

Mail Stop 6010

March 23, 2007

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

**Re: CombiMatrix Corporation
Amendment No. 1 to Registration Statement on Form S-1
Filed March 12, 2007
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.

Fee Table

1. We note that you have deleted the table. Given your reliance on Rule 457(o), please tell us how you will determine whether you have sufficient securities registered for this transaction throughout the offering.

Prospectus Cover

2. We note your response to prior comment 2 of our letter dated January 22, 2007. Your disclosure in the third paragraph continues to imply, however, that the

exercise of options or warrants could affect the exchange ratio. Please revise so that the disclosure regarding the exchange ratio is clear and consistent throughout your prospectus.

Prospectus Summary

3. We note your response to prior comment 3. We also note, however, that the Restated Certificate of Incorporation which is incorporated by reference into Acacia Research Corporation's annual report on Form 10-K for the fiscal year ended December 31, 2006 only authorizes 50 million shares of Acacia Research-CombiMatrix common stock. Please tell us where the restated certificate of incorporation of Acacia Research Corporation has been filed which indicates an increased number of authorized shares of Acacia Research-CombiMatrix common stock. Also, please tell us when the amendment to Acacia Research Corporation's certificate of incorporation that increased the number of authorized Acacia Research-CombiMatrix shares took effect.
4. We note the disclosure you have added in response to prior comment 15. Please also disclose in the summary the number of outstanding warrants and other commitments to issue shares of your common stock.

Stock Exchange Listing, page 2

5. We note your response to prior comment 4. With a view toward clarified disclosure, please tell us whether you satisfy all objective criteria for listing your shares on the Nasdaq Capital Market.

Diagram of Split Off, page 3

6. Please refer to the Acacia Research – Acacia Technologies stock consistently throughout this diagram. Currently, you refer to it both as “Acacia Research – Acacia Technologies” and “AR – Acacia Technologies.”

Summary Historical Financial Data, page 4

7. To the extent applicable, please revise to state that the amounts included in the tables are in thousands, except per share data.

Risk Factors, page 5

As a result of the redemption of AR-CombiMatrix stock..., page 5

8. Please quantify the aggregate fair market value of the assets of CombiMatrix Corporation's business and the adjusted tax bases of such business to Acacia as of a recent practicable date. Also please indicate the current corporate tax rate that would be applicable in the event the redemption is a taxable event and explain, as appropriate, how that rate may change going forward.

We may not be able to engage in desirable strategic transactions, page 6

9. Refer to the disclosure in the last paragraph. With a view toward clarified disclosure, please tell us about the transactions that you "have undertaken" or "contemplate" that might create the tax liability you mention. Also tell us about the degree of risk of tax liability created by these transactions.

Our common stock will trade as a new listing, page 8

10. We note from your response to prior comment 8 that Acacia Research Corporation intends to set the redemption ratio at a number that you intend will cause the per share trading price of your common stock to be above \$4.00 per share. Your response appears to be inconsistent with your prior disclosure that holders of Acacia Research-CombiMatrix common stock will be entitled to receive one share of CombiMatrix Corporation common stock in exchange for each share of Acacia Research-CombiMatrix common stock held on the redemption date. Please revise your disclosure so that it is clear and consistent and to disclose your plans with respect to setting the redemption ratio.

A Former Vice President, page 19

11. We note your response to prior comment 9; however, since your document discloses the opinions reached by outside counsel and independent counsel, consent is required. See Rule 436. Please file the consent of each of the outside and independent counsel mentioned here and on page 37.
12. With respect to the first allegation described in your response to prior comment 10, please provide us with more detail regarding the agreement, including your analysis as to why such agreement was not required to be filed as an exhibit to your periodic reports.

13. Please provide us with a copy of the complaint filed by your former Vice President and any responses that you have filed in response to that complaint with the Department of Labor.

Reasons for the Split Off, page 18

14. Please reconcile the disclosure in this section with the second paragraph on page 5 of the opinion filed as exhibit 8.1 to your registration statement.

Material U.S. Federal Income Tax Considerations, page 19

15. We note your disclosure in the third paragraph that "Acacia received an opinion of Greenberg Traurig, LLP, counsel to Acacia, to the effect that the split-off will be tax-free to Acacia and the holders of Acacia Research-CombiMatrix stock under Sections 355 and 368 and related provisions of the Code." The opinion that you have filed as Exhibit 8.1 to your registration statement does not appear to reach the conclusions you have disclosed. For example, the opinion concludes that "Section 355(e) of the Code will not apply to the Distribution," and does not appear to address the implications of Section 368 of the Code. Please file an opinion of tax counsel as to all of the material federal income tax consequences of the split off as an exhibit to your registration statement. Ensure that the opinion you file fully satisfies the requirement of Regulation S-K Item 601(b)(8).
16. We note that your revised disclosure in this section indicates that cash may be distributed instead of fractional shares. Since no other section of your prospectus mentions the possibility that cash may be distributed instead of fractional shares, please describe in an appropriate location in your prospectus all circumstances under which cash may distributed instead of fractional shares and disclose how any such cash amounts will be determined.
17. Given your letter ruling and counsel's opinion, it is unclear why you begin the last paragraph on page 19 with the equivocal statement "if" the split off qualifies. Please note that if counsel cannot opine on a particular material tax matter, it must clearly say so and provide the reasons for the uncertainty and the possible outcomes and risks to investors. Likewise, we note the equivocal statement on page 20 that Acacia's gain "likely" would include the entire fair market value of your stock.
18. Please tell us where you address the "hot stock" issues mentioned on page 4 of exhibit 8.1.

Description of Capital Stock, page 21

19. We note your revised disclosure in response to comment 11. Please expand your disclosure to include all material differences between the rights of a holder of your shares and the rights of a holder of Acacia Research-CombiMatrix common stock. As examples only, we note that pursuant to the terms of your certificate of incorporation, removal of directors requires a supermajority vote by your shareholders, you will no longer have a classified board, and the conversion and redemption features of the Acacia Research-Combimatrix common stock will not be applicable to the CombiMatrix common stock.
20. With respect to the bullet points under "Certificate of Incorporation and Bylaw Provisions," where the described provisions are materially different from the provisions contained in the charter documents of Acacia Research Corporation with respect to the Acacia Research-CombiMatrix common stock, please describe those differences.

No Written Consent of Stockholders, page 23

21. Article 2, Section 2.11 of your bylaws does not appear to be consistent with your disclosure regarding written consents of stockholders. Please advise or revise.

Special Meetings of Stockholders, page 23

22. Please tell us which section of your certificate of incorporation or bylaws permit your chief executive officer to call a special meeting.

Management's Discussion and Analysis of Financial Condition and Results of Operation, page 40

Discussion of Operations, Financial Resources and Liquidity, page 40

Revenues and Cost of Revenues, page 46

23. We reference your discussion of product revenues and cost of product sales on page 47. Please revise to discuss the gross margin generated by your product sales and clarify the reasons for significant changes in gross margin each period. We see that the gross margin percentage for product sales increased from 54% for the year ended December 31, 2005 to 62% for the year ended December 31, 2006.

Equity Compensation Plan Information, page 64

24. Please tell us where you have filed the December 2006 clarifying amendment to the CombiMatrix 2000 Stock Awards Plan and the 2002 CombiMatrix Stock Incentive Plan. Please also provide us with your analysis as to why shareholder and option and award holder approval was not required for the amendment to those plans and to the respective options and awards, as applicable.

Security Ownership, page 66

25. Please tell us how you have considered recently filed forms related to your company under Section 16 of the Exchange Act when you prepared your disclosure in this section.

Consolidated Financial Statements

Note 11. Allocated Net Worth, page F-21

Warrants, page F-22

26. We reference your disclosure on page F-23 that Acacia's classes of common stock are subject to redemption provisions under certain circumstances. Please revise to clearly disclose the specific circumstances that could result in redemption of the common stock.

Note 14. Pro Forma Information (unaudited)

27. We reference the discussion in Note 17 of your Form S-1 filed December 26, 2006 that each outstanding warrant will be exchanged to purchase CombiMatrix common stock, which is not redeemable. We see that this language has been removed from amendment number 1 to your Form S-1 filed March 12, 2007 and that you are currently presenting the warrants as a long term liability rather than as permanent equity in the pro forma information. Please tell us whether the redemption features of your common stock that result in the liability classification for the warrants will continue to exist after the split-off.

Exhibit 5

28. Please tell us why the shares must be "transferred" in order for them to be legally issued, fully paid and non-assessable.

Exhibit 8.1

29. 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 (1) of proper authority in the second paragraph of the opinion and (2) that "the CM Stock will constitute stock of Acacia for federal income tax purposes" in the last sentence of the first paragraph on page 5.
30. Please file an opinion that considers all issues required for an opinion supporting the tax matters described in your filing. We note that paragraph (2) on page 6 of the exhibit indicates that the current opinion excludes relevant issues.
31. Given the date restriction in paragraph (4) on page 6, please file an opinion that is dated as of the date you intend your registration statement to be declared effective.
32. Please revise paragraph (6) on page 7 so that it does not suggest that investors may not rely on the opinion.
33. Please expand the scope of the consent in the last paragraph of the opinion to include the use of counsel's name in the section entitled "Material U.S. Federal Income Tax Consequences of the Split Off." Also, clarify your reference to the use of counsel's name under "Legal Matters" as it appears that your prospectus does not contain a section with that heading.
34. Please file the complete opinion, including all attachments.

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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 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

Amit Kumar, Ph.D.
CombiMatrix Corporation
March 23, 2007
Page 8

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)