

April 24, 2008

Mail Stop 6010

Amit Kumar, Ph.D.
President and Chief Executive Officer
6500 Harbor Heights Pkwy, Suite 303
Mukilteo, WA 98275

Re: Combimatrix Corporation
Post-effective amendment to Form S-1 on Form S-3
Filed April 16, 2008
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 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.

Registration Statement Facing Page

1. Please demonstrate to us that you have satisfied all requirements for eligibility to register this transaction on Form S-3.

Explanatory Note

2. Please provide us support for your statement here that “[t]his Post-Effective Amendment does not register additional securities.” For example, demonstrate that your original Form S-1 registration statement covered the issuance by you of common shares underlying warrants. Include in your response an analysis of how the original S-1 described the transaction registered on the prospectus cover, in exhibit 5 and in the use of proceeds and the plan of distribution disclosure.

Prospectus Cover

3. We note that this registration statement relates to, among other things, the issuance by you of 28,341 shares of common stock underlying warrants issued in May 2003. In light of the disclosure on page F-24 of Acacia Research's Form 10-K for its fiscal year ended December 31, 2003, it appears that such warrants were issued in a private offering. Generally, it is inconsistent with Section 5 of the Securities Act to complete a transaction publicly that began privately. Please provide us with your analysis of how the issuance by you of the shares underlying the warrants issued in May 2003 is consistent with Section 5.

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As appropriate, please amend your filing in response to these comments. You may wish to provide us with marked copies of the amendments to expedite our review. Please furnish a cover letter with your amendments 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 amendments 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.

Before the amended registration statement is declared effective pursuant to Section 8 of the Securities Act, the company should provide us with a letter, 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.

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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.

You may contact Geoffrey Kruczek at (202) 551-3641 or me at (202) 551-3800 with any questions.

Sincerely,

Russell Mancuso
Branch Chief

cc (via fax): Mark A. von Bergen—Holland & Knight LLP
David C. Wong—Holland & Knight LLP