

Clinical trial will test new HIV/AIDS vaccine

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A phase 1 clinical trial to test a novel HIV/AIDS vaccine has begun at Brigham and Women's Hospital (BWH). This new vaccine aims to overcome the problem of preexisting immunity to common vaccine vectors, which is thought to be a major problem in the developing world.

“This study will involve 48 healthy volunteers who will receive either two or three immunizations and who will be followed to assess the safety and immunogenicity of the vaccine,” explains Lindsey R. Baden, MD, Assistant Professor of Medicine at BWH and Harvard Medical School and Protocol Chair for the study.

The vaccine consists of a replication-incompetent, recombinant adenovirus serotype 26 (rAd26) vector encoding an HIV-1 envelope gene.

“The rAd26 vaccine vector was selected for its particularly low seroprevalence in human populations and for its potent immunogenicity and protective efficacy in preclinical studies,” explains Dan H. Barouch, MD, PhD, Associate Professor of Medicine at Beth Israel Deaconess Medical Center (BIDMC) and Harvard Medical School and Principal Investigator of the Integrated Preclinical/Clinical AIDS Vaccine Development (IPCAVD) program that developed the vaccine. This program is sponsored by the Division of AIDS, National Institute of Allergy and Infectious Diseases, National Institutes of Health.

Manufactured by the Dutch biotechnology company Crucell Holland BV, the rAd26 vaccine is the first HIV-1 vaccine candidate to emerge

from the IPCAVD initiative, which brings together investigators from academia and industry in an effort to accelerate the development of promising HIV/AIDS vaccine candidates. The novel strategy used in developing this vaccine enables researchers to circumvent preexisting immunity to the adenovirus serotype 5, the virus responsible for the common cold, which has recently shown limitations as an HIV-1 vaccine vector.

“The rAd26 vector does not regularly occur in the human population and human antibodies to this vector are rare,” explains Jaap Goudsmit, Chief Scientific Officer at Crucell. “The rAd26 vector therefore is efficacious in eliciting good T and B cell responses.”

AIDS remains one of the world’s most devastating health problems, with an estimated 33.2 million people living with HIV/AIDS and 2.5 million new infections reported in 2007 alone.

Source: Beth Israel Deaconess Medical Center

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