



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4720

October 15, 2015

Via E-mail

Stefano Buono  
Chief Executive Officer  
Advanced Accelerator Applications S.A.  
20 rue Diesel  
01630 Saint Genis Pouilly, France

**Re: Advanced Accelerator Applications S.A.  
Registration Statement on Form F-1  
Filed October 1, 2015  
File No. 333-207223**

Dear Mr. Buono:

We have reviewed your registration statement 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 by amending your registration statement and providing the requested information. 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 registration statement and the information you provide in response to these comments, we may have additional comments.

Summary  
Our Business  
Overview, page 1

1. We note your revised disclosure and response to our prior comment 1. Please revise your prospectus summary to remove your discussion of confirmed progression event deaths and media PFS in the treatment arms of your Phase 3 trial. Your discussion of such information should be limited to sections of the prospectus where additional detailed information on clinical results provides context for evaluating such information.

Other Contracts  
FRI License Agreement, page 133

2. Please expand your disclosure to describe the termination provisions of the FRI license agreement.

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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement, please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Stefano Buono  
Advanced Accelerator Applications S.A.  
October 15, 2015  
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You may contact Frank Wyman at (202) 551-3660 or Lisa Vanjoske at (202) 551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact Johnny Gharib at (202) 551-3170, Bryan Pitko at (202) 551-3203 or me at (202) 551-3675 with any other questions.

Sincerely,

/s/ Suzanne Hayes

Suzanne Hayes  
Assistant Director  
Office of Healthcare and Insurance

cc: Via E-mail  
John G. Crowley, Esq.  
Davis Polk & Wardwell LLP