

June 6, 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
Response letter dated June 3, 2008
File No. 333-139679**

Dear Dr. Kumar:

We have reviewed your letter dated June 3, 2008. We are not providing you any assurance that your analyses or conclusions are accurate. If you elect to request that we declare your filing effective, please note that:

- the Commission, private plaintiffs or others might disagree with your positions. Please refer to the acknowledgements at the end of this letter that must accompany your request that the filing be declared effective; and
- the proposal suggested in your response to change the fee table by post-effective amendment would not be appropriate. See Securities Act Rules 413 and 457(a).

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;

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- 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.

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