



[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 is 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: Licensing information and copies of the 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 A signed Confidential Disclosure Agreement will be required to receive copies of unpublished patent applications.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.

Synergistic Internal Ribosomal Entry Site (IRES) - MicroRNA-Based Approach for Attenuation of Flaviviruses and Live Vaccine Development

Description of Technology:

Many members of the *Flaviviridae* family are emerging and reemerging human pathogens that have caused outbreaks of devastating and often fatal diseases and represent a serious public health problem on a global scale. There is no single attenuation strategy that exists which is sufficient to prepare a safe, efficacious and immunogenic live attenuated virus vaccine that will work universally for *Flaviviridae*. This patent application claims live attenuated flavivirus vaccines, live attenuated multivalent flavivirus vaccines, and methods of preventing flavivirus infections as well as methods of making the vaccines claimed in the application. More specifically, this patent application claims methods for attenuating a flavivirus or chimeric flavivirus using a synergistic dual strategy involving inserting miRNA-targeting sequences to restrict virus replication in target hosts, cells and/or tissues and placing one or more flavivirus genes under translational control of an internal ribosomal entry site (IRES).

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

Potential Commercial Applications:

- Diagnostics
- Vaccines

Competitive Advantages:

- Potential one-dose flavivirus vaccine

- Ease of manufacture in Vero cells
- Low-cost potential vaccine
- Developing and developed world potential vaccines

Development Stage:

- In vivo data available (animal)

Inventors: Alexander Pletnev (NIAID), Konstantin Tsetsarkin (NIAID).

Intellectual Property: HHS Reference No. E-006-2017/0—U.S. Provisional Application No. 62/443,214, filed January 6, 2017.

Licensing Contact: Peter Soukas, J.D., 301-594-8730; peter.soukas@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 vaccine(s) for prophylaxis against flavivirus infections. For collaboration opportunities, please contact Peter Soukas, J.D., 301-594-8730; peter.soukas@nih.gov.

Dated: February 6, 2017

Suzanne Frisbie,

Deputy Director

Technology Transfer and Intellectual Property Office

National Institute of Allergy and Infectious Diseases

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