



**[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:** Licensing information and copies of the patent applications 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 A signed Confidential Disclosure Agreement will be required to receive copies of unpublished patent applications.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.

## **A bivalent conjugate vaccine for Malaria and Typhoid prophylaxis.**

### **Description of Technology:**

Malaria is the single leading cause of mortality, especially among children in the developing world. Typhoid fever, caused by infection with *Salmonella typhi*, is known to be endemic with malaria and causes its own significant disease burden. Scientists at the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, have developed a novel bivalent vaccine candidate that may effectively prevent malaria and typhoid. This approach significantly enhances immune response to the Pfs25 Malaria transmission blocking antigen and produces a robust immune response against *Salmonella typhi* Vi polysaccharide (ViP).

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:**

- Development of this technology into a vaccine may protect vulnerable populations from both Malaria transmission and Typhoid fever.

### **Competitive Advantages:**

- This technology has significant advantages over current treatments, since there is currently only one commercial Malaria vaccine licensed for use in Europe only, which was not developed to address Malaria transmission, and the currently licensed *Salmonella typhi* vaccines show incomplete efficacy and do not provide long-term immunity. A formulation of the present technology has shown the

ability to induce an immune response to Pfs25 in excess of 100 times higher and Salmonella typhi antigen 20-40 times higher than what is seen by immunization with either antigen alone.

**Development Stage:**

- In vivo data available (animal)

**Inventors:** Drs. Patrick Duffy, Sojung An, and Puthupparampil Scaria, NIAID, NIH

**Publications:** None

**Intellectual Property:** Provisional Patent application # 62/327,184 Filed 04/25/16

Technology reference # E-124-2016/0

**Licensing Contact:** Daniel Anacker, Ph.D., 301-761-7671, daniel.anacker@nih.gov

**Collaborative Research Opportunity:** The NIAID, Laboratory of Malaria Immunology and Vaccinology is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize this technology.

Please contact Dr. Daniel Anacker at 301-761-7671 or daniel.anacker@nih.gov for more information.

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Suzanne Frisbie, Ph.D.

Deputy Director

Technology Transfer and Intellectual Property Office

National Institute of Allergy and Infectious Diseases

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