



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 A signed Confidential Disclosure Agreement will be required to receive copies of unpublished information related to the invention.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

Anti-Nucleoprotein Crimean-Congo Hemorrhagic Fever Virus Monoclonal Antibodies for Assay Creation.

Description of Technology:

Crimean-Congo hemorrhagic fever (CCHF) is the most widespread form of viral hemorrhagic fever, found in Eastern and Southern Europe, the Mediterranean, northwestern China, central Asia, Africa, the Middle East, and the Indian subcontinent. Typically beginning with non-specific fever, myalgia, nausea, diarrhea, and general malaise, symptoms of infection with the tick-borne CCHF virus (CCHFV) can rapidly

progress to hemorrhagic manifestations, with case fatality rates as high as 30–40% in some regions. Critically, there are no approved vaccines for CCHF, and prevention is limited to control of exposure to infected ticks and livestock.

Researchers at the Vaccine Research Center (VRC) of the National Institute of Allergy and Infectious Disease (NIAID) have recently demonstrated robust immunogenicity and significant protection in a Rhesus macaque model of CCHF following vaccination with a novel repRNA vaccine. Single memory B cells from peripheral blood mononuclear cells (PBMCs) were isolated from the vaccinated macaques to derive monoclonal antibodies that target the nucleocapsid protein (NP) of CCHFV, which plays a critical role in the replication and pathogenesis of the virus. This technology comprises mAbs with strong potential for the development of diagnostic tools, *in vitro* assays, research reagents, and other analytical methods for CCHFV NP recognition.

This technology is available for licensing for commercial development in accordance with 35 U.S.C. § 209 and 37 CFR part 404.

Potential Commercial Applications:

- Development of diagnostic assays for rapid, accurate CCHFV detection in clinical and non-clinical settings.

Competitive Advantages:

- There are no readily available antibodies that bind to the NP protein of CCHFV.

Development Stage: Preclinical

Relevant Publications: Hawman DW, et al. A replicating RNA vaccine confers protection in a rhesus macaque model of Crimean-Congo hemorrhagic fever. *NPJ Vaccines* 2024;9:86. <https://doi.org/10.1038/s41541-024-00887-z>

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Intellectual Property: HHS Reference No. E-129-2025.

Licensing Contact: To license this technology, please contact Brian Bailey at 240-669-5128, or bbailey@mail.nih.gov, and reference E-129-2025.

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