



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 A signed Confidential Disclosure Agreement will be required to receive copies of unpublished information related to the invention.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 descriptions follows:

Neutralizing Monoclonal Antibodies Against West Nile Virus.

Description of Technology:

West Nile virus (WNV) is a mosquito-borne flavivirus that can cause fever and, in some cases, severe neurologic disease. There is no approved human vaccine or specific antiviral treatment for WNV.

Researchers at NIAID's Vaccine Research Center (VRC), working with collaborators at Sheba Medical Center under the PREMISE program, identified five new human monoclonal

antibodies that potently neutralize WNV. These antibodies bind the viral envelope (E) protein, with data indicating recognition of E dimers or quaternary epitopes on the virion.

The invention includes compositions comprising the antibodies alone or in combination, nucleic acids encoding them, vectors and host cells for production, and methods for preventing, treating, or detecting WNV infection. The antibodies may be formulated for therapeutic administration, including emergency-use settings, and may also support diagnostic and research applications.

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, including use alone or in combination.
- Antibodies that strongly target the WNV E protein.
- Potential treatments for WNV outbreak response and prevention in high-risk populations.
- Genetic and cell-engineering tools for antibody production and product development.
- Antibodies for WNV detection, surveillance, and research tests.
- Potential intravenous treatments for patients with WNV.

Competitive Advantages:

- Shown to strongly neutralize WNV at low concentrations in laboratory cell-based studies.
- Novel antibodies with distinct molecular features not previously reported in scientific literature.
- Human monoclonal antibodies targeting E dimer or quaternary epitopes on the WNV virion.
- Potential applications in WNV treatment, diagnostics, and surveillance.
- Collaboration may help speed development to support WNV outbreak response.

Development Stage:

- Pre-Clinical

Inventors: Dr. Daniel Douek, Dr. Chaim Schramm, Dr. Ananda Chowdhury, Dr. Parker Dabbs, Dr. Lu Wang, Dr. Sarah Smith, Dr. Leonid Serebryanny, Dr. Theodore C. Pierson, Dr. Kimberly Dowd, Dr. Katherine Burgomaster, Dr. Laura Vanblargan, Dr. David Gordon, and Dr. Yuxiang Wang, all of NIAID; Dr. Yaniv Lustig, Dr. Yael Ottolenghi, and Dr. Dror Harats, all of Sheba Medical Center.

Publications: n/a

Intellectual Property: HHS Reference No. E-200-2024-0. U.S. Provisional Patent Application filed on July 31, 2024, and PCT Patent Application No. PCT/US2025/039922, filed on July 30, 2025.

Licensing Contact: To license this technology, please contact Brian Bailey at 240-669-5128, or bbailey@mail.nih.gov, and reference E-200-2024-0.

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.