[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 as a biological material 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: Jeffrey Thruston at 301-594-5179 or *jeffrey.thruston@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 A signed Confidential Disclosure Agreement will be required to receive copies of unpublished information related to the invention.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:

A VSV-EBOV-Based Vaccine Against COVID-19

Description of Technology:

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the causative agent of for coronavirus disease 2019 (COVID-19). COVID-19 is characterized by fever, cough, difficulty breathing, loss of taste and smell, nausea, and sore throat. As of the fourth quarter 2020, COVID-19 is responsible for over 1.17 million deaths worldwide. As the pandemic continues to surge, the importance of a safe, affordable, and efficacious vaccine is of urgent importance. The present technology utilizes the well characterized vesicular stomatitis virus (VSV) encoding the Ebola virus (VSV-EBOV) to express additionally a codon-optimized SARS-CoV-2 spike protein. A single intranasal or intramuscular administration of the vaccine showed protective efficacy against COVID-19 in hamsters after 4 weeks. A single intramuscular injection showed protective efficacy against COVID-19 pneumonia in rhesus macaques within 10 days. The vaccine is inexpensive to replicate, elicits a high antigen-specific antibody titer within the host, and provides protective efficacy after a single dose.

This technology is available for licensing, as a biological material, for commercial development in accordance with 35 U.S.C. § 209 and 37 CFR Part 404.

Potential Commercial Applications:

- Single dose vaccine against COVID-19

Competitive Advantages:

- Utilizes the established and well characterized VSV-EBOV vector
- Expresses high antigen titers within host cells
- Single dose protective efficacy against COVID-19
- Inexpensive and replicable

Development Stage:

- Prototype
- In vivo/In vitro

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Licensing Contact: To license this technology, please contact Jeffrey Thruston at 301-594-5179 or *jeffrey.thruston@nih.gov,* and reference E-233-2017-0.

Dated: January 19, 2021.

Surekha Vathyam,

Deputy Director,

Technology Transfer and Intellectual Property Office,

National Institute of Allergy and Infectious Diseases.

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