[AVI LETTERHEAD]

January 20, 2010

Jim B. Rosenberg
Senior Assistant Chief Accountant
United States Securities and Exchange Commission
100 F Street, NE
Washington DC 20549

Re: Form 10-K for Fiscal Year Ended December 31, 2008
Schedule 14A filed April 14, 2009
Forms 10-Q for the Fiscal Quarters Ended March 31, June 30 and September 30, 2009
Filed Number: 001-14895

Dear Mr. Rosenberg:

This letter is in response to your fax dated December 17, 2009, regarding the above-referenced matter. AVI BioPharma, Inc. (the "Company") hereby responds to the Commission's comments as follows:

10-K for the Fiscal Year Ended December 31, 2008

Item 1. Business
Strategic Alliances — page 5

1. We note your description of license agreements and other arrangements beginning on page 5. Please revise your disclosure to describe for each agreement:

- **Aggregate milestone payments payable under the agreement,**
- **Aggregate milestone payments paid to date,**
- **Range of royalty payments (for example, low teens, high teens, single digits), and**
- **Term and termination provision.**

RESPONSE:

In response to the Commission's comment, in addition to making any other changes that may be required, the Company will modify the disclosure contained in its Form 10-K for the fiscal year ended December 31, 2009 by adding to or modifying the disclosure in the manner specified below with respect to each agreement referenced below. Dollar amounts ultimately will be provided in any blank spaces contained in the proposed modifications to the disclosure in the Company's Form 10-K for the fiscal year ended December 31, 2009.

A. Chiron Agreement

After the existing text under the heading "Chiron Agreement," the following text would be added:

"Subject to the satisfaction of certain milestones triggering the obligation to make any such payments, AVI may be obligated to make milestone payments of up to $5 million in the aggregate under this agreement. As of December 31, 2009, AVI has not made, and is not under any current obligation to make, any such milestone payments, as the conditions triggering any such milestone payment obligations have not been satisfied. The range of percentage royalty payments required to be made by AVI under the terms of this agreement is in the single digits. Chiron is not obligated to make any milestone payments or royalty payments under the agreement. This agreement will terminate as of the later of (i) the 20th anniversary of the effective date of the agreement, or (ii) the expiration date of the last to expire patent among certain patents issued to Chiron."

B. Cook Group Agreement

The second sentence of the second paragraph under the heading "Cook Group Agreement" will be deleted in its entirety, and the following text would be added after the first sentence of the second paragraph:

"The Company is not obligated to make any milestone payments under the agreements with Cook. Subject to the satisfaction of a commercialization milestone relating to net sales of products developed under the agreement, Cook is obligated to make a one-time milestone payment of $10 million under the license and development agreement. As of December 31, 2009, Cook has not made, and is not under any current obligation to make, any such milestone payment, as the condition triggering such milestone payment obligation has not been satisfied. The license and development agreement also provides for payment to AVI of a double-digit percentage royalty on net sales by Cook. Cook has the right to terminate the agreements upon 90 days' written notice to AVI. AVI has the right to terminate the agreements upon 60 days' written notice to Cook if, following an assignment of Cook's rights under the agreements in connection with a merger or sale of assets, the assignee terminates its development efforts under the license and development agreement. In the absence of any such termination by Cook or AVI, the agreement terminates by its own terms with the expiration of the last to expire patent among certain patents. AVI does not expect to be entitled to or receive any milestone payment from Cook under this agreement."

C. Ercole Agreements

The existing text under this heading will be deleted in its entirety, and replaced with the following:

"In December 2006, AVI and Ercole entered into a collaboration and license agreement for purposes of identifying and developing drugs that direct the splicing of precursor messenger RNA (pre-mRNA) to treat a variety of genetic and acquired diseases. Under the collaboration and license agreement, each party selected gene targets for their research and development efforts. Subject to the satisfaction of certain development-related milestones, Ercole was obligated to pay milestone payments to AVI of up to $2.2 million in the aggregate with respect to each therapeutic candidate resulting from Ercole's work on the gene targets selected by Ercole. AVI had a reciprocal obligation to Ercole with respect to each therapeutic candidate resulting from AVI's work on the gene targets selected by AVI. Subject to the satisfaction of certain commercialization milestones relating to net sales of drugs successfully developed under the agreement, AVI was also obligated under the collaboration and license agreement to pay Ercole $20 million for each drug resulting from AVI's work on the gene targets selected by AVI, up to a maximum aggregate amount of $100 million in such payments. The parties also had reciprocal obligations to pay a single-digit percentage royalty to one another on net sales of drugs developed from the gene targets they selected. The collaboration and license agreement provided that it would terminate as of the later of (i) the expiration date of the last to expire patent among certain patents, or (ii) if all such patents were found to be invalid or unenforceable, 10 years. The obligations of the parties to one another under this agreement were terminated by operation of law when AVI acquired Ercole in March 2008. At the time the acquisition was completed, no milestone payments had been made by one party to the other, and no royalties had been paid under the agreement.

In May 2007, the parties entered into a second collaboration and license agreement for purposes of expanding the collaboration between the parties to include the discovery and development of drugs to treat muscular dystrophy and beta thalassemia. The parties agreed to share certain research and development costs under this agreement. The second collaboration and license agreement provided that it would terminate as of the later of (i) the expiration date of the last to expire patent among certain patents, or (ii) if all such patents were found to be invalid or unenforceable, 10 years. The obligations of the parties to one another under this agreement were likewise terminated by operation of law when AVI acquired Ercole in March 2008."

D. Eleos Agreement

The fifth sentence under the heading "Eleos Agreement" shall be deleted in its entirety, and replaced with the following:

"Subject to the satisfaction of certain development and commercialization milestones, Eleos may be obligated to make milestone payments of up to $19.5 million in the aggregate with respect to drugs resulting from Eleos' use of AVI intellectual property licensed to Eleos under the agreement. AVI has a reciprocal obligation to Eleos with respect to drugs resulting from AVI's use of Eleos' intellectual property licensed to AVI under the agreement. As of December 31,

2009, neither Eleos nor AVI has made, and neither Eleos nor AVI is under any current obligation to make, any such milestone payments, as the conditions triggering any such milestone payment obligations have not been satisfied. Percentage royalty payments required to be made by Eleos to AVI under the terms of this agreement range from single digits to double digits on net sales of drugs resulting from Eleos' use of AVI's intellectual property licensed to Eleos under the agreement. AVI is required to pay to Eleos a double-digit royalty on net sales of drugs resulting from AVI's use of Eleos' intellectual property."

The last sentence under the heading "Eleos Agreement" shall also be deleted in its entirety, and replaced with the following:

"For the fiscal years ending December 31, 2009, 2008 and 2007, AVI recognized $, $, and $, respectively, in revenue from this agreement. This agreement will terminate as of the later of (i) the expiration date of the last to expire patent among certain patents licensed under the agreement having claims covering a product using AVI or Eleos intellectual property licensed under the agreement, or (ii) 10 years from the date of the first commercial sale of a product using AVI or Eleos intellectual property licensed under the agreement."

E. Charley's Fund Agreement

The existing text under this heading will be deleted in its entirety, and replaced with the following:

"In October 2007, AVI and Charley's Fund, Inc., a nonprofit organization that funds drug development and discovery initiatives specific to Duchenne muscular dystrophy (DMD), announced that AVI had been awarded a $2.45 million research grant from Charley's Fund for the purposes of supporting a new product development program using proprietary exon skipping technologies developed by AVI to overcome the effects of certain genetic errors in the dystrophin gene. The parties entered into a sponsored research agreement in October 2007. The parties subsequently entered into an amendment of the sponsored research agreement in May 2009.

At the time of the execution of the amendment by the parties, of the $2.45 million to be paid, $2 million had already been paid to AVI by Charley's Fund, of which $1.35 million had been spent by AVI under the terms of the agreement. The May 2009 amendment allocated the remaining $650,000 already received by AVI, but not yet spent by AVI, toward a revised list of research and development tasks to be performed by AVI. Under the terms of the May 2009 amendment, subject to the satisfaction of certain milestones, Charley's Fund agreed that it would pay up to an additional $3 million to AVI in milestone payments over and above the $2 million it had already paid to AVI at the time of the execution of the amendment. As of December 31, 2009, Charley's Fund has made an aggregate of $ in milestone payments to AVI, an amount which

includes the $2 million amount paid to AVI prior to the execution of the amendment to the sponsored research agreement. AVI recognized $, $22,500 and $37,500, respectively, in revenue from Charley's Fund for the years ended December 31, 2009, 2008 and 2007.

Depending on the timing of the obtainment of a license by Charley's Fund to any product containing any molecular candidate arising or derived from the research sponsored by Charley's Fund, percentage royalty payments on net sales required to be made by Charley's Fund to AVI under the terms of the sponsored research agreement, as amended, range from single digits to double digits. Under the terms of the sponsored research agreement, as amended, if the parties are able to successfully commercialize any molecular candidate arising or derived from the research sponsored by Charley's Fund either through

sales of products or through licensing or partnership arrangements with a third party that include rights for such third party to sell, distribute, promote or market such products or the underlying intellectual property, then AVI is obligated to repay the research funds paid to AVI by Charley's Fund, up to an amount equal to the total amount of funds provided by Charley's Fund to AVI. In connection with this repayment obligation, AVI agreed that it would pay a single-digit percentage royalty on net sales of products containing any molecular candidate arising or derived from the research sponsored by Charley's Fund (up to an amount equal to the total amount of funds provided by Charley's Fund to AVI). This agreement will terminate by its own terms at the completion of the research being sponsored by Charley's Fund."

F. U.S. Department of Defense Agreements

The existing text under this heading will be deleted in its entirety, and replaced with the following:

"The Company currently has several contracts with the U.S. Department of Defense and its agencies funding its programs, including the Company's clinical stage programs for the Ebola, Marburg, and Junín and Swine Flu viruses. The continued funding of these programs from the U.S. government is critical to the ongoing development of these programs. Future funding of these programs is subject to availability of budgeted funds from the U.S. Department of Defense. As of December 31, 2009, the Company had received an aggregate of $ million in contract awards from the U.S. government, and an aggregate of $ million in milestones payments had been made by the U.S. government to AVI under such awards. AVI is not required to make any milestone payments or royalty payments to the U.S. government under these contracts. Unless terminated earlier by the U.S. government, these agreements terminate upon completion of the research funded by the award."

Item 9A — Controls and Procedures
Disclosure Controls and Procedures, page 27

2. Your disclosure includes a partial definition of disclosure controls and procedures. Please revise to include the complete definition of disclosure controls and procedures contained in Exchange Act Rule 13a-15(e). Your disclosure should be revised to clarify, if true, that your officers concluded that your disclosure controls and procedures are effective to ensure that information required to be disclosed in the reports that you file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, and to ensure that information required to be disclosed in the reports that you file or submit under the Exchange Act is accumulated and communicated to your management, including your chief executive officer and chief financial officer, to allow timely decisions regarding required disclosure. Please note that this comment also applies to your forms 10-Q for the Fiscal Quarters Ended March 31, June 30, and September 30, 2009.

RESPONSE:

In response to the Commission's comment, the Company will modify the disclosure contained in its Form 10-K for the fiscal year ended December 31, 2009 by expanding the definition of "disclosure controls and procedures" to clarify that the disclosure controls and procedures are also effective to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure. Specifically, the Company will modify the first paragraph of the disclosure under the heading "Disclosure Controls and Procedures" in Item 9A of its Form 10-K for the fiscal year ended December 31, 2008 such that the same paragraph in the 10-K for the fiscal year ended December 31, 2009 will read as follows (changes to the existing text are underlined):

> We carried out an evaluation as of the end of period covered by this report, under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, of the effectiveness of our disclosure controls and procedures pursuant to paragraph (b) of Rule 13a-15 and 15d-15 under the Exchange Act. Based on that review, the Chief Executive Officer and the Chief Financial Officer have concluded that our disclosure controls and procedures are effective to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act (1) is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and (2) is accumulated and communicated to our management, including our principal

> executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

In addition to that which was stated in its Form 10-K for the fiscal year ended December 31, 2008, the Company also represents that the evaluation of the effectiveness of the disclosure controls and procedures carried out as of the end of fiscal year ended December 31, 2008 included an evaluation as to whether the disclosure controls and procedures were effective to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure, and that, based on such evaluation, the Company's Chief Executive Officer and the Chief Financial Officer concluded that the Company's disclosure controls and procedures were also effective in this regard.

In response to the Commission's comment regarding the Company's Quarterly Reports on Form 10-Q for the quarters ended March 31, 2009, June 30, 2009, and September 30, 2009, the Company represents that it carried out an evaluation as of the end of each such period covered by each such quarterly report under the supervision and with the participation of its management, including our Chief Executive Officer and our Chief Financial Officer, of the effectiveness of the Company's disclosure controls and procedures pursuant to paragraph (b) of Rule 13a-15 and 15d-15 under the Exchange Act. With respect to each such review, the Chief Executive Officer and the Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act (1) is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and (2) is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure. In addition, the Company will modify the paragraph under the heading "Disclosure Controls and Procedures" in Item 4 of future quarterly reports on Form 10-Q such that the paragraph reflects the above indented text as well.

Schedule 14A filed April 14, 2009

Executive Compensation
Compensation Discussion and Analysis
Performance Factors in 2008, page 12

3. We note that your disclosure identifies the corporate goals, but does not identify the individual performance goals/milestones for each of the named executive officers. Also, your disclosure does not describe the prescribed weighting assigned to each of the goals and does not describe which of the goals were met, resulting in the

satisfaction of 67.5% of the corporate goals. Please provide us with draft disclosure for your Form 10-K for your fiscal year ending December 31, 2009, which identifies corporate and individual performance goals/milestones for each of the named executive officers, as well as the prescribed weighting assigned to each of the goals. Please also confirm that in your Form 10-K for your fiscal year ending December 31, 2009 you will discuss the achievement of the goals, including an explanation of which goals were met and how you determined the percentage of the goals achieved. To the extent that the goals/milestones are quantifiable, the discussion should also be quantified.

RESPONSE:

As discussed previously with Staff, the Company will incorporate information regarding executive compensation forward by reference to its proxy statement for its 2010 Annual Meeting of Shareholders rather than setting forth such information in its Form 10-K for the fiscal year ended December 31, 2009. As of the date hereof, the Company has not determined which named executive officers other than its Chief Executive Officer and Chief Financial Officer will be required to be discussed in the Company's Compensation Discussion and Analysis and in the compensation tables in the proxy statement. Nonetheless, the disclosure provided for any named executive officer other than the Chief Executive Officer and Chief Financial Officer will be consistent with the presentation for the named executive officers provided for in the language submitted in this letter. Accordingly, in response to the Commission's comment, the Company proposes to include the following language under the heading "Performance Factors in 2009" in the Company's proxy statement:

"The Compensation Committee, together with the Chief Executive Officer and full Board of Directors, establishes performance criteria for the named executive officers, both in terms of individual performance and the performance of the Company as a whole, and assigns weights to each of the performance goals. The following corporate goals, along with the weighting assigned to each of the goals, drove the Compensation Committee's executive compensation decisions for fiscal year 2009:

- Develop approved operational and other administrative plans and budget for 2009 (20%);
- Attain certain preclinical and clinical development milestones (40%);
- Complete certain key business development partnerships (15%);

- Advance core discovery research projects (5%); and
- Reorganize certain elements of the Company's business (20%).

As Chief Executive Officer, Dr. Hudson's performance goals were identical to the corporate goals identified above.

Each named executive officer, other than Dr. Hudson, also was given certain individual performance goals/milestones for themselves and their division that reflected the corporate goals and their position and responsibilities. The goals for each individual officer, along with the weighting assigned to each of the goals, were as follows.

J. David Boyle II, Chief Financial Officer

- Secure funding through to NDA for at least two biodefense projects (35%);
- Manage expense and revenue goals to achieve prescribed financial targets (10%);
- Restructure certain elements of the Company's agreement with a key business partner (25%); and
- Enhance general and administrative support for AVI, including establishing the Company's new headquarters (30%).

Stephen Shrewsbury, Senior Vice President of Preclinical, Clinical and Regulatory Affairs and Chief Medical Officer

- Achieve certain goals with respect to clinical development and regulatory affairs, including analyzing and submitting certain data for publication in a peer reviewed journal and completing certain drug trials (70%); and
- Achieve certain goals with respect to preclinical development (30%).

Patrick L. Iversen, Senior Vice President of Strategic Alliances

- Secure funding through to NDA for at least two biodefense projects (25%);

- Complete animal studies for certain drug candidates (20%);
- Achieve prescribed goals with respect to preclinical development (45%); and

- Achieve prescribed goals with respect to ongoing drug research projects (10%).

Dwight D. Weller, Senior Vice President of Chemistry and Manufacturing

- Achieve prescribed goals with respect to drug manufacturing supply and supply chain (30%);
- Reorganize certain elements of the Company's business (35%);
- Achieve a key employee hire relating to the Company's research chemistry efforts (5%); and
- Develop and successfully implement a plan for the Company's research chemistry efforts (30%).

As noted above, Dr. Hudson's performance bonus was based entirely on the Company's achievement of the corporate goals outlined above. The performance bonus of each other named executive officer was based on the Company's achievement of the corporate goals (70%), with the remainder of the performance bonus (30%) for such named executive officers based on the achievement of individual and divisional goals."

Lastly, the Company hereby confirms that the proxy statement it files in connection with its 2010 Annual Meeting of Shareholders will contain a discussion of the achievement of the goals, including an explanation of which goals were met and how it was determined the percentage of the goals achieved. To the extent that the goals/milestones are quantifiable, the discussion will also be quantified, except where, consistent with Instruction 4 to Item 402(b) of Regulation S-K, disclosure of which would result in competitive harm for the Company.

Forms 10-Q for the Fiscal Quarters Ended March 31, June 30 and September 30, 2009

Item 4. Controls and Procedure
Evaluation of Disclosure Controls and Procedures, page 18

4. Please disclose any change or state, if true, there were no changes in your internal control over financial reporting that occurred during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, your internal control over financial reporting. Refer to paragraph of Item 308 of Regulation S-K.

RESPONSE:

In response to the Commission's comment regarding the Company's Quarterly Reports on Form 10-Q for the quarters ended March 31, 2009, June 30, 2009, and September 30, 2009, the Company represents that it evaluated its internal control over financial reporting in each such quarter, and the Company's Chief Executive Officer and Chief Financial Officer concluded in each such quarter that that there had not been any change in the Company's internal control over financial reporting during each such quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. In addition, in future quarterly reports on Form 10-Q, the Company will modify the relevant text in Item 4 of future quarterly reports on Form 10-Q such that it reads as follows: "Based on the evaluation carried out at the end of the period covered by this report, our principal executive officer and principal financial officer concluded that there has not been any change in our internal control over financial reporting during the quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting."

In connection with the Company's response to the Commission's comments, the undersigned hereby acknowledges on behalf of the Company 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.

If you have any questions regarding the foregoing, please do not hesitate to contact me at your convenience at (425) 354-5038.

Sincerely,

AVI BioPharma, Inc.

/s/ J. David Boyle II
J. David Boyle II
Chief Financial Officer