



[Billing Code 4140-01-P]

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The inventions listed below are owned by an agency of the U.S.

Government and are available for licensing to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

FOR FURTHER INFORMATION CONTACT: Chris Kornak, 240-627-3705, chris.kornak@nih.gov. Licensing information and copies of the U.S. patent applications listed below may be obtained by communicating with the indicated licensing contact at the Technology Transfer and Intellectual Property Office, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rockville, MD, 20852; tel. 301-496-2644. A signed Confidential Disclosure Agreement will be required to receive copies of unpublished patent applications.

SUPPLEMENTARY INFORMATION: Technology description follows.

A second CD4-binding region of HIV-1 gp120 critical for viral infectivity: new methods for treatment and vaccine development

Description of Technology: It is believed that immunization with an effective immunogen based on the HIV-1 envelope glycoprotein can elicit a neutralizing antibody response, which may be protective against HIV-1 infection. NIAID researchers have discovered a new critical component of the CD4-binding site in gp120, named CD4-BS2, which is exclusively formed in the trimeric envelope conformation. It was further found that this newly recognized region is critical for the progression of the fusogenic mechanism that leads to HIV-1 entry and infection of the cells. This discovery may lead to new methods of treatment, for treating HIV-1, as well as to the production of new vaccine immunogens.

This technology is available for licensing for commercial development in accordance with 35 U.S.C. 209 and 37 CFR Part 404, as well as for further development and evaluation under a research collaboration.

Potential Commercial Applications: New target for HIV therapeutic and vaccine development

Competitive Advantages: A new molecular target discovered in this invention may facilitate the development of next-generation HIV therapeutics and vaccines

Development Stage: Proof-of-concept studies demonstrate that CD4 binding to CD4-BD2 is critical for triggering gp120 conformational changes that enable coreceptor binding and HIV-1 infectivity. Animal studies are ongoing.

Inventors: Paolo Lusso, NIAID, NIH; and Qingbo Liu, NIAID, NIH

Publications: Liu, Qingbo, et al. "Quaternary contact in the initial interaction of CD4 with the HIV-1 envelope trimer." *Nature Structural & Molecular Biology* (2017).

Intellectual Property: HHS Reference No. E-230-2015/0 - US Patent Application No. 62/292,750 filed 02/08/2016; PCT Application No. PCT/US2017/017038 filed 02/08/2017.

Licensing Contact: Chris Kornak, 240-627-3705, chris.kornak@nih.gov.

Collaborative Research Opportunity: The Technology Transfer and Intellectual Property Office (TTIPO) is seeking parties interested in collaborative research to further co-develop HIV-1 vaccines and/or inhibitors that target the newly recognized region. For collaboration opportunities, please contact Chris Kornak, 240-627-3705, chris.kornak@nih.gov.

Dated: April 10, 2017

Suzanne Frisbie

Deputy Director

Technology Transfer and Intellectual Property Office

National Institute of Allergy and Infectious Diseases

[FR Doc. 2017-08351 Filed: 4/24/2017 8:45 am; Publication Date: 4/25/2017]