

Mail Stop 6010

May 12, 2006

Joseph Cummins, DVM, PhD
Chairman of the Board, President and Chief Executive Officer
Amarillo Biosciences, Inc.
4134 Business Park Drive
Amarillo, Texas 79109

**Re: Amarillo Biosciences, Inc.
Preliminary Proxy Statement on Schedule 14A, April 25, 2006,
revised April 28, 2006
File No. 333-04413**

Dear Mr. Reithinger:

We have reviewed your filings and have the following 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 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

1. We note that you have filed this preliminary proxy statement and your periodic reports under a file number used for registrations statements filed under the Securities Act of 1933 or for company's that are only reporting under Section 15(d) of the Securities Exchange Act of 1934. It appears, however, that the company is reporting under Section 12(g) as it has a Form 8-A12G on file. Please re-file these documents using your correct file number.
2. Please note that you are required to file with the Commission any written instructions, scripts, and outlines that will be used by any person that solicits proxies on behalf of the company, through personal interview, telephone, or telegram, and all other soliciting

- material that will be furnished to the company's stockholders. See Rules 14a-6(b) and (c).
3. Please revise your proxy statement to indicate for each proposal whether the board of directors has unanimously recommended that the stockholders vote for that proposal.
 4. Please revise your proxy statement to disclose the effect of abstentions and broker non-votes on each proposal.
 5. Please also revise your proxy statement to disclose the number of shares which must vote in favor of proposal number two.
 6. We refer to your third proposal, "To transact such other business as may properly come before the meeting or any adjournment thereof." Please make it clear in your notice, proxy statement and on your proxy card that this is a separate proposal that shareholders can vote on. Also, please note that such discretionary authority cannot be used to adjourn the meeting for the purpose of soliciting additional votes. If you anticipate that you may adjourn the meeting to solicit additional votes, revise your notice and proxy card to include a separate vote on this matter.

Principal Stockholders, pages 1-2

7. Please disclose the natural persons who have voting and dispositive power over the shares held by Hayashibara Biochemical Laboratories, Inc.

Security Ownership of Directors and Named Executive Officers, page 2

8. Please also add to your table the beneficial ownership information for your director nominees Thomas D'Alonzo and Thomas Ulie as required by Item 403 of Regulation S-B.
9. To the extent that Katsuaki Hayashibara has voting or investment control over the securities held by Hayashibara Biochemical Laboratories, Inc. he is considered a beneficial owner those securities. Please revise your table to the extent applicable.

Proposal One, Election of Directors, pages 3-4

10. Please note that Item 401 of Regulation S-B requires a brief description of the business experience of your officers, directors and director nominees during each of the last five years. Please revise this section to include the applicable dates for Thomas D'Alonzo.

Proposal Two, Approval of Conversion, page 4

11. Please revise your disclosure to discuss all the material differences between the provisions under Delaware and Texas law, including the indemnification provisions. We note that you deleted your original discussion of the differences in indemnification provisions between Delaware and Texas law. Please reinsert this discussion and address the material differences between such indemnification provisions.
12. We note that you discuss the benefits, e.g. viability, success, of being a Delaware corporation. Please revise your disclosure to also explain that converting to a Delaware corporation provides you no assurances of increased viability or success.
13. Please disclose any specific interests your officers, directors or director nominees may have in the new Delaware indemnification provisions, e.g. any threatened litigation.

Audit, Nominating and Compensation Committees, pages 5-6

14. Please provide the disclosure regarding the company's nominating committee required by Item 7(d)(2)(ii)(H) and Item 7(d)(2)(ii)(I) of Schedule 14A.
15. Please also provide all the disclosure regarding the company's audit committee required by Item 7(d)(3) of Schedule 14A.
16. Please provide the disclosure regarding the board of directors' process for security holders to send communications to the board of directors and board attendance at annual meetings as required by Item 7(h) of Schedule 14A.

Certain Transactions, page 7

17. Item 404 of Regulation S-B requires you to describe the nature of each related party transaction and amount of the related party's interest in the transaction. Please expand your disclosure of the agreements with HBL accordingly.

Independent Public Accountants, page 8

18. Please provide the disclosure regarding the company's independent public accountants required by Item 9(c), (d) and (e) of Schedule 14A.

Stockholder Proposals, page 8

19. Please revise your disclosure to calculate the deadline for submitting shareholder proposals for inclusion in next year proxy statement in accordance with Rule 14a-8(e)(Question 5). Your current deadline of December 16, 2006 does not meet the criteria of Rule 14a-8(e)(Question 5). The deadline is "not less than 120 calendar days before the date of the company's proxy statement released to shareholders in connection with the previous year's annual meeting." Also see Rule 14a-5(e)(1).

20. Please also revise your disclosure to calculate the deadline for submitting proposals outside the processes of Rule 14a-8. See Rule 14a-5(e)(2).

* * *

As appropriate, please revise your proxy statement in response to these comments. You may wish to provide us with marked copies of the revised document to expedite our review. Please furnish a response letter that keys your responses to our comments. 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. 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.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that

- the company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments in the filings reviewed by the staff do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments 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 our review of your filing or in response to our comments on your filing.

Joseph Cummins, DVM, PhD

May 12, 2006

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Please contact Sonia Barros at (202) 551-3655 or Suzanne Hayes at (202) 551-3675 with any questions.

Sincerely,

Jeffrey Riedler
Assistant Director

cc: Ed Morris, Esq.
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