

technology employs protein engineering to stabilize S in its prefusion conformation, preventing structural rearrangement, and exposing antigenically preferable surfaces. The technology has been applied to several CoV spikes, including those from human-relevant viruses, such as HKU1-CoV, SARS-CoV, and MERS-CoV. Particularly for MERS-COV, stabilized S proteins have been shown to elicit superior neutralizing antibody responses up to 10-fold higher in animal models and protect mice against lethal MERS-CoV infection. This technology is applicable for delivery via other platforms, such as mRNA.

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:* The stabilized prefusion coronavirus spike protein can be used as a vaccine antigen to elicit robust neutralizing antibody responses.

*Competitive Advantages:*

- Improved immunogenicity compared to other coronavirus S vaccine formulations.
- Increased protein expression, stability, and manufacturability compared to wild-type CoV S.

*Development Stage:*

- In vivo data available (animal).

*Inventors:* Barney Graham (NIAID), Masaru Kanekiyo (NIAID), M. Gordon Joyce (NIAID), Kizzmekia Corbett (NIAID), Hadi Yassine (NIAID), Andrew Ward (Scripps), Robert Kirchdoefer (Scripps), Christopher Cottrell (Scripps), Jesper Pallesen (Scripps), Hannah Turner (Scripps), Nianshuang Wang (Dartmouth), Jason McLellan (Dartmouth),

*Intellectual Property:* HHS Reference No. E-234-2016/0, U.S. Provisional Patent Application Number 62/412,703, filed October 25, 2016, PCT Patent Application PCT/US2017/058370 filed October 25, 2017.

*Licensing Contact:* Amy Petrik, Ph.D., 240-627-3721; amy.petrik@nih.gov.

*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 norovirus diagnostics or vaccines. For collaboration opportunities, please contact Amy Petrik, Ph.D., 240-627-3721; amy.petrik@nih.gov.

Dated: April 5, 2018.

**Suzanne M. Frisbie,**

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

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**BILLING CODE 4140-01-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### National Heart, Lung, and Blood Institute; Notice of Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of a meeting of the Sleep Disorders Research Advisory Board.

This meeting is open to the public but is being held by virtual/teleconference. No physical meeting location is provided for any interested individuals to listen to and/or participate in the meeting. Any individual interested in listening to the meeting discussions must: access the website <https://nih.webex.com/nih/onstage/g.php?MTID=e9a4cbcaac003afd915c2c94a8c787585> and enter Event Password: sdrab or call-in toll number 1-650-479-3208 and enter access code: 625 446 354, for access to the meeting. Individuals require special assistance, should notify the Contact Person listed below in advance of the meeting.

*Name of Committee:* Sleep Disorders Research Advisory Board.

*Date:* April 27, 2018.

*Time:* 2:00 p.m. to 4:00 p.m.

*Agenda:* Discussion of NIH Sleep Disorders Research Plan Revision.

*Place:* National Institutes of Health, Two Rockledge Center, Conference Room 10167, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

*Contact Person:* Michael J. Twery, Ph.D., Director, National Center on Sleep Disorders Research Division of Lung Diseases, National Heart, Lung, and Blood Institute, National Institutes of Health, 6701 Rockledge Drive, Suite 10042, Bethesda, MD 20892-7952, 301-435-0199, [twerym@nhlbi.nih.gov](mailto:twerym@nhlbi.nih.gov).

This notice is being published less than 15 days prior to the meeting due to the timing limitations of receiving input from committee members prior to presenting the plan to other audiences for comment and meeting a legislative reporting deadline.

(Catalogue of Federal Domestic Assistance Program Nos. 93.233, National Center for Sleep Disorders Research; 93.837, Heart and Vascular Diseases Research; 93.838, Lung Diseases Research; 93.839, Blood Diseases and Resources Research, National Institutes of Health, HHS)

Dated: April 10, 2018.

**Michelle D. Trout,**

*Program Analyst, Office of Federal Advisory Committee Policy.*

[FR Doc. 2018-07820 Filed 4-13-18; 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:** Dr. Amy Petrik, 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.

#### Novel Multivalent Nanoparticle Vaccines

*Description of Technology:* Current seasonal influenza vaccines are designed to elicit immunity to circulating strains of influenza each year. The targeted strains are selected based on predictions of which strains are likely to be predominant in the human population for a given year. This prediction must be made well ahead of the influenza season to allow time for vaccine production and can be inaccurate.

Scientists at NIAID's Vaccine Research Center are developing an alternative approach for design and production of seasonal influenza vaccines. The design includes recombinant fusion proteins that self-

assemble into nanoparticles with influenza antigenic proteins displayed on the nanoparticle surface (*Nature* 499, 102–106 (2013)). Further engineering these recombinant fusion proteins, the scientists have developed nanoparticles that simultaneously display multiple strains of influenza viral protein antigens (the receptor-binding domain of hemagglutinin) on their surface. Due to the heterogeneity of the antigenic protein derived from multiple strains, these nanoparticles are referred to as mosaic nanoparticles.

Upon immunization of mice with mosaic nanoparticles displaying antigens from eight different H1N1 strains, the elicited antibodies neutralized a panel of H1N1 strains from 1918 through 2009 including the strains that had not been displayed on the mosaic nanoparticle. However, mice immunized with a mixture of the eight types of nanoparticles, each displaying a single antigenic protein, did not elicit a similar breadth of neutralizing antibody response.

NIAID is continuing development of these vaccine candidates through animal studies and moving toward clinical evaluation.

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:*

- Vaccine platform for seasonal influenza with broader protection coverage

*Competitive Advantages:*

- Nucleic acid or recombinant protein-based vaccine
- Increased ease of production compared to current seasonal influenza vaccines

*Development Stage:*

- In vivo (animal studies)

*Inventors:* Barney S. Graham, Hadi Yassine, Masaru Kanekiyo (all from NIAID).

*Publications:* Kanekiyo, M, et al. *Manuscript under revision.*

*Intellectual Property:* HHS Reference Number E–060–2015 includes U.S. Patent Application No. 15/540,898 filed June 29, 2017 (Pending); Canada Patent Application No. 2,974,346 filed December 31, 2015 (Pending); China Patent Application No. 201580076324.6 filed December 31, 2015 (Pending); Europe Patent Application No. 15825772.5 filed July 7, 2017 (Pending); India Patent Application No. 201717026077 filed July 21, 2017 (Pending); Australia Patent Application No. 2015373928 filed July 21, 2017; Brazil Patent Application No.

BR112017014219–8 filed June 29, 2017; Israel Patent Application No. 253187 filed December 31, 2015; Japan Patent Application No. 2017–534796 filed June 28, 2017; South Korean Patent Application No. 10–2017–7021112 filed July 27, 2017; Singapore Patent Application No. 11201705264W filed June 23, 2017.

*Related Intellectual Property:* HHS Reference Number E–293–2011

*Licensing Contact:* Dr. Amy Petrik, 240–627–3721; amy.petrik@nih.gov. 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 influenza monoclonal antibody technologies. For collaboration opportunities, please contact Dr. Amy Petrik, 240–627–3721; amy.petrik@nih.gov.

Dated: April 5, 2018.

**Suzanne M. Frisbie,**

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

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**BILLING CODE 4140–01–P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health

#### Submission for OMB Review; 30-Day Comment Request; Generic Clearance for the Research Domain Criteria (RDoC) Initiative (National Institute of Mental Health)

**AGENCY:** National Institutes of Health, HHS.

**ACTION:** Notice.

**SUMMARY:** In compliance with the Paperwork Reduction Act of 1995, the National Institutes of Health (NIH) has submitted to the Office of Management and Budget (OMB) a request for review and approval of the information collection listed below.

**DATES:** Comments regarding this information collection are best assured of having their full effect if received within 30 days of the date of this publication.

**ADDRESSES:** Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the: Office of Management and Budget, Office of Regulatory Affairs, OIRA\_submission@omb.eop.gov or by

fax to 202–395–6974, Attention: Desk Officer for NIH.

**FOR FURTHER INFORMATION CONTACT:** To request more information on the proposed project or to obtain a copy of the data collection plans and instruments, contact: Melba Rojas, NIMH Project Clearance Liaison, Science Policy and Evaluation Branch, Office of Science Policy, Planning and Communications, NIMH, Neuroscience Center, 6001 Executive Boulevard, MSC 9667, Bethesda, Maryland 20892, call 301–443–4335, or email your request, including your mailing address, to [nimhprapubliccomments@mail.nih.gov](mailto:nimhprapubliccomments@mail.nih.gov).

**SUPPLEMENTARY INFORMATION:** This proposed information collection was previously published in the **Federal Register** on January 29, 2018, pages 4062–4063 (83 FR 4062) and allowed 60 days for public comment. No public comments were received. The purpose of this notice is to allow an additional 30 days for public comment. The National Institute of Mental Health (NIMH), National Institutes of Health, may not conduct or sponsor, and the respondent is not required to respond to, an information collection that has been extended, revised, or implemented on or after October 1, 1995, unless it displays a currently valid OMB control number.

In compliance with Section 3507(a)(1)(D) of the Paperwork Reduction Act of 1995, the National Institutes of Health (NIH) has submitted to the Office of Management and Budget (OMB) a request for review and approval of the information collection listed below.

*Proposed Collection:* Generic Clearance for the Research Domain Criteria (RDoC) Initiative, 0925–NEW, National Institute of Mental Health (NIMH), National Institutes of Health (NIH).

*Need and Use of Information Collection:* This request serves as notice that the National Institute of Mental Health (NIMH) is seeking OMB approval of a generic plan to conduct information collections to interface with the scientific community and promote the RDoC Initiative. As the lead Federal agency for research on mental illnesses, NIMH’s mission is to transform the understanding and treatment of mental illnesses through basic and clinical research, paving the way for prevention, recovery, and cure. To this end, NIMH launched the RDoC Initiative in 2009 to implement Strategy 1.4 of the 2008 NIMH Strategic Plan: “Develop new ways of classifying disorders based on dimensions of observable behaviors and brain functions.” The aim of RDoC is to