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News Release

New Study Suggests Potential for a Broadly-Protective HIV Vaccine

USU researchers find broad-spectrum defense against multiple strains of HIV-1

BETHESDA, Md.— New research conducted at the Uniformed Services University of the Health Sciences (USU) suggests that it may be possible to develop a vaccine that protects against the myriad strains of the HIV virus. HIV is extremely variable, so an effective vaccine may need to stimulate the body to produce cross-reactive antibodies that will neutralize multiple viral strains. These results demonstrate that induction of truly broad-spectrum neutralizing antibodies may be an achievable goal. This groundbreaking study titled: “Extensively Cross-Reactive Anti-HIV-1 Neutralizing Antibodies Induced by gp140 Immunization” appears this week in the Early Edition of *Proceedings of the National Academy of Sciences* <http://www.pnas.org/papbyrecent.shtml>.

To be effective, an HIV vaccine must induce the body to produce cross-reactive antibodies that can neutralize multiple strains. USU Professors CAPT Gerald Quinnan, Jr., M.D., USPHS, and Christopher Broder, Ph.D., and their colleagues at USU attempted to elicit these broad-range antibodies in an animal model by immunizing with a particular HIV-1 surface protein, designated R2 gp140, and an immune response-boosting component. The researchers tested antibodies generated by the immunizations to determine their effectiveness in neutralizing the infectivity of a variety of HIV-1 strains. Antibodies produced as a result of immunization neutralized all 48 strains of HIV-1 tested. The results are encouraging for vaccine development, because they showed that it is possible to elicit a broad-spectrum antibody response.

The Uniformed Services University of the Health Sciences (www.usuhs.edu) is located on the grounds of the National Naval Medical Center in Bethesda, Md. The University provides military and public health-relevant education, research, service and consultation to the nation and the world. USU is a typical academic health center with a unique focus on health promotion and disease prevention, and with the specialized mission of educating health care practitioners to deal with peace- and wartime casualties, natural disasters, emerging infectious diseases and other public health emergencies.

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