



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

November 24, 2009

Peter F. McAree
Senior Vice President and Chief Financial Officer
Caliper Life Sciences, Inc.
68 Elm Street
Hopkinton, MA 01748

**Re: Caliper Life Sciences, Inc.
Annual Report on Form 10-K
Filed March 13, 2009
File No. 001-32976**

Dear Mr. McAree:

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.

Cover Page

1. It appears that the file number that you have used on the cover of your Form 10-K is not the most current file number for your filings and that you currently file under the number 001-32976. Please confirm that you will reference the correct file number in your future filings.

Item 9A. Controls and procedures, page 69

2. We note that you have correctly set forth the full definition of “disclosure controls and procedures” but that your officers only concluded that your disclosure controls and procedures were effective to “provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms.” In your future filings, also disclose whether your officers concluded that your disclosure controls and procedures are also effective to ensure that information required to be disclosed in the reports that you file or submit under the Exchange Act is accumulated and communicated to your management, including your chief executive officer and chief financial officer, to allow timely decisions regarding required disclosure. Please note that this comment also applies to your effectiveness conclusions in your quarterly reports as well.

Item 11. Executive Compensation, page 72

3. We refer to the disclosure under “Introduction” on page 34 of the proxy statement that you have incorporated by reference. We note that you disclose the “new peer group” on page 35 that will be used by your Compensation Committee “in subsequent years.” We note further that you disclose “some of the peer companies” to which you have referred in the past on page 34, and that you also disclose several peer group companies to which you referred as of December 31, 2007 but are no longer included in your benchmarking analysis. Since it is unclear whether you have provided a complete list of the peer group used by your Compensation Committee for the fiscal year ended December 31, 2008, please confirm to us that in your future filings you will identify all companies that comprise the peer group used by your Compensation Committee for benchmarking purposes, as appropriate. Additionally, if you have benchmarked different elements of your compensation against different benchmarking groups, please identify the companies that comprise each group. Refer to Regulation S-K Item 402(b)(2)(xiv).
4. We note from your disclosure on page 35 of the proxy statement that you have incorporated by reference that you “compare base salary, total cash compensation, long term incentives and total direct compensation” with the “Industry Benchmarks” reviewed by your Compensation Committee. Additionally, we note from your disclosure at the top of 38 that “the Compensation Committee establishes total annual direct compensation targets for each executive based on the market median of [y]our compensation benchmark group...” However, other than your discussion of Mr. Hrusovsky’s base salary, which you state is positioned “at approximately the twenty-fifth percentile of the Industry Benchmark,” we note that you have not provided a discussion of benchmarking targets for the

compensation components you cite on page 35. In future filings, please disclose your Industry Benchmark targets for each compensation component that is determined using comparative peer group data. Additionally, to the extent that actual compensation falls outside a targeted percentile range, please include an explanation of the reasons why. See Item 402(b)(2)(xiv) of Regulation S-K. In this regard, we note that you “believe that executive base salaries should generally target the market median,” but that Mr. Hrusovsky received a base salary significantly below that target for the 2008 fiscal year.

5. We refer to your disclosure under “Base Salary” on page 38 of the proxy statement that you have incorporated by reference. In future filings, please provide expanded disclosure and clarity as to what factors are used by the Compensation Committee in determining actual payouts for base salary. For example, it appears from your disclosure that performance and the “achievement of individual goals” are important components in base salary determinations. However, your current disclosure does not specify how a named executive officer’s base salary reflects such officer’s individual performance or contribution. Therefore, please provide an enhanced discussion and analysis in future filings as to how the Compensation Committee evaluates the individual performance, both quantitative and qualitative, and specific contributions of each named executive officer when determining base salary. Refer to Regulation S-K Item 402(b)(2)(vii). Additionally, to the extent that your future filings reflect material differences in base salary among your named executive officers, please provide disclosure explaining the reasons for any such disparity.
6. We refer to your disclosure under “Annual Performance Bonuses” on page 39 of the proxy statement that you have incorporated by reference. Regarding your disclosure that annual performance cash bonuses are awarded in part based upon an “executive’s individual performance ranking resulting from the annual performance review process,” please provide expanded disclosure in future filings that addresses each named executive officer’s achievement of the individual goals that comprise the annual performance appraisal and how such achievement translates into actual cash bonus compensation decisions. See Regulation S-K Item 402(b)(2)(vii). While we note your disclosure that there is a minimum threshold rating of .70 that must be achieved before a performance bonus is awarded, is it unclear from your current disclosure what is required by a named executive officer in order to achieve a particular rating pursuant to your review process. Please note that we would expect to see disclosure that contains appropriate insight into all factors that are considered by the Compensation Committee in setting performance-related objectives; your disclosure in future filings should clarify how each individual named executive officer achieves his or her performance bonus for the relevant fiscal period.

7. We refer to the chart at the top of page 40 of your proxy statement and note that you have not disclosed your target performance goal for “Cash flow from operations.” Please confirm that in future filings you will clearly disclose in your Compensation Discussion & Analysis the targets for each performance metric related to executive compensation. Refer to Regulation S-K Item 402(b)(2)(v). To the extent that you believe that disclosure of the information would result in competitive harm such that you may omit the information under Instruction 4 to Item 402(b) of Regulation S-K, please provide a detailed explanation supporting your conclusion. If it is appropriate to omit specific targets or performance objectives, you are required to provide appropriate disclosure pursuant to Instruction 4 to Item 402(b). Refer also to Question 118.04 of the Regulation S-K Compliance and Disclosure Interpretations, available on our website at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>. In discussing how difficult or likely it will be to achieve the target levels or other factors, you should provide as much detail as necessary without disclosing information that poses a reasonable risk of competitive harm.
8. We refer to your disclosure under “Long-Term Equity Incentives” on page 29 of the proxy statement that you have incorporated by reference. We note minimal discussion and analysis as to how your long-term equity incentive compensation was determined. In your future filings, please include substantive analysis and insight into how your Compensation Committee made its long-term equity grant determinations with respect to each named executive officer. Refer to Items 402(b)(1)(iii) and (v) of Regulation S-K. Your revised disclosure should discuss and analyze how the Compensation Committee determined the actual number of shares underlying the stock options that were awarded to your named executive officers and how and why those awards varied among the named executive officers; for example, we note that the value of the award granted to your chief executive officer greatly exceeded the grants to your other named executive officers.

* * *

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. 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.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information

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investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

Please contact Celia Soehner at (202) 551-3463 or me at (202) 551-3635 with any questions.

Sincerely,

Tim Buchmiller
Senior Attorney