

Via Facsimile and U.S. Mail
Mail Stop 6010

December 22, 2006

Herm Rosenman
Vice President – Finance and Chief Financial Officer
Gen-Probe Incorporated
10210 Genetic Center Drive
San Diego, CA 92121-4362

Re: Gen-Probe Incorporated
Form 10-K for Fiscal Year Ended December 31, 2005
File No. 001-31279

Dear Mr. Rosenman:

We have limited our review of your filing to the issues we have addressed in our comments. In our comments, we ask you to provide us with information so we may better understand your disclosure. Please be as detailed as necessary in your explanation. 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 filings. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K – December 31, 2005

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 57

Critical accounting policies and estimates, page 63

Valuation of inventories, page 65

1. Consistent with Section V. of Financial Reporting Release 72, please provide us the following information, in disclosure-type format, about the estimates you discussed in the critical accounting policies for your Inventory Allowance:
 - The amount of changes in the estimate and its effect on the revenue recognized in each period or that changes in the estimate have not been material; and,

- The amount of the change in the estimate that is reasonably likely in the future and the effect on revenue that the change would have on your financial statements.

Consolidated Financial Statements, page F-1

Notes to Consolidated Financial Statements, page F-7

4. Intangible assets by asset class and related accumulated amortization, page F-19

2. Please tell us why it was appropriate to capitalize the fees discussed here such as the \$20.0 million in manufacturing access fees paid to Roche and the \$7.0 million in license fee payments to DiagnoCure and cite the supporting authoritative guidance by pronouncement and paragraph. In so doing, please tell us whether these fees are within the scope of SFAS 2 and, if so, why paragraph 11(c) would not have required these fees be expensed as research and development when incurred.

9. Commitments and contingencies, page F-25

Collaborative agreements, page F-25

3. Your disclosures here and on pages 23 and 24 make it appear that you have only one agreement with Chiron, which was entered into in June 1998 and amended effective January 1, 2004. However, your disclosures on page 61 references “collaborative arrangements with Chiron” and page 62 discusses a definitive agreement with Chiron signed in March 2003 and also references “strategic alliance agreements with Chiron.” As it is unclear how many agreements you have with Chiron or whether you have disclosed the material terms of all agreements, please provide us revisions to your existing disclosures. In that disclosure, include a description of each deliverable as this term is used in EITF 00-21. Tell us how you have addressed each deliverable identified within your revenue recognition policy in Note 1.

* * * *

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provide the requested information. Detailed letters greatly facilitate our review. You should furnish the letter to us via EDGAR under the form type label CORRESP.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filings include all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its

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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 your letter, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; 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 filings or in response to our comments on your filings.

You may contact James Peklenk, Staff Accountant, at (202) 551-3661, or Jim Atkinson [Oscar?], Accounting Branch Chief, at (202) 551-3674 if you have questions regarding the comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant