

Mail Stop 6010  
Via Facsimile and U.S. Mail

May 24, 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 May 9, 2007 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 audited financial statements for the years ended September 30, 2006 and 2005, as well as

unaudited interim financial statements and related information for the period ended March 31, 2007.

Notes to Condensed Consolidated Financial Information

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

1. We acknowledge your proposed revisions in response to comment 2 as well as the supplemental tabular restatement information that you have presented for the three and nine months ended June 30, 2006 and for the period from inception through June 30, 2006. Please provide us with the clarifying information that follows and revise the disclosure in your filing accordingly.
  - Based on the explanation provided in footnote (b), it appears that there should be a credit to capitalized financing costs in the period ended June 30, 2006. In addition, as it appears that you reduced selling, general and administrative expense in the three months ended March 31, 2006 and June 30, 2006, it follows that you should also revise your selling, general, administrative expense for the nine months ending June 30, 2006 and the period from inception through June 30, 2006 since you have double-counted the entry in those periods as well. Please revise accordingly or tell us why no revision is necessary.
  - Based on the explanation provided in footnote (c), it remains unclear why you recorded a \$1,156,698 increase to “net gain (loss) in fair value of debt derivative and warrant liability.” If you recorded a derivative liability for warrants initially valued at \$933,117 that you should have valued at \$2,089,814, it appears that you would have incurred additional expense, and not income, in correcting your error. Please tell us why you appear to have recorded income in correcting this error. Additionally, we again request that you please revise footnote (c) to clarify the relationship between this error and each individual financing transaction in “Note C,” as the volume of those transactions makes it difficult for the investor to tell which were affected by the error. Please also tell us why you restated your June 30, 2006 Form 10-QSB to correct this error, which appears to relate to the initial valuation of the warrants and affect your March 31, 2006 Form 10-QSB.
  - We acknowledge your proposed revisions to footnote (e). Please confirm that you have reflected the initial effects of the error you described in your restated September 30, 2005 Form 10-KSB. Please tell us whether you initially attempted to correct the errors related to your December 2004, February 2005 and June 2005 warrant issuances in your June 30, 2006 reporting period and whether you then realized that you should actually amend your September 30, 2005 Form 10-KSB to reflect the errors in the periods that they affected. Please also note that you will have to amend your September 30, 2006 Form 10-KSB to appropriately reflect the effects of our comments on restatement information presented therein.

- Please clarify why your cumulative statement of operations for the period from inception through June 30, 2006 does not also include adjustments for the \$563,750 and \$6,640,706 that you reference in footnote (d) to your tabular restatement disclosure for the nine months ended June 30, 2006. If you recorded restatement adjustments for the nine months ended June 30, 2006, it would seem they should all flow through to your cumulative restated statement of operations for the period then ended.

Note J- Restatement of June 30, 2005 Quarterly Financial Statements, page F-48

2. We acknowledge your proposed revisions in response to comment 3 as well as the supplemental tabular restatement information that you have presented for the three and nine months ended June 30, 2005 and for the period from inception through June 30, 2005. Please provide us with the clarifying information that follows and revise the disclosure in your filing accordingly.
  - Please revise footnotes (b), (f) and (h) to specifically identify the related financing transactions, your December 2004 \$1.465 million convertible note issuance and the January/February 2005 \$7.371 million convertible note transaction, as referenced in Schedule A of your response.
  - We refer to your references throughout the footnotes to your tabular disclosure which state that you will reclassify certain of your warrant liabilities to equity when your Form SB-2 covering the underlying shares is declared effective. Please refer to paragraph 18 of EITF No. 00-19 and tell us whether the warrant agreements underlying each related financing transaction require that you maintain the effectiveness of your Form SB-2, which would preclude you from automatically reclassifying the liabilities upon effectiveness.
3. Please confirm that you will timely amend your June 30, 2006 Form 10-QSB to reflect the revised restatement information that you ultimately present in your Form SB-2 at the conclusion of our related comment process.

Notes to (Audited) Consolidated Financial Statements (Restated)

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

4. We acknowledge your responses to comments 7, 8, 9 and 10 as well as the supplemental tabular restatement information that you have presented for the year ended September 30, 2005 and for the period from inception through September 30, 2005. Please provide us with the clarifying information that follows and revise the disclosure in your filing accordingly.
  - We refer to our initial comment 8 and to footnotes 7(b) and (f). It is unclear how the net September 30, 2005 balance sheet adjustment of \$13,673,574 to record

warrant liabilities related to your various financing transactions, inclusive of any revaluation adjustments, correlates to the \$23,148,264 adjustment that you recorded to interest expense for the year ended September 30, 2005 and the period from inception through September 30, 2005. Please revise your disclosure to elicit how footnotes 7(b) and (f) relate to one another.

- Please revise footnotes (b) and (e) to specify which financing transactions correlate to the adjustments.
  - We refer to your references throughout the footnotes to your tabular disclosure which state that you will reclassify certain of your warrant liabilities to equity when your Form SB-2 covering the underlying shares is declared effective. Please refer to paragraph 18 of EITF No. 00-19 and tell us whether the warrant agreements underlying each related financing transaction require that you maintain the effectiveness of your Form SB-2, which would preclude you from automatically reclassifying the liabilities upon effectiveness.
5. Please confirm that you will timely amend your September 30, 2005 and 2006 Forms 10-KSB to reflect the revised restatement information that you ultimately present in your Form SB-2 at the conclusion of our related comment process.

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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.  
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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