Hearing of the House Committee on Energy and Commerce, Subcommittee on Health

The Role of the National Institute of Allergy and Infectious Diseases in Research Addressing Ebola Virus Disease

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November 19, 2014

Category A pathogens
- Anthrax (Bacillus anthracis)
- Botulism (Clostridium botulinum toxin)
- Plague (Yersinia pestis)
- Smallpox
- Tularemia (Francisella tularensis)
- Viral hemorrhagic fever viruses (e.g., Ebola, Marburg, Lassa and Machupo)

Product Development Pipeline

Early concept and product development  Advanced development  Commercial manufacturing  Regulatory review

NIH  BARDA  Industry  FDA

NIAID Ebola Vaccines Ready to Proceed to Phase 2/3 Efficacy Testing in West Africa

- NIAID/GSK (chimp adenovirus vector)  Phase 1 trial at NIH fully enrolled; Phase 2/3 efficacy trials planned for West Africa
- NewLink (VSV vector)  Phase 1 trials enrolling at NIH and WRAIR; Phase 2/3 efficacy trials planned for West Africa

Other vaccines in development: Crucell/Johnson & Johnson (adenovirus vector) and Bavarian Nordic (MVA vector); Profectus (VSV vector); NIAID Intramural, Thomas Jefferson Univ. (rabies vector)
Ebola Therapeutics in Development

- ZMapp (Mapp Biopharmaceutical)
  - Combination of 3 artificially produced antibodies directed against the Ebola virus
- BCX4430 (BioCryst)
  - A novel drug (nucleoside analogue) that interferes with the reproductive process of the virus
- TKM-Ebola (Tekmira Pharmaceuticals)
  - Small inhibitory RNA molecule that interferes with the replication of the virus (supported by DOD)
- Brincidofovir (Chimerix)
  - DNA polymerase inhibitor; in vitro activity against Ebola
  - Good safety record; currently in phase 3 trials for CMV and adenovirus
- Favipiravir (MediVector/Toyama/Fuji)
  - Polymerase inhibitor; modest activity against Ebola
  - Currently in phase 3 trials for influenza

NIH Special Clinical Studies Unit: Designated Ebola Treatment Facility

The Washington Post
October 25, 2014

Nina Pham, Nurse Who Contracted Ebola, is Now Free of Virus and Leaves NIH

Photo: The Washington Post
Photo: Nina Pham