



HIV VACCINE

Multimerized HIV gp120s for Vaccine Development

Brief Description of Technology

An engineered HIV Env glycoprotein that improves antibody-recognition potential for HIV vaccine development.

BUSINESS OPPORTUNITY

Exclusive license
Sponsored research

TECHNOLOGY TYPE

Vaccine development
HIV

STAGE OF DEVELOPMENT

Preclinical *in vitro* and *in vivo*
Preparing for phase I clinical trials

PATENT INFORMATION

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Technology Overview

Dr. Leo Stamatatos and Dr. Roland Strong have developed a unique and promising approach to developing an effective HIV vaccine by engineering an HIV Env glycoprotein using specific gp120 modifications and multimerization strategies. This multimerized gp120 expands the germline [gl] VRC01-class antibody-recognition potential of the Env, as desired in vaccine development for HIV. HIV-1 broadly neutralizing antibodies [bNAbs] are antibodies capable of neutralizing HIV but efforts to elicit stimulation of such antibodies using recombinant Env [rEnv] have been unsuccessful. One of the reasons for the lack of success is thought to be the inability of the Env proteins used as immunogens to engage B cell receptors [BCRs] that encode the germline of VRC01-class antibodies.

Applications

- Vaccine for HIV

Advantages

- Expands antibody-recognition potential of Env
- Unique and promising approach for HIV vaccine

Market Overview

HIV and AIDS remain a persistent problem for the United States and countries around the world. Worldwide, approximately 37 million people live with HIV. It is estimated that at steady state, routine vaccination demand for vaccines that would prevent infection only is 22-61 million annual doses with a potential market value of \$210 million to \$2.7 billion, depending on the vaccine product profile.

Investigator Overview

Leo Stamatatos, PhD, Vaccine and Infectious Disease Division

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