



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 National Institute of Allergy and Infectious Diseases (NIAID), an institute of the National Institutes of Health (NIH), Department of Health and Human Services (HHS), is giving notice of the invention listed below, which 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: Inquiries related to this licensing opportunity should be directed to: Brian Bailey at 240-669-5128, or bbailey@mail.nih.gov. Licensing information 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 A signed Confidential Disclosure Agreement will be required to receive copies of unpublished information related to the invention.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:

Neutralizing Antibodies Against West Nile Virus.

Description of Technology:

West Nile virus (WNV) is a mosquito-borne virus that can cause severe disease affecting the brain and nervous system, especially in older adults and people with weakened immune systems. There is no approved human vaccine or specific antiviral treatment for WNV.

Researchers at NIAID's Vaccine Research Center (VRC), together with collaborators at Sheba Medical Center and the Israeli Ministry of Health, have identified and characterized seven

new fully human monoclonal antibodies that bind to the WNV envelope (E) protein—the main surface protein the virus uses to enter cells. In laboratory studies, these antibodies (AIS-196, AIS-204, AIS-259, AIS-260, AIS-261, AIS-262, and AIS-265) strongly blocked WNV infection, and several also showed protective effects in a mouse model.

The invention includes the antibody sequences and tools needed to produce them, supporting development of full-length antibody therapies or smaller antibody fragments. These antibodies could help prevent WNV disease in people at higher risk or treat infection early, either individually or in combination. Modified versions are also included that may extend how long the antibodies remain active in the body or adjust how they interact with the immune system. The antibodies may also be useful in laboratory tests for WNV diagnosis, surveillance, and research.

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:

- Prevention or treatment antibodies for WNV, especially for people at higher risk of severe disease or after a known exposure.
- Fully human antibodies that strongly neutralize virus infection by targeting its key surface E protein.
- Flexible formats for different uses, including full-length antibodies or antibody fragments, and the option to use a single antibody or a combination (“cocktail”).
- Engineered versions designed to last longer in the body and tune immune functions for safety and performance.
- High-quality antibodies for WNV testing and surveillance, supporting laboratory detection, public health monitoring, and research.

- Neutralizing antibodies as components of delivery systems for prophylactic or therapeutic applications.

Competitive Advantages:

- An antibody-based approach for WNV prevention or treatment, given the lack of an approved human vaccine, specific antiviral treatment, or licensed antibody therapy.
- Strong virus-neutralizing activity.
- Fully human antibodies, which are less likely to cause anti-drug immune responses than non-human or humanized antibodies.
- Engineered versions that may last longer in the body and tune immune activity to improve safety and effectiveness.
- High-quality antibodies that support WNV prevention or treatment and can also be used in diagnostic tests, public health surveillance, and research.

Development Stage:

- Pre-Clinical

Inventors: Dr. Theodore Pierson, Dr. Kimberly Dowd, and Dr. Daniel Douek, all of NIAID; Dr. Dror Harats, Dr. Yael Ottolenghi, and Dr. Gili Regev-Yochay, all of Sheba Impact Ltd.; Dr. Yaniv Lustig, of Sheba Impact Ltd. and Ministry of Health, State of Israel.

Intellectual Property: HHS Reference No. E-021-2026-0. Provisional Patent Application No. 63/991,485, filed on February 26, 2026.

Licensing Contact: To license this technology, please contact Brian Bailey at 240-669-5128, or bbailey@mail.nih.gov, and reference E-021-2026-0.

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 Brian Bailey at 240-669-5128, or bbailey@mail.nih.gov.

Dated: April 17, 2026.

Surekha Vathyam,

Director,

Technology Transfer and Intellectual Property Office,

National Institute of Allergy and Infectious Diseases.

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