

Mail Stop 6010
Via Facsimile and U.S. Mail

January 25, 2007

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. 8 to Registration Statement on Form SB-2
Filed November 13, 2006
File No. 333-122848**

Dear Mr. Hayward:

We have reviewed your filings and most recent response letter furnished via EDGAR on December 22, 2006 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. 8 to Registration Statement on Form SB-2

General

1. Prior to requesting acceleration for effectiveness, please refer to Item 310(g) of Regulation S-B and amend your registration statement on Form SB-2 to provide updated financial statements.

Notes to Condensed Consolidated Financial Information

Note A- Summary of Significant Accounting Policies, page F-20

Note I – Restatement of Quarterly Financial Statements, page F-45

2. We acknowledge your response to comments 4, 5 and 7 and reissue our comments. You have not provided us with sufficiently detailed disclosure that substantially revises your restatement footnote to explain why you made each correction of an error for the three and nine months ended June 30, 2006 and 2005 and the period from your inception through June 30, 2006. Please revise Note I to not only disclose the amount of each error and the related financial statement period and financial statement line item affected, but why each change occurred. That is, describe the nature of each error and the corresponding financial statement line items that it affected; tell us how you concluded that an adjustment was necessary; and tell us how you calculated that adjustment. Additionally, if a particular adjustment affects, for example, both your balance sheet and statements of operations and cash flows for a particular period, you should clearly illustrate that correlation in your description of the error. Your disclosure should provide a clear illustration of how you progressed from each financial statement line item “as reported” to “as adjusted” in each period, disaggregating the total error affecting each line item, preferably in tabular format with corresponding footnote disclosure. Examples of items that we would like you to clarify based on the information included in your December 22, 2006 supplemental response follow; however, you should provide this enhanced information for each error, as our list of examples is not exhaustive.
- It is unclear, based on your explanation regarding the capitalization of debt issuance costs, why you recorded a \$390,000 increase to selling, general and administrative (SG&A) expense for the three months ended June 30, 2006 without a corresponding decrease to your balance sheet. Please clarify.
 - Explain why, in general, you would record the fair value effect of stock-based compensation issued to non-employees/consultants to your interest expense or gain on fair value of debt derivative and warrant liabilities line items, as opposed to SG&A expense. It appears that you recorded various adjustments of this nature for the nine months ended June 30, 2006, as well as the cumulative period from your inception through June 30, 2006; for example, you recorded an increase in gain on fair value of debt derivative and warrant liabilities of \$1,156,598 for the three months ended June 30, 2006 and a decrease in interest expense of \$5,940,556 for the nine months ended June 30, 2006.
 - Tell us why the increase in “non-cash income attributable to the repricing of warrant and debt derivatives” of \$4,131,604 in your narrative explanation of the adjustments to your statements of cash flows for the nine months ended June 30,

2006 and the period from your inception through June 30, 2006 does not correlate to the adjustment to the net gain on fair value of debt derivative and warrant liabilities line item on page 6 of your response letter (for both periods).

- Tell us why an error of \$1,365,000 occurred in relation to your issuance of common shares to settle related party debt and where you recorded that error on your statements of operations for the nine months ended June 30, 2005 and for the period from your inception to June 30, 2006. Similarly, tell us why and where on your statements of operations you recorded the other adjustments to the “non-cash fair value of common stock issued in exchange for services” that you have outlined on page 11 of your response letter.
3. Refer to comment number 5 and your reference to your response to comment 4. It is not clear from your response to comment 4 whether you have made any adjustments to additional paid-in capital, as initially described in Note I of the financial statements in amendment number 8 to your Form SB-2. Please explain to us and clarify in the filing whether you made any adjustments to additional paid-in capital and tell us the basis for those adjustments. If the explanations previously provided in Note I (as filed) were in error, please clarify.
 4. We acknowledge your response to comment 8 and reissue our comment. Please clarify for us and in your filing why you believe that you appropriately classified certain error corrections related to the valuation of your warrant liabilities pursuant to EITF No. 00-19 within interest income (expense) for all periods presented in Note I of your interim financial statements and Note M of your annual financial statements. We specifically refer you to the material increase in “non-cash financing costs attributable to the issuance of warrants” of approximately \$23.1 million for the nine months ended June 30, 2005 discussed on page 10 of your response, which appears to correlate to the increase in interest expense that we have noted above in comment 2. Additionally, provide us with a detailed analysis of each correction that aggregates to the \$23.1 million and explain how each correction relates to one of your various financing transactions.

Notes to (Audited) Consolidated Financial Statements (Restated)

Note M – Restatement of Financial Statements, page F-91

5. We acknowledge your response to comments 6 and 10 and reissue our comments. You have not provided us with sufficiently detailed disclosure that substantially revises your restatement footnote to explain why you made each correction of an error for the year ended September 30, 2005 and the period from your inception through September 30, 2005. Please revise Note M to not only disclose the amount of each error and the related financial statement period and financial statement line item affected, but why each change occurred. That is, describe the nature of each error and the corresponding financial statement line items that it affected; tell us how you concluded that an adjustment was necessary; and tell us how you calculated that adjustment. Additionally,

if a particular adjustment affects, for example, both your balance sheet and statements of operations and cash flows for a particular period, you should clearly illustrate that correlation in your description of the error. Your disclosure should provide a clear illustration of how you progressed from each financial statement line item “as reported” to “as adjusted” in each period, disaggregating the total error affecting each line item, preferably in tabular format with footnote disclosure. Examples of items that we would like you to clarify based on the information included in your December 22, 2006 supplemental response follow; however, you should provide enhanced information for each error, as our list of examples is not exhaustive.

- In general, your use of the term “erroneously” does not sufficiently tell us how you determined that your financial statements were in error. For example, tell us what is meant by your “erroneous” recording of the \$1,365,000 error related to your issuance of common shares to a former director in exchange for previously incurred debt. Please also revise your proposed disclosures to Note I accordingly.
- Tell us why you recorded the \$3,960,000 decrease in “non-cash cost of common stock issued pursuant to an employee stock option plan” in your statement of cash flows for the year ended September 30, 2005 and clarify the line items that this adjustment affected in your corresponding balance sheet and statement of operations.
- Tell us why you recorded the \$9,079,000 adjustment to your statement of cash flows for the year ended September 30, 2005, which you attribute to stock subscription proceeds. Clarify the other financial statement line items that this adjustment affected.

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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.

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.

Mr. James Hayward
Applied DNA Sciences, Inc.
January 25, 2007
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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) 551-3682 or me at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: Joe Daniels, Esq.
Fulbright & Jaworski LLP
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New York, NY 10103-3198