufficient to fund operations through March 2007.

2. Staff Accounting Bulletin (Topic 1.B.2) which states that, in a situation where the registrant's historical financial statements are not indicative of the ongoing entity, a registration statement should include pro forma financial information that is in accordance with Article 11 of Regulation S-X and reflects the impact of other significant changes. While this SAB specifically addresses registration statements, the Company determined that it provided analogous support for a pro forma balance sheet in the Second Quarter 2006 10-Q.

3. Within the last three years, the Company has consistently provided pro forma balance sheet information in its previous filings when a material financing transaction has occurred in the interval between period close and the filing deadline. For example, in its Quarterly Report on Form 10-Q for the quarter ended March 31, 2004, the Company reflected a $11.8 million registered direct financing that closed on April 16, 2004 in a pro forma balance sheet.

If you require additional information, please telephone the undersigned at the telephone number indicated above.

Very truly yours,

/s/ Stuart M. Falber

Stuart M. Falber

cc: Jeffrey Riedler (Securities and Exchange Commission)
Sudhir Agrawal (Idera Pharmaceuticals, Inc.)
Robert Karr (Idera Pharmaceuticals, Inc.)
Robert G. Andersen (Idera Pharmaceuticals, Inc.)
Brendan McCorry. (Ernst & Young LLP)