Mail Stop 6010 September 15, 2006

Arlene Morris
President and Chief Executive Officer
Affymax, Inc.
4001 Miranda Avenue
Palo Alto, CA 94304

Re: Affymax, Inc.
File 333-136125
Form S-1 filed July 28, 2006

Dear Ms. Morris:

We have reviewed your filing and have the following 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 supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

Form S-1/A filed September 1, 2006
Management's Discussion and Analysis of Financial Condition and Results of Operations
Critical Accounting Policies and Significant Judgments and Estimates
Revenue Recognition, page 35

1. Please expand your disclosure both herein, on page 32 and in Note 2 to your consolidated financial statements to clarify how you consider revenue related to reimbursement of third-party U.S. clinical development expenses and profit sharing expense due from Takeda to be "earned" in relation to the applicable criteria of SAB No. 104, Topic 13A.1.

2. Please refer to your response to comment 27. Please tell us why it is appropriate to defer revenue recognition of your up-front payment until final delivery of the clinical trial results.

Stock-Based Compensation, page 36

3. Please expand your disclosure to include the following information relating to your issuances of equity instruments:

   - A discussion of significant factors, assumptions, and methodologies used in determining fair value, as your statement that your board of directors and management considered "progress and milestones attained in your business" is vague;

   - A discussion of how management considered the information provided by the unrelated third party valuation specialist that you engaged in July 2006 in relation to management's methodology; and

   - A discussion of each significant factor contributing to the difference between the fair value as of the date of each grant and the estimated IPO price, giving consideration to the price determined via your July 2006 contemporaneous valuation by an unrelated valuation specialist.

4. Please provide a consent from your third-party valuation specialist and include the valuation specialist in the "Experts" section of the filing.

5. Please disclose and provide us with additional information, both here and in note 8 to your consolidated financial statements, regarding your determination of the volatility factor related to your share-based payments. That is, correlate your selection of an expected volatility factor to paragraph 23 of SFAS No. 123(R) and provide further detail as to how you identified "industry peers," as discussed, for example, in paragraphs A22 and A139 of SFAS No. 123(R). Specify how you considered the stage of life cycle, size and financial leverage of the "industry peers" that you looked to in estimating your volatility factor.

6. Please furnish your letter dated September 1, 2006 regarding stock compensation via EDGAR. In addition, please tell us why the fair value of your stock did not increase significantly in February 2006 upon your entry into to the collaboration agreement with Takeda for your main product candidate, Hematide. It appears that the options granted in February 2006 were in anticipation of the Takeda agreement which was effective on February 13, 2006.

Results of Operations, page 39

7. We acknowledge the general discussion included in your "Overview," including your assertion that Hematide represented approximately 78% of your research and development expense in fiscal 2005. However, we believe that your disclosures about historical research and development expenses and estimated future expenses related to your major research and

development projects, particularly those product candidates other than Hematide, as referenced on page 57, could be enhanced for investors. Please refer to the Division of Corporation Finance "Current Issues and Rulemaking Projects Quarterly Update" under section VIII – Industry Specific Issues – Accounting and Disclosure by Companies Engaged in Research and Development Activities. You can find it at the following website address: http://www.sec.gov/divisions/corpfin/cfcrq032001.htm#secviii. Please then provide us with information in a disclosure-type format, regarding the costs incurred during each period presented and to date on each of the research and development projects in your pipeline. If you do not maintain research and development costs by project, please clarify in the filing why management does not maintain and evaluate research and development costs by project. Include other quantitative or qualitative analyses that indicate the amount of the company's resources being used on these projects. Please also provide us with the amount or range of estimated costs and timing to complete the phase in process and each future phase. To the extent that information is not estimable, please clarify in the filing the facts and circumstances indicating the uncertainties that preclude you from making a reasonable estimate.

Comparison of Years Ended December 31, 2003 and 2004, page 41

8. Please revise your disclosure to provide further detail regarding the $4.2 million intangible asset impairment that you recorded during the fiscal year ended December 31, 2003. Refer to Item 303(a)(3)(i) of Regulation S-K. Clarify what the change in corporate strategy was and how that resulted in your impairment.

Notes to Consolidated Financial Statements
Note 6. Preferred Stock, page F-21

9. Refer to your response to comment 22. Please revise your response regarding your warrants to address the additional conditions necessary for equity classification in paragraphs 12-32 of EITF No. 00-19.

10. We acknowledge your response to comment 23; however, your revised disclosure does not clarify for investors why it is appropriate to assume the automatic conversion of all of your preferred shares upon the IPO. Please revise your disclosure throughout the filing accordingly.

Note 8. Stock-Based Compensation, page F-25

11. We acknowledge your response to comment 26 and reissue our comment, as you have not yet disclosed your estimated IPO price. Please revise/update the vested/unvested intrinsic value option information included on page 37 of your MD&A based on your estimated IPO price through the date of the most recent balance sheet presented.

12. We acknowledge your response to comments 24 and 25 and will continue to reissue our comment until you have disclosed an estimated offering price. Therefore, please disclose in your financial statements, at a minimum, the following information for equity instruments

granted during the 12 months prior to the date of the most recent balance sheet included in the filing:

- The number of options or shares granted at each applicable date, as well as the related exercise price; underlying fair value of the common stock; and the intrinsic value, if any;

- Whether or not you obtained a contemporaneous valuation in determining the fair value of the equity instruments; and

- Whether or not the valuation specialist used was a related party.

Additionally, please provide all of the above information to us, supplementally, for equity instruments that you issue subsequent to the date of the latest balance sheet that you include in your filing through the date of your latest response.

As appropriate, please amend your filing 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 supplemental information. Detailed cover letters greatly facilitate our review. Please file your cover letter on EDGAR under the form type label CORRESP. 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 filings reviewed by the staff to be certain that they have provided all information investors require for an informed 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.

We will consider a written request for acceleration of the effective date of the registration statement as a 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 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.

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You may contact Ibolya Ignat (202) 551-3656 if you have questions regarding comments on the financial statements and related matters. Please contact Zafar Hasan at (202) 551-3653 or me at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey Riedler
Assistant Director

cc: Laura Berezin, Esq.
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