

June 16, 2006

Mail Stop 6010

E Kevin Hrusovsky
President and Chief Executive Officer
Caliper Life Sciences, Inc.
68 Elm Street
Hopkinton, MA 01748

**Re: Caliper Life Sciences, Inc.
Amendment No. 1 to Registration Statement on Form S-4
Filed May 23, 2006
File No. 333-132931
and Documents Incorporated By Reference
File No. 000-28229**

Dear Mr. Hrusovsky:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

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 comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. We note your response to our prior comment 1 and your new disclosure added in response to our comment and we reissue the comment, in part. In your disclosure on page I-7 of the pro forma equivalent value per share of Xenogen's common stock as of a recent practicable date, you only disclose the trading price of Xenogen's, and not Caliper's, common stock on that same date. As this information would appear to be necessary in order to calculate the pro forma equivalent value per share, please revise your disclosure to provide this information. In addition, please supplement your disclosure of the pro forma equivalent values per share as of the two dates provided to clarify that each such pro forma value consists of two components, .575 of one share of Caliper

common stock and .223 of a warrant to acquire one share of Caliper common stock. Disclose the value of each component and briefly discuss the limitations in determining the second component.

Outside Front Cover Page of Joint Proxy Statement/Prospectus

2. Highlight the cross-reference to risk factors in prominent type or in another manner. See Regulation S-K Item 501(b)(5).

Merger Consideration page I-7

3. In your discussion of the Xenogen warrants to be assumed by Caliper in the second paragraph on page I-7, it is unclear from your reference to the “timely exercise of [the assumed] warrants” whether each assumed warrant has the same five year expiration date as the Caliper warrants to be issued in the transaction or rather a specific expiration date unique to that particular warrant. Please clarify your disclosure accordingly. In addition, please also disclose here that the exercise price of each assumed warrant will be equal to the exercise price of the original Xenogen warrant.
4. We note your response to our prior comment 10, and your disclosure on page I-105. Please provide such disclosure in the summary.

Interests of Certain Persons in the Merger, page I-11

5. We note your response to our prior comment 14, but do not see the additional disclosure you discuss. On the contrary, it appears that you have removed a discussion of your CEO’s activities. We reissue the comment. Please name the “certain” Xenogen officers and Xenogen and Caliper directors that may have interests in the merger that may be different from the interests of Xenogen or Caliper stockholders. Quantify the benefits these directors and officers are expected to receive as a result of these interests. Please also disclose the amount and percentage of outstanding Xenogen and Caliper common stock beneficially owned by these individuals.

Security Ownership of Certain Beneficial Owners and Management, page IV-35

6. We reissue our prior comment 33 with respect to Harvard Private Capital Holdings, Inc. Please identify the individuals who have beneficial ownership of the shares held by Harvard Private Capital Holdings, Inc. To the extent beneficial ownership is deemed to be held by committee, identify the individuals comprising such committee.
7. We also reissue our prior comment 33 with respect to the security ownership table of Caliper found on page VI-13. Please identify the individuals who have

beneficial ownership of the shares held by Dimensional Fund Advisors Inc.,
Platinum Asset Management Limited and Royce & Associates, LLC.

Annex A

8. We note Section 1.7 of the merger agreement. Please confirm whether you will be issuing to holders of Xenogen common stock rights to purchase shares of Caliper's Series A Junior Participating Preferred Stock. To the extent you are, you will need to register such rights as separate securities. See G.109 and H.27 of the Manual of Publicly Available Telephone Interpretations (July 1997).

Annex B

9. We note your response to our prior comment 40. However, it appears that you have removed the language in question from Annex B. To the extent your response to our comment, as opposed to the revised opinion, controls, we reissue our prior comment. To the extent the current opinion, revised to remove the language in question, controls, we have no further comment. Please confirm.

Exhibit 8.1

10. We note the last sentence in the opinion. As stockholders are entitled to rely on your opinion, please obtain a revised opinion that removes this limitation.

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

You may contact Praveen Kartholy at (202) 551-3778 or in his absence, Brian Cascio at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at (202) 551-3637 or me at (202) 551-3444 with any other questions.

Sincerely,

Perry Hindin
Special Counsel

cc: William T. Whelan, Esq.
Megan N. Gates, Esq.