[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 inventions listed below are owned by an agency of the U.S. Government and are 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: Licensing information and copies of the U.S. patent applications listed below may be obtained by communicating with the indicated licensing contact James M. Robinson 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 A signed Confidential Disclosure Agreement will be required to receive copies of unpublished patent applications.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 descriptions follows.

Compositions and Methods for Detecting Loa Loa

Description of Technology:

Loa loa is a filarial nematode estimated to infect 3-13 million people in Central and Western Africa. In parts of Africa, mass administration of ivermectin is common for onchocerciasis and lymphatic filariasis control. However, some individuals infected with Loa loa microfilariae in high densities are known to experience post-ivermectin severe adverse events, such as encephalopathy, coma, or even death. Therefore, diagnostic tools that can accurately identify and differentiate *Loa loa* microfilariae from other filarial infections are needed. Microscopic evaluation of blood samples is the only current diagnostic method used to detect *Loa loa* microfilaremia in endemic areas, and is impractical for widespread screening. Molecular based assays are useful and are quantitative, but require the use of sophisticated instrumentation.

The inventors analyzed samples from *Loa loa* infected patients and uninfected controls, and have identified *Loa loa* microfilaria-specific antigens. The pending application claims a variety of means of detecting these antigens.

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:

- Diagnostics

Competitive Advantages:

- Highly specific to *Loa loa* microfilariae

- Highly sensitive

- Both diagnostic and quantitative

- Works with blood, urine, or saliva sample

Development Stage:

- Pre-Clinical

Inventors: Thomas B. Nutman, NIAID, NIH; Sasisekhar Bennuru, NIAID, NIH; and Papa Makhtar Drame, NIAID, NIH.

Publications: Drame, Papa, et al. 2016. Identification and Validation of Loa loa Microfilaria-Specific Biomarkers: a Rational Design Approach Using Proteomics and Novel Immunoassays. *mBio*, vol. 7 no. 1 e02132-15.

Intellectual Property: HHS Reference No. E-140-2015/0 - US Provisional Patent Application No. 62/153,654 filed April 28, 2015; PCT Patent Application No. PCT/US2016/029673 filed April 28, 2016.

Licensing Contact: James M. Robinson, 301-761-7542; James.Robinson4@nih.gov.

Collaborative Research Opportunity: The Technology Transfer and Intellectual Property Office (TTIPO) is seeking parties interested in collaborative research to further develop, evaluate or commercialize a diagnostic means for detecting *Loa loa* microfilaria-specific antigens. For collaboration opportunities, please contact James M. Robinson, 301-761-7542; James.Robinson4@nih.gov.

Dated: March 28, 2017.

Suzanne Frisbie,

Deputy Director,

Technology Transfer and Intellectual Property Office,

National Institute of Allergy and Infectious Diseases.

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