



DIVISION OF
CORPORATION FINANCE

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

February 24, 2012

Via E-mail

Mr. David B. Johnston
Chief Financial Officer
AVEO Pharmaceuticals, Inc.
75 Sidney Street
Cambridge, MA 02139

Re: AVEO Pharmaceuticals, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2010
Filed March 11, 2011
Form 10-Q for the Interim Period Ended September 30, 2011
Filed November 8, 2011
File No. 001-34655

Dear Mr. Johnston:

We have reviewed your January 11, 2012 response to our December 23, 2011 letter and have the following comments.

Please respond to this letter within 10 business days 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, please tell us why in your response. Please furnish us a letter on EDGAR under the form type label CORRESP that keys your response to our comments.

After reviewing any information you provide in response to a comment, we may have additional comments.

Form 10-Q for the Quarter Ended September 30, 2011
Notes to Condensed Consolidated Financial Statements
Note 4. Collaboration and License Agreements
Astellas Pharma Inc., page 10

1. We continue to evaluate your response to prior comment 2 regarding your accounting for the Astellas Agreement and have the following additional comments.
2. Regarding the Astellas Agreement, you disclose that you "...received an initial cash payment of \$125 million, comprised of a \$75 million license fee and \$50 million in research and development funding." Please explain to us what research and development activity the initial \$50 million payment related. Address whether it was for past or future research and development efforts and whether it relates to the joint development and commercialization activities in North America and Europe. Provide us further explanation as to why it is appropriate to include the \$50 million in the allocation of the unit of accounting in which \$120.2 million was recognized upfront.

3. Please provide us your accounting analysis supporting why accounting for the joint development and commercialization activities in North America and Europe as a joint risk sharing collaboration in accordance with ASC Topic 808, *Collaborative Arrangements*, deems those activities not to be separate deliverables that should be evaluated in accordance with ASC 605-25 for purposes of determining whether they represent a separate unit of accounting or should be included with another identified unit of accounting.
4. Please explain to us any refund provisions stipulated in the agreement including those that do not have financial consequences that impact the Company. If the Astellas Agreement does not include refund provisions, please explain your disclosure at page 11 of the Form 10-Q for the quarter ended September 30, 2011, "there are no refund provisions in the Astellas Agreement that have financial consequences that impact the Company."
5. Please enhance your disclosures with respect to the identified deliverables in the Astellas Agreement as follows:
 - Expand disclosure of all the rights and obligations under the agreement; and
 - Expand disclosure for how you estimated the performance period for each deliverable.
6. Please address the following with respect to your committee obligations:
 - In your evaluation of deliverables, how did you consider the obligations of each of your committees (i.e. joint steering committee, joint development committee, joint commercialization committee, and joint medical affairs)?
 - Are these obligations considered a deliverable? Why or why not?
 - If these obligations are a deliverable:
 - Are they a separate unit of accounting? Why or why not?
 - If they are not a separate unit of accounting, what unit of accounting are they included in?
 - How is the value of your committee obligations considered in determining the selling price of the applicable unit of accounting?
 - What are the performance periods for your committee obligations and how were they determined?

You may contact Christine Allen, Staff Accountant, at (202) 551-3652 or Gus Rodriguez, Accounting Branch Chief, at (202) 551-3752 if you have questions regarding the comments. In this regard, do not hesitate to contact me at (202) 551-3679.

Sincerely,

/s/ Jim B. Rosenberg

Jim B. Rosenberg
Senior Assistant Chief Accountant