



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. Peter Tung; 240-669-5483; peter.tung@nih.gov. 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 A signed Confidential Disclosure Agreement will be required to receive copies of unpublished patent applications.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.

Compounds That Treat Malaria and Prevent Malaria Transmission

Description of Technology:

Malaria is the single leading cause of death, especially among children, in the

developing world. Malaria is caused by infection with parasites of the genus *Plasmodium*, transmitted by mosquitos. In addition to transmission, vital steps in the parasite lifecycle occur in the mosquito host. The invention offered for licensing relates to therapeutic compounds and related pharmaceutical compositions that can be used in the prevention and treatment of malaria infection. More specifically, the invention is drawn to compounds that may kill sexual and mosquito stage malaria parasites to block transmission. Specifically claimed is the antihistamine Ketotifen, which has demonstrated activity blocking parasite development in mosquitoes. Also claimed are treatments encompassing Ketotifen with other existing antimalarial drugs in a combination treatment aimed at multiple stages in the malaria life cycle.

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:

- Prevention and treatment of malaria infections

Competitive Advantages:

- Drugs that kill sexual and mosquito stages of the parasite are important for preventing and/or slowing the spread of malaria infection and ultimately for malaria eradication.
- Primaquine, the only currently available drug shown to block transmission, is known to cause serious adverse side effects.

Development Stage:

- Pre-Clinical (animal data available)

Inventors: Xin-zhuan Su and Dipak Raj (NIAID)

Publications:

Eastman R. T. Pattaradilokrat S. Raj D. K. Dixit S. Deng B. Miura K. Yuan J. Tanaka T. Q. Johnson R. L. Jiang H. et al. 2013. A class of tricyclic compounds blocking malaria parasite oocyst development and transmission. *Antimicrob. Agents Chemother.* 57: 425–435.

Intellectual Property:

US Patent # 9,375,424, US divisional patent application: 13/392,668, Worldwide patent applications: Canada 2772085, Europe 10812670.7, India 1684/DELNP/2012. Priority Application 61/237,417 filed August 27, 2009. (HHS Reference No. E-283-2009)

Licensing Contact: Peter Tung, Ph.D; 240-669-5483; peter.tung@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 this technology. For collaboration opportunities, please contact Peter Tung; 240-669-5483; peter.tung@nih.gov.

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Suzanne Frisbie,

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Technology Transfer and Intellectual Property Office,

National Institute of Allergy and Infectious Diseases.

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