



DIVISION OF  
CORPORATION FINANCE

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

July 30, 2010

Mr. Michael J. Lambert  
Chief Financial Officer  
NuVasive, Inc.  
7475 Lusk Boulevard  
San Diego, California 92121

**Re: NuVasive, Inc.**  
**Form 10-K for the Fiscal Year Ended December 31, 2009**  
**Filed February 26, 2010**  
**File No. 000-50744**

Dear Mr. Lambert:

We have reviewed your filings and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the year ended December 31, 2009

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 35

Results of Operations, page 39

1. We note that your fiscal year 2009 revenue has increased by approximately 48% as compared to the previous year and noted from your disclosure only that the increase is primarily related to continued market acceptance of your products. In light of the significant increase in revenue for fiscal year 2009 as compared to the prior year, your MD&A disclosure appears broad and does not provide a thorough analysis that provides readers a view of the company through the eyes of management. When individual line items, disclosed in your statements of operations, significantly fluctuate in comparison to the comparable prior period, please quantify, and disclose the nature of each item that caused the significant change. For example, please quantify each material factor, i.e. such as price changes and / or volume changes by type of product, disclose separately the effect on operations attributable to each factor causing the aggregate change from year to year and disclose the nature of or reason for each factor causing the aggregate change. The analysis should reveal underlying material causes of the factors described and any future impact on operating results. Please consider the use of tables when quantifying changes, with narrative discussions following the tables to explain the underlying business reasons for the changes. Please incorporate the above comment to all of the disclosures in the analysis of your results of operations in MD&A in future filings. For further guidance, please refer to Item 303 and the related instructions in Regulations S-K as well as SEC Interpretive Release No. 33-8350.

Item 9A. Controls and Procedures, page 47

Management's Report on Internal Control over Financial Reporting, page 48

2. Please revise Management's Report on Internal Control in future filings to appropriately include a statement of management's responsibility for establishing and maintaining adequate internal control over financial reporting. We refer you to Item 308(a)(1) of Regulation S-K.

Item 11. Executive Compensation, page 51

3. We note from your disclosure under "Benchmarking" that you have incorporated by reference from page 18 of your proxy statement that you target base salaries, bonuses, total cash compensation, equity compensation and total direct compensation total cash compensation for your named executive officers above the 75<sup>th</sup> percentile of your peer companies. Given that you target these elements of your compensation packages, please briefly discuss in your applicable future filings how each element of compensation you

provide to the named executive officers relates to the data you have analyzed from the peer companies and include an analysis of where actual payments under each element of compensation actually fell within the targeted range. If any of your named executive officers are compensated at levels that are materially different from the targeted levels of compensation, please also provide discussion and analysis as to why.

4. We note from your discussion under "Base Salaries" on page 20 of the proxy statement that you have incorporated by reference into your Form 10-K that salary increases were larger than in the prior year.
  - a. Please tell us and in future filings explain what perquisites were eliminated which were reflected in the increased salaries. Please also disclose why the committee decided to make this change.
  - b. Please tell us and disclose in future filings how the committee was able to evaluate that your executives "delivered results that were well above expectations and similarly situated executives in our peer group." For example, we note you pay base salaries were already above the 75% percentile of the company's peers, how did the committee evaluate what executives were comparable and what "results" were used to make the comparisons.
  - c. Also, in future filings, please specifically describe for each executive what the committee evaluated in determining the "performance of the individual executives."
5. We note your discussion under "Performance-Based Cash Bonuses on page 20 and 21 of the proxy statement that you have incorporated by reference into your Form 10-K regarding the earnings per share target of \$0.15 to \$0.25 for the bonus pool to be funded. It is unclear how this target was set by the committee. In future filings, please disclose how the earnings per share target was used to determine the size of the bonus pool to be funded.
6. We note from your discussion under "Performance-Based Cash Bonuses " on page 20 and 21 of the proxy statement that you have incorporated by reference into your Form 10-K that you have not disclosed any specific targets to be achieved in order for your named executive officers to earn their additional bonuses. Please provide such disclosure in your future filings, as applicable. To the extent you believe that disclosure of such information, on a historical basis, would result in competitive harm such that the information could be excluded under Instruction 4 to Item 402(b) of Regulation S-K, please provide us with a detailed explanation supporting your conclusion. To the extent that 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) of Regulation S-K. 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.

7. We refer to your disclosure under the caption “Equity Compensation” on page 22 of the proxy statement that you have incorporated by reference into your Form 10-K. We note minimal, if any, discussion and analysis as to how the stock option grants and restricted stock unit awards were determined. In your future filings, as applicable, please include substantive analysis and insight into how your Compensation Committee made its stock option grant determinations and restricted stock unit award determinations with respect to each named executive officer. Refer to subparagraphs (b)(1)(iii) and (v) of Item 402 of Regulation S-K. For example, please 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.
8. We note your disclosure in response to Item 402(s) of Regulation S-K under the caption “Management of Compensation-related Risks” on page 24 of the proxy statement that you have incorporated by reference into your Form 10-K. Please describe the process you undertook to reach the conclusion that disclosure is not necessary.

Financial Statements, page 60

Notes to Consolidated Financial Statements, page 66

Note 1. Organization and Significant Accounting Policies, page 66

Description of Business, page 66

9. We see your disclosure that you operate in one business segment, but we also see several disclosures related to your different product offerings. For example, you disclosure on page 1 you have four different product offerings. Also, as part of your discussion in MD&A of the change in cost of sales you cite your biologic product line and explain that these products have a lower margin relative to other product lines. Please revise future filings to disclose revenue by product or disclose why this is impracticable. We refer you to FASB ASC 280-10-50-40.

Inventory, page 67

10. We see you indicate inventory is recorded in cost of goods sold based on a method that approximates cost. Please specifically tell us the cost flow assumption method utilized to relieve inventory (e.g., FIFO, average cost, etc.) and how the method utilized complies with U.S. GAAP. Also, tell us why you believe you have met the disclosure requirements of Rule 5-02 (6)(b) of Regulation S-X.

Reclassifications, page 72

11. We see from your disclosure that you reclassified depreciation expense from cost of sales to sales, marketing and administrative expenses and we see that the related amounts appear to be significant. Please tell us in further detail what led to the reclassification and why you determined this reclassification was appropriate. Please cite the authoritative accounting literature upon which you based your prior and current classification of the referenced depreciation expense. Please also tell us your consideration as to whether this was a correction of an error based upon the guidance in FASB ASC 250-10.

Note 2. Business Combinations, page 72

Cervitech Inc. Acquisition, page 72

12. We see that you recorded a significant amount of goodwill in conjunction with the purchase of Cervitech. Please revise future filings to provide a qualitative description of the factors that make up the goodwill recognized. We refer you to FASB ASC 805-30-50.
13. We also see from your disclosure that you allocated a significant amount of the purchase price to in-process research and development. Please revise your discussion in future filings to explain the nature of the underlying technology, how you determined the fair value of the in-process research and development, estimated completion dates, completion costs and capital requirements, as well as your related accounting. Please also discuss the risks and uncertainties associated with completing the technology.

Investment In Progentix Orthobiology, B.V., page 74

14. Please tell us how you determined that the Remaining Shares and the Option Agreement that were entered into between NuVasive, Progentix and Progentix shareholders are not considered to be freestanding financial instruments. Further, please tell us how your accounting for the agreements as a combined unit in the consolidated financial statements as a redeemable noncontrolling interest classified as mezzanine equity complies with FASB ASC 810 or other authoritative U.S. GAAP. Please cite the accounting guidance upon which you based your accounting as classification. Finally, tell us your consideration of the need to provide a reconciliation at the beginning and the end of the period of the carrying amount of your total equity (net assets), equity (net assets) attributable to the parent, and equity (net assets) attributable to the noncontrolling interest based on the disclosure requirements of FASB ASC 810-10-50-1A.

Osteocel Biologics Business Acquisition, page 77

15. We see that you also recorded a significant amount of goodwill in conjunction with the purchase of Osteocel. Please revise future filings to provide a qualitative description of the factors that make up the goodwill recognized. We refer you to FASB ASC 805-30-50.

Mr. Michael J. Lambert  
NuVasive, Inc.  
July 30, 2010  
Page 6

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 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.

You may contact Julie Sherman, Staff Accountant, at (202) 551-3640 or Jay Webb at (202) 551-3603 if you have any questions regarding comments on the financial statements and related matters. Please contact Alicia Lam, Staff Attorney, at (202) 551-3316 or Jay Mumford, Reviewing Attorney, at (202) 551-3637 if you have questions on any other comments. In this regard, do not hesitate to contact me at (202) 551-3212.

Sincerely,

Jeff Jaramillo  
Branch Chief