



DIVISION OF
CORPORATION FINANCE

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

June 14, 2012

Via E-mail

Carl W. Hull
Chairman and Chief Executive Officer
Gen-Probe Incorporated
10210 Genetic Center Drive
San Diego, CA 92121

**Re: Gen-Probe Incorporated
Preliminary Proxy Statement on Schedule 14A
Filed May 18, 2012
File No. 000-49834**

Dear Mr. Hull:

We have limited our review of your filing to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Summary Term Sheet, page 1

1. Please revise the summary to highlight the board's decision not to conduct an auction process or market check prior to approving the merger agreement, including your financial advisor's qualification in the first full paragraph on page 32 regarding this decision. Please also revise to briefly highlight potential risks and negative factors of the acquisition as disclosed on pages 29-30.

Interests of Gen-Probe's Directors and Executive Officers in the Merger, page 4

2. Please quantify the amounts described.

Questions and Answers..., page 12

3. Please treat the summary and question and answers as one section and remove redundancy.

Background of the Merger, page 21

4. Where you indicate that a party submitted an indication of interest at a particular price or range, where possible, disclose the premium to the then-current market price represented by the indication of interest. In addition, it is not clear from the disclosure whether parties who had signed confidentiality agreements and/or submitted indications of interest had engaged in due diligence prior to indicating that they did not wish to pursue a transaction. Please clarify.
5. Please clarify when Party I exited the bidding process.
6. Please revise your disclosure in the first paragraph on page 23 to describe the “other strategic options” explored and explain why the board rejected those options.
7. We note your reference on page 28 to discussions between your management and Hologic regarding Hologic’s likely reaction to your conducting an auction process. Please revise the background section to describe these discussions in detail. Also please revise to explain in greater detail your April 5, April 27 and April 29 internal discussions concerning whether to contact third parties.

Opinion of Gen-Probe’s Financial Advisor, page 30

8. Please provide on a supplemental basis copies of the materials that Morgan Stanley prepared in connection with its fairness opinion or otherwise provided to the board in connection with this transaction, including, among other things, any “board books,” drafts of fairness opinions provided to the board, and summaries of all oral presentations made to the board.
9. Please tell us what consideration you have given to updating your disclosure for any events subsequent to the date of the board meeting and/or fairness opinion. We note in this connection that the FDA has approved your PANTHER System for use with APTIMA Combo 2(R) Assay.

Precedent Transactions Analysis, page 34

10. Please revise to explain in greater detail why Morgan Stanley determined to limit the precedent transactions analysis to the three most recent transactions in excess of \$1 billion.

Interests of Gen-Probe's Directors and Executive Officers in the Merger, page 38

11. We note your disclosures on pages 24 and 26 indicating that Hologic's management raised the possibility of Mr. Hull continuing to lead the Gen-Probe business following an acquisition and that Mr. Hull informed Hologic that he would not engage in any future employment discussions until after a definitive merger agreement, if any, were executed. Please disclose whether Mr. Hull and other named executive officers have engaged in employment discussion with Hologic either before or after execution of the merger agreement.

The Merger Agreement, page 47

12. Refer to the second italicized paragraph under this heading. Because the terms of the Merger Agreement are included in your disclosure document, please revise to reflect your obligation to disclose any material change in the information contained in such document, even if the document was initially prepared for a different purpose.

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 the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. 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 responding to our comments, please provide a written 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.

Carl W. Hull
Gen-Probe Incorporated
June 14, 2012
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Please contact Joseph McCann at (202) 551-6262 or me at (202) 551-3528 with any questions.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz
Assistant Director

cc (via email): Brian J. McCarthy, Esq. – Skadden, Arps, Slate, Meagher & Flom LLP