



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

DIVISION OF  
CORPORATION FINANCE

June 22, 2011

Via E-Mail

Kurt H. Jensen  
Chief Financial Officer  
Applied DNA Sciences, Inc.  
25 Health Sciences Drive, Suite 215  
Stony Brook, NY 11790

**Re: Applied DNA Sciences, Inc.  
Form 10-K for the Fiscal Year Ended September 30, 2010  
Filed December 15, 2010  
File No. 002-90539**

Dear Mr. Jensen:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Forward-Looking Information, page 1

1. We note disclosure that certain statements are forward looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Please note that the Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 does not apply to penny stock issuers. In future filings, please revise this section to eliminate references to these safe harbors.

Item 1. Business, page 1

2. Please include your sources and availability of raw materials and the names of your principal suppliers and the duration of your patents and trademarks pursuant to Item 101(h)(4)(v) and (vii) of Regulation S-K.

Overview, page 1

3. Please clearly disclose the products you are currently selling and the products you intend to sell in the future.

Item 10. Directors, Executive Officers and Corporate Governance, page 35

4. Please briefly discuss the specific experience, qualifications, attributes or skills that led to the conclusion that the person should serve as a director pursuant to Item 401(e) of Regulation S-K.
5. Please provide the Compensation Committee Interlocks and Insider Participation information required pursuant to Item 407(e)(4) of Regulation S-K.

Exhibit Index, page 47

6. We note disclosure of your agreement with Huddersfield and District Textile Training Company Limited on page 12. Please file this as a material agreement or tell us why you are not required to do so.

Exhibits 32.1 and 32.2

7. We note that the Exhibit 32.1 and 32.2 certifications refer to the fiscal year ended September 30, 2009. Please file a full 10-K amendment, including new certifications that contain the correct date.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules 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 responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments 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.

Kurt H. Jensen  
Applied DNA Sciences, Inc.  
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Please contact Sherry Haywood, Staff Attorney at (202) 551-3345 or, in her absence, me at (202) 551-3397 with any questions.

Sincerely,

/s/ Jay Ingram

Jay Ingram  
Legal Branch Chief

cc. via email to Merrill M. Kraines  
Fulbright & Jaworski L.L.P.