

FDA/NIH Perspective

Challenges in Advancing the Field of Gene Therapy

Co-Chairs:

Stephanie Simek, PhD

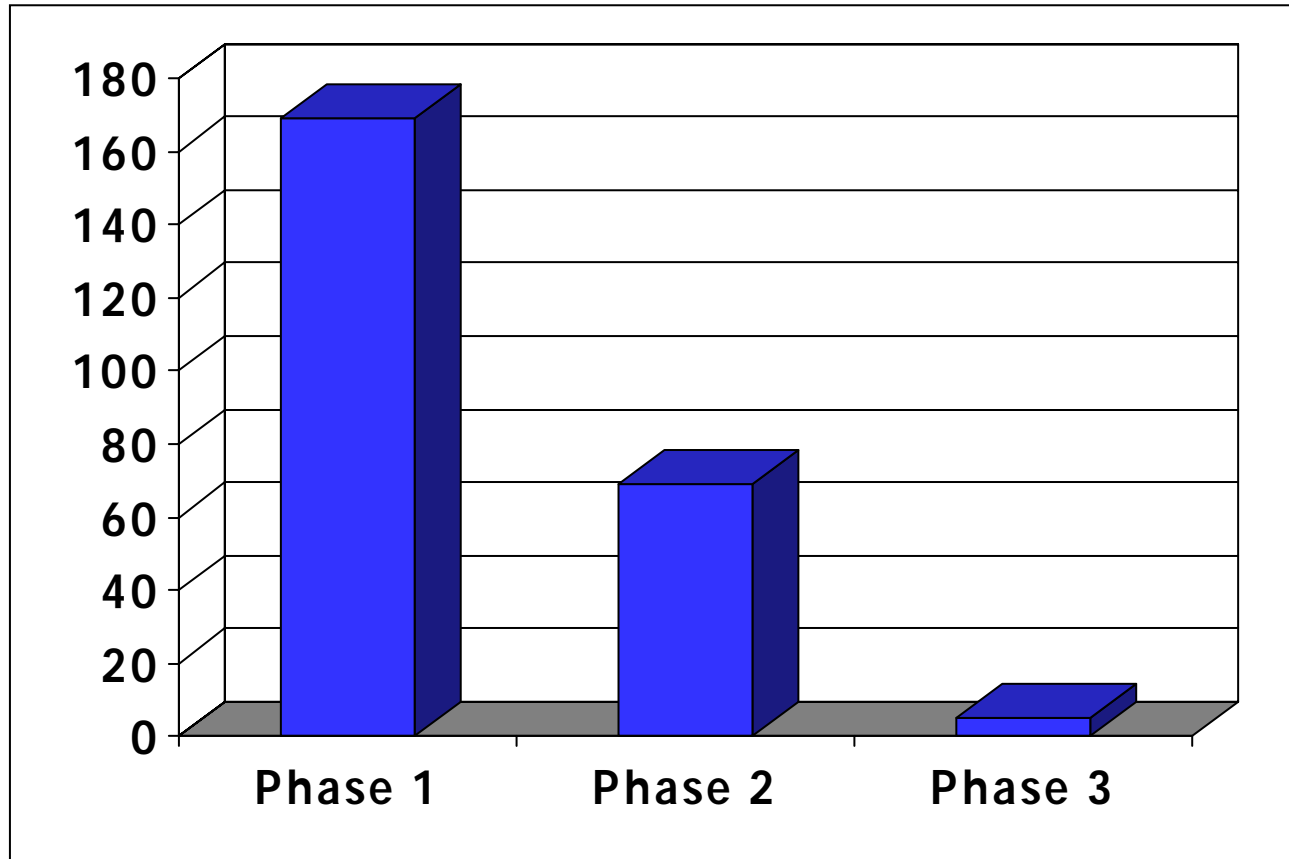
OCTGT/CBER

Kenneth Cornetta MD.

IU/NGVL

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Number of Active Gene Therapy INDs





Challenges in Clinical Trials

- What is the most efficient way to establish safety and efficacy?
- What preclinical studies should precede clinical studies?
- What questions should be answered in exploratory and confirmatory clinical studies?



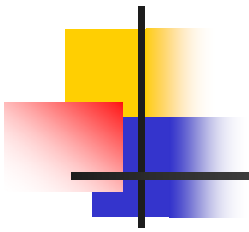
Challenges in Clinical Trials

- Why is it important to characterize the product and demonstrate consistent manufacturing early in development?
- How does the process look from the perspective of the academic investigator/sponsor?
 - NGVL product manufacturing for NIH supported investigators
 - Time limitation of NIH funding



Presentations

- Gene Transfer Studies: Preclinical and Clinical Challenges
 - Daniel Rosenblum, MD.
- Common Challenges in the Development of Gene Therapy Products
 - Andrew Byrnes, PhD.
- Challenges to Gene Therapy: The IU NGVL Experience
 - Kenneth Cornetta, MD.



Questions



Questions

- In a scenario where there is an existing ongoing phase 1 clinical trial with a specific gene therapy product, please consider the following question.
- What type of product changes would require a new IND versus doing a preclinical bridging study to demonstrate safety?



Questions

- What type of product changes would trigger a sponsor to perform a comparability study .
 - What type of testing should be included in the study
 - How should the study be conducted
 - Does a direct comparison have to be done with old and new product in a side by side study
 - Can data from previous lots of old product be used?



Questions

- What type of assay would the FDA accept for use as a measure of product potency?
 - What is the importance/benefit of having a quantitative potency assay?
 - If your potency assay can not be quantified will the agency accept a qualitative assay?



Questions

- Do I need to conduct animal studies with my product?
 - Do I need to conduct biodistribution studies with my vector if there is published data with vectors of this type?
 - Do I need to conduct toxicology studies with my vector if there is published data with vectors of this type?



Questions

- What is an appropriate animal model for my vector?
 - Do I have to use non-human primates?
 - Can I use analogous vectors or transgenes in species other than NHPs?
 - Does the agency accept data in animal models of disease for demonstration of activity? Safety?
 - Do all of my animal studies need to be GLP-compliant?



Questions

- At what point in time can I/should I contact CBER to discuss my preclinical studies?
- What types of control groups might be necessary for conduct of “adequate and well controlled” clinical studies to support registration for a gene transfer product?



Questions

- How does the FDA determine whether a study is designated to be a phase 1, a phase 1/ 2, phase 2, or phase 3 (pivotal) study? Does the FDA have specific criteria for making this determination?
- Does FDA accept clinical study data from trials conducted in countries outside the US?
- What advantages does designation of your program as a “fast track” development program confer to sponsors?