

A telecon with held between FDA and Amgen to request for Information with reference to Amgen's Gene Therapy BLA # 125518. The telecon was held from 3 to 4 PM on September 9<sup>th</sup> 2014.

The following people participated from the FDA:

Ramjay Vatsan (CMC)  
Daniel Takefman (CMC)  
Robert Aksamit (CMC)  
Andrew Byrnes (CMC)  
Mike Havert (CMC)  
Peter Bross (Clinical)  
Maura Oleary (Clinical)  
Mark Davidson (RPM)

Amgen had the following representative on the telecon:

Kathleen Sugrue-Richards, MS, Senior Manager, Regulatory Affairs, CMC  
Anne Marie Woodland, MS, RAC, Executive Director, Regulatory Affairs  
Tara Reed, MS, RAC, Senior Associate, Regulatory Affairs, CMC  
Paul J. Husak, PhD, Director, Product Quality  
Paul Bullock, PhD, Executive Director, Process Development  
David Hambly, PhD, Senior Scientist  
Allan Gibson, Director, Quality Control  
Colin Love, PhD, Vice President, Clinical Operations

The following questions and request for additional information and clarifications were communicated to Amgen: (Amgen sent back a written response to the questions and the response is attached to the meeting minutes. Additional points that were discussed at the meeting are given below each question. FDA reminded Amgen that this was a preliminary RFI for missing CMC information and that there may be additional informational requests as the review of the BLA progresses.

Amgen said they understood and will provide this information. FDA stated that it was not expected for Amgen to send the information immediately by e-mail. Submission to the BLA is expected as soon as possible but it was not required before the day 73 filing deadline and could be consolidated with other information submitted to the BLA.

- 1) We have not found some method descriptions and validation reports. At this time we ask that you provide method protocols and validation reports for in vitro and in vivo adventitious virus testing. Please include volumes tested. Please provide method descriptions (and validation reports) for (b) (4) determination. Please provide verification reports for all compendial assays.

**Discussion:** FDA wanted additional clarification on why study reports for the different contract research organization performing the in (b) (4) were not included and why this assay was not validated. Amgen offered to provide a complete reasoning for not doing the validation study.

FDA also clarified that they should submit SOPs for the evaluation methods and validation reports for assays or parts of assays that were validated with explanations for not doing a complete validation.

FDA further clarified that, in instances where the assays were done by contract laboratories, Amgen may submit a cross reference to an existing Master File with specific reference to the sections being referenced or obtain the exact SOP and results from the contract Research Organization and submit it to the BLA as an amendment.

2) Also provide the following information:

- a) A summary of risk assessment and analysis for process changes and production scale up.
- b) Justification for the specification of (b) (4) listed as acceptable hold times for (b) (4) manufacture.
- c) Detailed information on the external standards (example: For (b) (4) used in (b) (4) : information on purity, method of manufacture, source, and a sample certificate of analysis).

Additional topics discussed:

FDA asked for clarification on the submitted SOPs with reference to statements of testing being done in their United Kingdom test facilities. Amgen confirmed that the samples will be sent to UK for some (b) (4) .