



[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 invention listed below is owned by an agency of the U.S. Government and 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 at 240-627-3705 or Chris.Kornak@nih.gov. Licensing information and copies of the U.S. patent application listed below may be obtained by communicating with 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 A signed Confidential Disclosure Agreement will be required to receive copies of unpublished information related to the invention.

SUPPLEMENTARY INFORMATION: Technology description follows:

Continuous Cell Lines Persistently Expressing High Levels of Native HIV-1

Envelope Trimers on their Surface Membrane

Description of Technology:

Transduced human cell lines expressing high levels of native HIV-1 Envelope on their surface membrane, in the unmodified or interdomain stabilized form. These cell lines provide a stable source of native HIV-1 envelope for multiple uses, including the high-efficiency production of virus-like particles (VLPs) for use as vaccines, testing new inhibitors or neutralizing antibodies, or identifying/capturing B cells that produce broadly neutralizing antibodies from infected/vaccinated humans or animals.

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:

- High-efficiency production of virus-like particles (VLPs)
- A means to test new inhibitors or neutralizing antibodies targeting HIV-1 envelope trimers
- Probe for identifying/capturing B cells that produce broadly neutralizing antibodies

Competitive Advantages:

- The interdomain-stabilized form does not bind CD4 and is locked in the native prefusion form.

Development Stage:

- Research Use

Inventors: Paolo Lusso (NIAID), Peng Zhang (NIAID)

Publications: Zhang, Peng, et al. "Interdomain stabilization impairs CD4 binding and improves immunogenicity of the HIV-1 envelope trimer." *Cell host & microbe* 23.6 (2018): 832-844.

Licensing Contact: To license this technology please reference E-185-2018-0, and contact Chris Kornak at 240-627-3705 or Chris.Kornak@nih.gov.

Collaborative Research Opportunity: The National Institute of Allergy and Infectious Diseases is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize this technology. For collaboration opportunities, please contact Chris Kornak at 240-627-3705 or Chris.Kornak@nih.gov.

Dated: April 30, 2019.

Suzanne M. Frisbie,

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Technology Transfer and Intellectual Property Office,

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