

Mail Stop 6010
Via Facsimile and U.S. Mail

May 1, 2006

Mr. James Hayward
Chief Executive Officer
Applied DNA Sciences, Inc.
25 Health Sciences Drive, Suite 113
Stony Brook, NY 10532

**Re: Applied DNA Sciences, Inc.
Amendment No. 7 to Registration Statement on Form SB-2
Filed April 17, 2006
File No. 333-122848**

Dear Mr. Hayward:

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.

Amendment No. 7 to Registration Statement on Form SB-2

General

1. Prior to requesting acceleration for effectiveness, please amend your Form 10-KSB for the year ended September 30, 2005, as applicable, to comply with our comments on your Form SB-2.
2. Prior to requesting acceleration for effectiveness, please refer to Item 310(g) of Regulation S-B and consider whether you need to include, in an amended registration

statement on Form SB-2, unaudited financial statements for the three and six months ended March 31, 2006.

Consolidated Financial Statements

Index to Financial Statements, page F-1

3. The index to your financial statements indicates that the report of your independent registered public accounting firm is found on page F-43; however, the independent accountant's report does not appear anywhere in the document. Please revise your Form SB-2 accordingly.

Consolidated Statements of Cash Flows, page F-56

4. We acknowledge the information provided in "Exhibit B" in response to comment 14 of our letter dated January 26, 2006; however, we reiterate our request that provide to us a reconciliation between your statement of cash flows and your statement of shareholders' deficit for the year ended September 30, 2005. In particular, please tell us how the following line items on your September 30, 2005 statement of cash flows correlate to the aggregate of the individual transactions on the statement of shareholders' deficit: "common stock issued in exchange for consultant services rendered"- \$14,805,128; "ESOP shares"- \$3,960,000; and "amortization of beneficial conversion feature"- \$8,836,000.

Notes to (Audited) Consolidated Financial Statements

Note B- Acquisition of Intangible Assets, page F-64

5. We acknowledge your response to comment 3 of our letter dated January 26, 2006. You disclose that you acquired "proprietary DNA anti-counterfeit trade secrets developed by Biowell," but then state that there were no projects in place at acquisition or future research and development activities planned with respect to the intellectual property that you acquired from Biowell, which is the basis for your assertion that the \$14.7 million did not represent IPRD at acquisition. This assertion appears contradictory to your "Intellectual Property" discussion on page 29 and your disclosure on page 36; that is, it appears that research and development activities are the core of your company's business and that there are projects under development that utilize the Biowell intellectual property. Please revise your statement of operations for the year ended September 30, 2005 to reflect the \$14.7 million charge as IPRD or provide us with further information to clarify why it is not an IPRD charge pursuant to paragraph 42 of SFAS No. 141.
6. Additionally, please clarify whether the "developed core technologies" and "developed product technologies" that you acquired from Biowell meet the criteria of paragraph 11 c. of SFAS No. 2. It appears that you are using these technologies in conjunction with research and development projects.

Note E- Capital Stock, pages F-73 and F-74

7. Please provide us with a reconciliation of the note conversion transactions that you outlined for the three months ended March 31, 2005 to those disclosed in Note B of your Form 10-QSB/A for the period ended March 31, 2005. Based on the information provided, it appears that you converted \$2,246,056 of your notes payable in exchange for 6,488,051 shares during the three months ended March 31, 2005; however, the disclosure in Note B of your March 31, 2005 Form 10-QSB/A indicates those figures as \$4,221,320 and 7,998,551, respectively.

Note F- Stock Options and Warrants, pages F-77 - F-80

8. We acknowledge your response to comments 4 and 5 of our letter dated January 26, 2006. Your registration rights agreement appears to require you to file a registration statement that is declared effective by the SEC and to keep the registration statement continuously effective for a preset time period, or you are required to pay a liquidated damages payment equal to 3.5% per month on the face value of the related convertible notes, with no cap on the maximum penalty that could be incurred. The EITF recently deliberated the impact of these liquidated damages clauses and the effect on the accounting and classification of instruments subject to the scope of EITF 00-19 in EITF 05-4 *The Effect of a Liquidated Damages Clause on a Freestanding Financial Instrument Subject to Issue No. 00-19*. The EITF has not reached a consensus on this issue and has deferred deliberation until the FASB addresses certain questions which could impact a conclusion on this issue; however, different views on this issue are outlined in Issue Summary No. 1 to EITF 05-4. Tell us how you viewed and accounted for the registration rights agreement and the related warrants. Please also refer to the Division of Corporation Finance "Current Accounting and Disclosure Issues" Section II(B) - Classification and Measurement of Warrants and Embedded Conversion Features (New). You can find this at the following website:
<http://www.sec.gov/divisions/corpfin/acctdis120105.pdf>.
9. Additionally, you disclose that your liquidating damages are a "penalty." This appears to render your ability to settle in unregistered shares an uneconomic alternative that you are precluded from considering in lieu of cash settlement. Considering this, please tell us how you determined that you could classify the warrants within equity based on the provisions of EITF No. 00-19.
10. We acknowledge your response to comments 6 and 7 of our letter dated January 26, 2006. Please provide us with your explicit analysis of whether the warrants meet the definition of a derivative instrument under SFAS No. 133, paragraph 6, and provide us with your corresponding point-by-point analysis of whether the warrants meet all of the criteria outlined in paragraphs 12-32 of EITF No. 00-19 in order to qualify for the paragraph 11a.) scope exception under SFAS No. 133 and ultimately reside in equity.

11. We acknowledge your response to comment 9 of our letter dated January 26, 2006. Please revise your disclosure to clarify and quantify your accounting for the 3 million warrants issued to directors and advisors during the three months ended September 30, 2005. That is, tell us whether you initially recorded the fair value of the shares within equity and subsequently valued them as a derivative liability under SFAS No. 133 due to the “cashless exercise” provisions available to the warrant holders, as this is unclear based on your current disclosure. Additionally, please provide us with your explicit analysis of whether the warrants meet the definition of a derivative instrument under SFAS No. 133, paragraph 6, and provide us with your corresponding point-by-point analysis of whether the warrants meet all of the criteria outlined in paragraphs 12-32 of EITF No. 00-19 in order to qualify for the paragraph 11a.) scope exception under SFAS No. 133 and ultimately reside in equity.
12. In your response to comments 4-7, you repeatedly state that the penalties for the January/February 2005 warrants and the July 2005 Trilogy warrants can be settled in cash or unregistered shares. Please tell us why you do not believe the shares need to be registered. For example, the definition of “registrable securities” in paragraph 1.1(i) of Exhibit 4.4 to your 8-K filed January 28, 2005 for the January/February 2005 convertible notes offering appears to indicate that shares issued in conjunction with the warrant shares would be “registrable.” In addition, on page 79, you state that you also agreed to file a registration statement underlying the Trilogy warrants and that, in the event Trilogy successfully brings a claim against you relating to this matter, it could result in a significant decrease in your liquidity or assets, which also alludes to a penalty.

Form 10-QSB for the Fiscal Quarter Ended June 30, 2005

Condensed Consolidated Statement of Cash Flows, page 17

13. We acknowledge your response to comment 14 of our letter dated January 26, 2006. Please provide us with additional information to clarify the errors that you have identified in Exhibit B, as follows:
 - Notation A in Exhibit B indicates that you have “missed” reflecting expense related to common shares issued in exchange for services rendered by non-employee consultants of \$831,000. Please tell us whether your statement of operations for the three months ended June 30, 2005, as presented in your Form 10-QSB, correctly reflected the \$831,000 in that period.
 - Notation B in Exhibit B indicates that you did not record the shares issued in your note conversion transactions at their fair value, which would have resulted in incremental conversion expense. Please reconcile the \$4,474,533 in “debt exchanged for stock” to the statement of shareholders’ deficit at June 30, 2005 and tell us whether that amount reflects non-cash expense, as your response indicates that you simply offset the net book value of the debt converted to equity

and did not record any expense. Please also tell us the net book value of the debt converted to shares from 1/1/05 through 6/30/05 and correlate that to the \$4,474,533 and the \$(2,313,500).

Form 10-QSB/A#2 for the Fiscal Quarter Ended March 31, 2005

General

14. As acknowledged in your response to comment 11 of our letter dated January 26, 2006, prior to requesting acceleration of effectiveness for your Form SB-2, please amend your March 31, 2005 Form 10-QSB to appropriately present the financial statements as “restated.”

Notes to (Unaudited) Condensed Consolidated Financial Statements

Note B- Capital Stock, page 25

15. We acknowledge your response to comments 12 and 13 of our letter dated January 26, 2006, inclusive the information provided in “Exhibit A.” You disclose in Note B that you retired an aggregate of \$4,221,032 in convertible notes payable by issuing 7,998,551 shares of your common stock; however, the information provided in Exhibit A with respect to the “Lee” transaction, coupled with your assertion that you did not charge anything to the statement of operations, indicates that you did not account for the fair value of any incremental consideration paid to retire the convertible notes. Please provide us with a reconciliation that details each of the note payable conversion transactions that you effected during the three months ended March 31, 2005, including: the net book value of the convertible debt retired; the value of the shares issued through stockholders’ equity; and any amounts charged to your statement of operations for the fair value of any incremental consideration paid.
16. Additionally, giving consideration to our comment above, please provide us with the related restatement disclosures required by paragraph 26 of SFAS No. 154, inclusive of any revisions to your original restatement of \$2.9 million.

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As appropriate, please amend your filings 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 supplemental 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.

Mr. James Hayward
Applied DNA Sciences, Inc.
May 1, 2006
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You may contact Amy Bruckner, Staff Accountant, at (202) 551-3657 or Mary Mast, Senior Accountant, at (202) 551-3613 if you have questions regarding comments on the financial statements and related matters. Please contact John Krug, Senior Staff Attorney, at (202) 551-3609 with any other questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: Joe Daniels, Esq.
Fulbright & Jaworski LLP
666 Fifth Avenue, 31st Floor
New York, NY 10103-3198