

Mail Stop 6010

January 22, 2007

Amit Kumar, Ph.D.
President and Chief Executive Officer
Combimatrix Corporation
6500 Harbour Heights Parkway
Suite 301
Mukilteo, WA 98275

**Re: Combimatrix Corporation
Registration Statement on Form S-1
Filed December 26, 2006
File No. 333-139679**

Dear Dr. Kumar:

We have limited our review of your filing to those issues we have addressed in our 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 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.

General

1. Please tell us why you did not register this transaction on Form S-4. Include in your response an analysis of whether the disclosure requirements of Form S-4 would be material to investors who are evaluating this transaction.

Prospectus Cover

2. Your disclosure in the third paragraph implies that exercise of warrants and options could affect the exchange ratio. However, your disclosure on page 14 implies that the exchange ratio is fixed. Please reconcile.

Prospectus Summary

3. We note your disclosure that before the split off there will be 52,365,810 shares of Acacia Research-CombiMatrix common stock outstanding and that there will be a similar number of shares of your common stock outstanding after the split off. Please tell us whether the increase in authorized stock of Acacia Research-CombiMatrix that appears to have been approved by Acacia Research Corporation's shareholders last year became effective. If so, it is unclear why that is not reflected in subsequent balance sheets of Acacia Research Corporation and in the exhibits filed to Acacia Research Corporation's periodic filings.

Stock Exchange Listing, page 2

4. With a view toward clarified disclosure, please tell us when you will apply for the listing and whether the listing will be concurrent with the split off.

Diagram of Split Off, page 3

5. Please tell us when the issuance of the Acacia Research Corporation common stock to the current Acacia Research-Acacia Technologies stockholders will be registered. Also provide us with your analysis as to whether an amendment to the Acacia Research Corporation Certificate of Incorporation is required to create the Acacia Research Corporation stock that is not classified.

We may not be able to engage in desirable strategic transactions, page 5

6. Please quantify the number of shares you may issue without creating tax uncertainties. Disclose any assumptions that underlie your calculation.

We could incur significant tax liability, page 6

7. Please quantify the tax liability if the transaction were deemed to be taxable.

Our common stock will trade as a new listing, page 6

8. With a view toward disclosure and given the market price of the Acacia Research-CombiMatrix common stock, please tell us why you believe it is reasonable to imply that you could satisfy the \$3.00 requirement.

A Former Vice President, page 13

9. Please file the consent of counsel mentioned here and on page 33.
10. With a view toward clarified disclosure, please tell us the nature of the alleged violations of the federal securities laws.

Description of Capital Stock, page 16

11. Please describe the material differences between the rights of a holder of your shares and the rights of a holder of Acacia Research-CombiMatrix shares.
12. Please clearly quantify and explain the effect of the difference between the number of authorized shares of your stock and of Acacia Research-CombiMatrix stock.

Compensation, page 55

13. Please provide compensation disclosure for your year ended December 31, 2006. See Release 33-8732A (August 29, 2006).

Equity Compensation Plan Information, page 60

14. Please clarify how control will change in the split off. Please tell us with specificity the location of the applicable provision that defines "change in control" in the exhibits filed with the Commission.
15. Please highlight in your prospectus summary the termination of unexercised options. Also highlight in the summary the number of outstanding options, warrants and other commitments to issue your securities that will survive the split off.

Historical, page 60

16. Given the last sentence of your introduction to the first table, it is unclear how the options under the 2002 plan will be treated in the redemption. Please revise for clarity.

Consolidated Financial Statements

17. Please update the financial statements as required by Rule 3-12 of Regulation S-X.
18. Please include a currently dated and signed consent from your independent auditors prior to requesting effectiveness.
19. We reference the discussion on page 1 that you will reimburse Acacia for all taxes owed by the CombiMatrix group prior to the split off. Please tell us your estimate of those taxes and clarify how they are reflected in the financial statements.

Consolidated Statements of Operations, page F-4

20. Please revise to state that the values are presented in thousands, as necessary.

Note 2. Summary of Significant Accounting Policies, page F-9

Revenue Recognition, page F-9

21. We see that you sell your product through distributors. Please describe the significant terms of your agreements with distributors, including payment, returns, credits, discounts, exchanges and other significant matters. Please explain and support when you recognize revenue to distributors and revise your filing to clarify. Refer to SAB 104 and SFAS 48 as necessary in your response.
22. Please revise to clarify your multiple-element arrangements and how you have recognized revenue under these arrangements in the financial statements.
23. We see that you use the percentage of completion method to recognize revenue under your government grants and contracts. Please tell us whether you have any billings in excess of costs and estimated earnings or costs and estimated earnings in excess of billings on uncompleted contracts.

Impairment of Long-Lived Assets and Goodwill, page F-11

24. We note from your disclosure on page 39 that you have three reporting units and that you estimate the fair value of reporting units using existing market prices for Acacia Research-CombiMatrix stock and the discounted cash flow method. Please revise to describe how you allocate the estimated fair value to the three reporting units.

25. In addition, we reference your discussion on page 7 of the possible impairment of goodwill. We also reference the decline in revenues in fiscal 2005 and operating losses during the periods presented. Please provide us your SFAS 142 impairment assessment for the most recent period.

Stock-Based Compensation, page F-12

26. Please disclose the period over which the \$2.9 million unrecognized compensation expense will be recorded in the financial statements.

Pre-2006 Stock-Based Compensation, page F-13

27. Please tell us the circumstances that resulted in recording stock based compensation credits during the year ended December 31, 2005 and the nine months ended September 30, 2005.

Note 17. Pro Form Information (unaudited), page F-28

28. Please tell us how you considered SAB Topic 1B-2 in determining whether full pro forma financial statements under Article 11 of Regulation S-X should be provided. Note that pro forma financial statements are required if historical financial statements are not indicative of the ongoing entity because tax or other cost sharing agreements will be terminated or revised.

Exhibits

29. Please tell us the effect of the stock split set forth in Section 1 of Article IV of the document filed as Exhibit 3.1 to your registration statement.
30. Please tell us why you have not filed Exhibit 8.

Exhibit 5

31. You should not file an opinion that assumes conclusions of law that are a necessary requirement of the ultimate opinion provided. We note, for example, the assumptions regarding authorization, execution and delivery of documents in the second paragraph.
32. Given the statements in the sixth paragraph, please file an opinion that is dated on the date that the registration statement is declared effective.

33. Please clarify whether Mr. Rasor issued the opinion in his individual capacity. We note the inconsistency between the individual signature and the statement that “[w]e have acted as counsel for the Registrant.”

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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 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 Act of 1933 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness 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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the

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Combimatrix Corporation
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securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Kristin Lochhead at (202) 551-3664 or Brian Cascio at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. You may contact Tim Buchmiller at (202) 551-3635 or me at (202) 551-3617 with any other questions.

Sincerely,

Russell Mancuso
Branch Chief

cc: Raymond A. Lee, Esq.
Steven T. Anapoell, Esq.
Dennis J. Rasor, Esq.
(via fax)