

Development Stage:

- Pre-clinical.

Inventors: Eric O. Long (NIAID), Xiaoxuan Zhuang (NIAID).

Publications: Zhuang X and Long E.O., "CD28 homolog is a strong activator of natural killer cells for lysis of B7H7-positive tumor cells." *Cancer Immunol Res* 7(6):939–951. <https://cancerimmunolres.aacrjournals.org/content/7/6/939.long>. April 24, 2019.

Trends Immunol: "Inhibition-resistant CARs for NK cell cancer immunotherapy" *Trends Immunol* 40:1078–1081, December 2019.

Intellectual Property: HHS Reference No. E–097–2020–0–PCT–01, PCT Patent Application No. PCT/US2020/024985.

Licensing Contact: To license this technology, please contact Chris Kornak at 240–627–3705 or Chris.Kornak@nih.gov, and reference E–097–2020–0.

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 Chris Kornak at 240–627–3705 or Chris.Kornak@nih.gov.

Dated: April 12, 2020.

Wade W. Green,

Acting Deputy Director, Technology Transfer and Intellectual Property Office, National Institute of Allergy and Infectious Diseases.

[FR Doc. 2020–08562 Filed 4–22–20; 8:45 am]

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: Amy F. Petrik, Ph.D., 240–627–3721; amy.petrik@nih.gov. Licensing information and copies of the U.S. patent application 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 A signed Confidential Disclosure Agreement will be required to receive copies of unpublished patent applications.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:

Recombinant Prefusion Measles and Mumps F and F–HN (H) Glycoproteins for Vaccine Development.

Description of Technology: The Measles virus (MeV) and Mumps virus (MuV) are highly contagious paramyxoviruses that can be transmitted by respiratory droplets from or on direct contact with an infected person. The resulting diseases can lead to serious complications or death among children. The existing vaccines for MeV and MuV are live attenuated virus vaccines which are administered in two subcutaneous doses at 1 year of age and as early as one month later. Two doses of a combination measles, mumps and rubella vaccine are 97% effective against measles and 88% against mumps. A single dose of a combination measles, mumps, and rubella vaccine is 93% effective against measles and 78% effective against mumps.

Despite the effectiveness of the current licensed vaccines against MeV and MuV, incidences of both have increased in recent years. Contributing factors include reduced vaccination rates (especially in the U.S) due to vaccine hesitancy and circulation of divergent strains against which the licensed MMR vaccine offers limited protection.

In the case of MuV, recent studies have shown that immunity wanes significantly after the second MMR vaccination which normally occurs in childhood. In response to recent recurring MuV disease outbreaks in the U.S and Europe, the Advisory Committee on Immunization Practices is advising a third MMR vaccination to boost protection. However, existing immunity neutralizes a third MMR vaccination limiting its effectiveness. Genotype G MuV is the main cause of recent outbreaks in the US and Europe, and a genotype-matched vaccine has been suggested as a solution for the recurring outbreaks.

Researchers at the Vaccine Research Center (VRC) of the National Institute of Allergy and Infectious Diseases (NIAID) used structure-guided design to create immunogen constructs aimed at stabilizing the measles and mumps F

glycoproteins in their prefusion conformations. This was achieved by following the discovery that the prefusion stabilized F glycoproteins from other members of the paramyxoviridae family induced high titer neutralizing responses.

The researchers developed recombinant immunogens based on: (a) The measles F glycoprotein trimer stabilized in its prefusion conformation (preF–MeV); (b) genotype G mumps F glycoprotein trimers stabilized in its prefusion conformation (preF–MuV); (c) a chimera in which a genotype G mumps F glycoprotein trimer stabilized in its prefusion conformation is fused with mumps HN protein (preF–HN); and (d) a chimera in which a genotype G mumps F glycoprotein trimer stabilized in its prefusion conformation is fused with measles H protein (preF–MuV/MeV H).

The prefusion stabilization of both the mumps and measles F glycoproteins relies on amino acid substitutions to allow the formation of intra-protomer disulfide bonds. Researchers found that the preF and preF–HN immunogens are stable for over a month at 37 °C and hypothesize that lyophilized product would be stable at room temperature for months.

When mice are immunized in a prime-boost-boost regimen with the MuV immunogen constructs, the group receiving the preF–HN immunogens elicited similar antibody titers against genotype G MuV and Jeryl Lynn strain of MuV (genotype A) indicating that the preF–HN immunogens offer broad protection against divergent strains of MuV. Interestingly, mice immunized in a prime-boost regimen with the pre–F MuV/MeV H chimeric immunogen elicited antibody titers to both MuV and MeV that are above the determined protective thresholds.

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:

- The products can be used as measles or mumps vaccines.

Competitive Advantages:

- Currently, there is no licensed recombinant measles or mumps vaccine for use as boosters as a third vaccination.

- The preF–HN immunogens offer broad protection against divergent strains of mumps.

- The stabilized prefusion F molecules may be deliverable as mRNA vaccines, increasing yields of expressed antigen and presentation of the optimal conformation of target proteins.

- PreF and preF–HN immunogens are stable for over a month at 37 °C, the lyophilized product may be stable at room temperature for months.

- Recombinant vaccine production is scalable, cost-effective vaccine production can be achieved.

Development Stage: Preclinical Research.

Inventors: Barney Graham, Ph.D. (NIAID); Guillaume Stewart-Jones, Ph.D. (NIAID).

Intellectual Property: HHS Reference Number E–153–2019 includes U.S. Provisional Patent Application Number 62/946,902 filed 12/11/2019.

Licensing Contact: To license this technology, please contact Amy F. Petrik, Ph.D., 240–627–3721; amy.petrik@nih.gov.

Dated: April 12, 2020.

Wade W. Green,

Acting Deputy Director, Technology Transfer and Intellectual Property Office, National Institute of Allergy and Infectious Diseases.

[FR Doc. 2020–08561 Filed 4–22–20; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Prospective Grant of an Exclusive Patent License: Thio Compounds and Thalidomide Analogues for the Treatment of Neurological Diseases

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The National Institute on Aging and the National Cancer Institute, institutes of the National Institutes of Health, Department of Health and Human Services, are contemplating the grant of an Exclusive Patent License to practice the inventions embodied in the U.S. and foreign Patents and Patent Applications listed in the Supplementary Information section of this notice to AevisBio, Inc. located in 814 W Diamond Ave., Suite 203, Gaithersburg, MD 20870.

DATES: Only written comments and/or applications for a license which are received by the National Institute on Aging c/o National Cancer Institute's Technology Transfer Center on or before May 8, 2020 will be considered.

ADDRESSES: Requests for copies of the patent application, inquiries, and comments relating to the contemplated Exclusive Patent License should be directed to: Merissa Baxter, Ph.D., Technology Transfer Manager, NCI Technology Transfer Center, 9609

Medical Center Drive, Rm. 1E406 MSC 9702, Bethesda, MD 20892–9702 (for business mail), Rockville, MD 20850–9702, Telephone: 240–276–7234, Email: merissa.baxter@nih.gov.

SUPPLEMENTARY INFORMATION:

Intellectually Property

United States Patent No. 8,927,725, issued January 6, 2015 and entitled “Thio Compounds” [HHS Reference No. E–045–2012–0–US–01]; United States Patent No. 9,084,783, issued July 21, 2015 and entitled “Thio Compounds” [HHS Reference No. E–045–2012–0–US–02]; United States Patent No. 9,623,020, issued April 18, 2017 and entitled “Thio Compounds” [HHS Reference No. E–045–2012–0–US–03]; United States Patent No. 10,220,028, issued March 5, 2019 and entitled “Thio Compounds” [HHS Reference No. E–045–2012–0–US–04]; US Provisional Patent Application No. 62/235,105, filed on September 30, 2015 and entitled “Thalidomide Analogs and Methods of Use” [HHS Reference No. E–208–2015–0–US–01]; PCT Patent Application No. PCT/US2016/054430, filed on September 29, 2016 and entitled, “Thalidomide Analogs and Methods of Use” [HHS Reference No. E–208–2015–0–PCT–02]; Australian Patent Application No. 2016330967, filed on September 29, 2016 and entitled “Thalidomide Analogs and Methods of Use” [HHS Reference No. E–208–2015–0–AU–03]; Canadian Patent Application No. 3000661, filed on September 29, 2019 and entitled “Thalidomide Analogs and Methods of Use” [HHS Reference No. E–208–2015–0–CA–04]; European Patent Application No. 16782148.7, filed on September 29, 2019 and entitled “Thalidomide Analogs and Methods of Use” [HHS Reference No. E–208–2015–0–EP–05]; South Korean Patent Application No. 10–2018–7012347, filed on April 13, 2018 and entitled “Thalidomide Analogs and Methods of Use” [HHS Reference No. E–208–2015–0–KR–06]; and United States Patent Application No. 15/764,193, filed on March 28, 2018 and entitled “Thalidomide Analogs and Methods of Use” [HHS Reference No. E–208–2015–US–07].

The patent rights in these inventions have been assigned and/or exclusively licensed to the government of the United States of America.

The prospective exclusive license territory may be world-wide, and the field of use may be limited to the use of Licensed Patent Rights for the following: “The development, production, and commercialization of a select subset of thalidomide/lenalidomide/pomalidomide (POMA)

analogue compounds for the therapeutic treatment of neurological disorders prevalent in aging: Specifically, Traumatic Brain Injury (TBI), Alzheimer's disease (AD), Parkinson's disease (PD), and Multiple Sclerosis (MS).”

These technologies disclose novel thalidomide, lenalidomide, and pomalidomide analogues that can potentially be used for the treatment of neurological diseases, autoimmunity, and/or cancer.

This notice is made in accordance with 35 U.S.C. 209 and 37 CFR part 404. The prospective exclusive license will be royalty bearing, and the prospective exclusive license may be granted unless within fifteen (15) days from the date of this published notice, the National Institute on Aging receives written evidence and argument that establishes that the grant of the license would not be consistent with the requirements of 35 U.S.C. 209 and 37 CFR part 404.

In response to this Notice, the public may file comments or objections. Comments and objections, other than those in the form of a license application, will not be treated confidentially, and may be made publicly available.

License applications submitted in response to this Notice will be presumed to contain business confidential information and any release of information in these license applications will be made only as required and upon a request under the Freedom of Information Act, 5 U.S.C. 552.

Dated: April 13, 2020.

Richard U. Rodriguez,

Associate Director, Technology Transfer Center, National Cancer Institute.

[FR Doc. 2020–08560 Filed 4–22–20; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Docket ID FEMA–2020–0002; Internal Agency Docket No. FEMA–B–2014]

Proposed Flood Hazard Determinations

AGENCY: Federal Emergency Management Agency; DHS.

ACTION: Notice; correction.

SUMMARY: On March 13, 2020, FEMA published in the **Federal Register** a proposed flood hazard determination notice that contained an erroneous