



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

October 12, 2007

Dr. Tina S. Nova
Chief Executive Officer
Genoptix, Inc.
2110 Rutherford Road
Carlsbad, CA 92008

**RE: Genoptix, Inc.
Amendment No. 2 to Registration Statement on Form S-1
File No. 333-144997
Amendment Filed October 9, 2007**

Dear Dr. Nova:

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 supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not 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 on 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 the company's response to our prior comment five from our letter dated October 5, 2007. Your analysis makes a distinction between bone marrow cases and blood-based cases, and also indicates that historically 60% of your cases have been more complex, higher priced, bone marrow cases. Please revise your disclosure in all appropriate sections to include those portions of your comment letter response addressing the percentage breakdown between the two types of cases, and a general discussion of the complexity of, and pricing associated with, each type of case. In addition, briefly describe the nature of the competitive landscape associated with each type of testing.

2. Please incorporate the revisions made in response to our prior comment seven from our letter dated October 5, 2007 into your “Governmental Regulation” discussion on page 69.

Use of Proceeds, page 31

3. Please revise to set forth the estimated underwriting discounts and commission and the estimated offering costs.

Liquidity and Capital Resources, page 56

4. We note your response to comment 13. Please revise to address the cash used in investing activities and the cash provided by and used in financing activities for the noted periods or advise us why the disclosure is not necessary.

Management, page 77

5. We note your response to our prior comment 21 from our letter dated October 5, 2007 and the analysis you have provided supporting your conclusion that your key employees and consultants within your disclosure responsive to Item 401 of Regulation S-K do not perform policy making functions for purposes of Rule 3b-7 and Item 402 of Regulation S-K. Please revise to incorporate substantially all of your response immediately under the heading “Key Employees and Consultants” on page 80.

Executive Compensation, page 86

6. We note your response to comment 22 that the company deleted the references that compensation is “generally comparable” because the compensation committee has not engaged in a formal benchmarking process through which it compares its executive compensation to other companies that are similar to the company. We also note your additional disclosure that “the company has not benchmarked our executive compensation against a particular group of companies that it considers to be comparable to us.” Advise us why the company changed the disclosure expanding the statement that the company has not benchmarked executive compensation against a particular group of companies. Did the company benchmark its executive compensation against a broader group of companies? Please revise your disclosure as appropriate.
7. On page 97 you disclose that you have re-priced your 2006 stock option awards in connection with a retrospective valuation analysis. You also indicate that you have agreed to pay the cash differential associated with the re-pricing to induce the option holders to agree to the modification. In an appropriate section, please revise to indicate: (a) the business and/or legal rationale for making this

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adjustment; (b) the impact that this will have on the company, including the total value of cash payments that the company expects to make to satisfy these obligations; (c) whether the IPO proceeds will be used to satisfy such payment obligation; and, (d) the impact that the re-pricing has on your executive compensation plans and structure. In this respect, for example, we note that the \$55,620 payment to Dr. Nova will be free of the vesting requirements normally associated with stock options and will not have transfer restrictions under Rule 144.

Closing Comments

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 supplemental 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 filings reviewed by the staff to be certain that they have provided all information investors require for an informed 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.

You may contact Raj Rajan (202) 551-3388 if you have questions regarding comments on the financial statements and related matters. Questions on other disclosure issues may be directed to Jay Williamson at (202) 551-3393.

Sincerely,

John Reynolds
Assistant Director

cc. Patrick Loofbourow
(858) 550-6420