

Mail Stop 6010

December 20, 2005

Gregory Witchel  
Chief Executive Officer  
DiaSys Corporation  
81 West Main Street  
Waterbury, CT 06702

**Re: DiaSys Corporation  
Annual Report on Form 10-KSB for the  
fiscal year ended June 30, 2005  
Filed October 14, 2005  
Quarterly Report on Form 10-QSB for the  
quarter ended September 30, 2005  
Filed November 14, 2005  
Response letter submitted on December 1, 2005  
File No. 1-16285**

Dear Mr. Witchel:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents 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.

Form 10-KSB for the fiscal year ended June 30, 2005

Item 1. Description of Business, page 1

1. Describe the 2003 change in control and the relationships of the parties involved.

2. Please refer to the first bullet of prior comment 2. Please be advised that comments, if any, concerning your confidential treatment application will be issued in a separate letter.
3. Please address the third bullet of prior comment 2 fully.
4. Please refer to prior comment 3 and prior comment 29. Please tell us why you did not add disclosure concerning the following:
  - Your announcement in February 2005 about your agreement with Grupo Mex Lab and that the Mexican market “represents a significant opportunity;”
  - Your announcements in 2004 about your agreements with Repreclin and Tecnodiagnosostica that “the market in Venezuela is highly attractive” and that Costa Rica represents an “important opportunity;”
  - Your announcements in May and December 2004 and January 2005 concerning agreements with distributors; and
  - Your May 24, 2004 and May 26, 2004 press releases, such as “Assuming 20% market acceptance and penetration, we can conservatively estimate annual potential revenues to the company of about \$18 million per year.”

Point of Care, page 4

5. Please clarify what you mean by “PCT filings,” and disclose the significance of the filings.

Sales, Marketing and Distribution, page 4

6. We note your disclosure that you have “terminated 3 U.S. regional sales managers in the beginning of the fourth quarter.” We also note identical disclosure in your Form 10-KSB for the previous fiscal year. Did you terminate three sales managers in the fourth quarter of the last two fiscal years? Please avoid inappropriately copying disclosure from previous filings.

Strategic Relationships, page 5

7. Please tell us why you do not provide disclosure about your relationship with Bayer.
8. Please file the agreements mentioned in this section.

Equity Compensation Plan Information as of June 30, 2005, page 13

9. Please refer to prior comment 6. Please tell us why your 2004 Form 10-KSB referred to plans not approved by shareholders.

Recent Issuances of Unregistered Securities, page 13

10. We reissue prior comment 7 as it applied to your previous disclosure. Your disclosure regarding past transactions must comply fully with the requirements of Regulation S-B Item 701.
11. Please tell us where you have provided the disclosure required by Item 701 of Regulation S-B for each of the fiscal 2005 issuances mentioned on page 31.

Item 6. Management's Discussion and Analysis of Financial Condition and Results of Operation, page 13

Liquidity and Capital Resources, page 14

12. You disclose that you engaged a third party to complete development of the Bence Jones protein technology. Tell us about the significant terms of this arrangement, specifically focusing on the terms for compensation. Unless insignificant, please make disclosure about the nature, terms and extent of any financial commitment under the arrangement with the third party research firm.

Financial Condition, page 15

13. Please refer to prior comment 8. Please provide sufficient disclosure for investors to appreciate your cost of capital and the trends during the period addressed. For example, discuss the terms of the securities issued or issuable, including any discounts to the market price of your securities.

Net Sales, page 16

14. Quantify the increase in sales from your major customer. Also, discuss the reasons for the changes in sales to other customers. For example, given your announcement of new agreements, it is unclear why sales to other customers have not changed. It is also unclear what trends the various products mentioned in Item 1 are experiencing. Please likewise expand the disclosure in your Form 10-QSB for the period ended September 30, 2005.

Gross Profit and Gross Profit Margins, page 16

15. Despite an increase in sales for fiscal 2005, we see that your gross profit margin decreased from 56% in fiscal year 2004 to 49% in fiscal year 2005. However,

MD&A does not provide a clear explanation of the factors responsible the deterioration of your gross margin in 2005. Please expand to identify and describe the factors responsible for the deterioration of your gross margin in 2005.

16. As a related matter, you indicate that you initiated a restructuring action in the fourth quarter of 2005. Under that action, you appear to have consolidated both manufacturing and assembly functions, and sales support and administration in the UK. We also see from a Form 8-K dated September 15, 2005 that the consolidation of operations resulted in a 32% reduction in overall staffing. Financial statement and MD&A disclosures about restructuring plans should conform to SFAS 146 and SAB Topic 5-P. Please expand to provide all of the relevant disclosures. If you believe disclosure is not required under that guidance, please support your assertion in detail.

Research and Development, page 16

17. Please expand the disclosure on pages 3-4 of the Products section to discuss the new workstation.

Controls and Procedures, page 17

18. Please amend the appropriate filings to address the concerns raised by previous comments 10 and 11.
19. Please disclose any changes in your internal control over financial reporting during your fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, your internal control over financial reporting. Please similarly revise your disclosure in your Form 10-QSB for the period ended September 30, 2005.

Item 9. Directors and Executive Officers of the Registrant, page 19

20. Please refer to prior comment 13. Please provide the disclosure required by Item 406(a) of Regulation S-B.

Item 10. Executive Compensation, page 19

21. Please provide all disclosure required by Regulation S-B Item 402, including a summary compensation table with disclosure for your last three completed fiscal years.
22. Please reconcile the number of option grants reflected in the summary compensation table with the number in the option grants table.

23. Please provide the year-end option value table required by Regulation S-B Item 402(d).

Item 12. Certain Relationships and Related Transactions, page 21

24. Please refer to prior comment 15. Please expand the table in response to prior comment 25 of our March 18, 2005 letter to address the documents evidencing the transactions described in the disclosure incorporated by reference in your Form 10-KSB for fiscal 2004.
25. Please explain the purpose and terms of the July 16, 2004 Settlement Agreement and General Release. File the agreement as an exhibit.
26. Please tell us where you have filed the documents evidencing the transactions mentioned in the first three full paragraphs of your related-party disclosure on page 22.
27. Disclose the terms of the November 1, 2004 loans. Also clarify why the issuers of the loans would also “personally guarantee” them.
28. Please clarify the relationship between you and the public relations firm. Also disclose the number of shares issued to the firm, the duration of the agreement, and the nature of the services to be provided.
29. With a view toward clarified disclosure, please identify to us each person who is a creditor for the \$400,000 “loans payable from shareholders” indicated on your balance sheet. Include the date of issuance of the loan, where you have disclosed the terms of the transaction, and the exhibit number of the controlling documents.

Section 16(a)

30. Please refer to prior comment 16. Please provide us with a table that supports your belief that transactions by your officers and directors have been reported. The table should address the transactions discussed on pages 9 and 10 of your July 2004 proxy and include specific dates when the transactions were reported under Section 16.

Report of Independent Registered Public Accounting Firm, page 28

31. Please amend the second paragraph of the audit report to refer to the standards of the PCAOB. Refer to PCAOB Auditing Standard No. 1.

Patent Costs, page 34

32. Refer to prior comment 22 from our letter dated August 12, 2005. We do not see that you have disclosed the estimated aggregate amortization expense for each of the five succeeding fiscal years as required by paragraph 45 of SFAS 142. Please revise your filing to include the required disclosure. Additionally, please also revise to specifically identify the useful life in years and to disclose the basis for assuming that the useful life for SFAS 142 purposes is the remaining life of the patents.

Note 14. Common Stock, page 41

33. We note your response to prior comments 24 and 25 from our letter dated August 12, 2005. Please expand to make clear disclosure about the terms and conditions of the related party borrowings totaling \$400,000 as of June 30, 2005. For instance, you should specifically address due dates, repayment terms, security, conversion terms and interest.
34. As a related matter, with respect to the warrants and stock issued for services or in connection with your financing transactions, please disclose how you determined the fair value of the instruments granted, including identification of the model(s) applied and significant assumptions. As well, when you issue stock or debt with warrants (or other equity instruments) the disclosure should also address how you allocated the proceeds to each feature. Please expand.
35. Please provide us copies of the agreements underlying the cash sales of equity during fiscal 2005 and to-date during fiscal 2006, including agreements addressing the terms and conditions of any warrants issued in the transactions.

Signatures

36. Please note that your controller or principal accounting officer must sign the filing. Any person who occupies more than one of position must indicate each capacity in which he or she signs the report. See General Instruction C.2 to Form 10-KSB.

Form 10-QSB for the fiscal quarter ended September 30, 2005

Gross Profit, page 9

37. Please explain why your profit decreased at a rate greater than your decrease in sales.

Selling, General & Administrative, page 9

38. Please discuss the restructuring that resulted in decreased costs. From your revised disclosure, investors should be able to evaluate the sustainability of the cost reductions and the potential effect on your business, including your competitive position.

Recent Sales of Unregistered Securities, page 11

39. We note your recent sales of unregistered securities. Please provide us your analysis of whether these transactions should have been reported under Item 3.02 of Form 8-K. If so, please confirm your understanding of the effect of the failure to file Form 8-K on your eligibility to use short-form registration statements.
40. Please tell us where you have provided the disclosure required by this Item for the warrant sales mentioned on pages 5 and 8.
41. Please disclose the facts relied upon to make each cited exemption from registration available. See Regulation S-B Item 701(d).

Exhibits

42. Please submit certifications that do not alter the language required by Regulation S-B Item 601(b)(31). For example, we note the change you made in paragraph 4(b) of the certification.

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 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 Kristin Lochhead at (202) 551-3664 or Gary Todd at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Tom Jones at (202) 551-3602 or me at (202) 551-3617 with any other questions.

Sincerely,

Russell Mancuso  
Branch Chief

cc: (via fax): Richard T. Keppelman