

Small pilot trial shows promise for a malaria vaccine but hurdles exist

By ACSH Staff — August 9, 2013



[1]

A small-scale [proof-of-concept study](#) [2] has given malaria researchers and the millions of victims of this ancient scourge reason for hope that an effective preventive vaccine may one day become a reality.

A multi-center group of scientists enrolled 57 volunteers between the ages of 18 and 45, with no prior history of malaria, and administered specially prepared, weakened but still infectious malaria particles at various intervals and dosages. This potential vaccine was given intravenously, although in very small amounts, to 40 of the volunteers, and then all were exposed to malaria-carrying mosquitoes.

Among the six volunteers who got the full-course of five IV infusions at the high-dose, none came down with malaria; among the nine subjects who got 4 injections, six were protected. Those subjects who received fewer doses, as well as all the unvaccinated controls, reliably came down with the infection, proving the efficacy of the immunogenic vaccine.

The vaccine is known as PfSPZ for the scientific name of the malaria parasite, *Plasmodium falciparum*, and the type of modified malarial particle, the sporozoite. The group was led by Dr. Robert Seder of the National Institute of Allergy and Infectious Diseases of the NIH.

[He commented](#), [3] "In this trial, we showed in principle that sporozoites can be developed into a malaria vaccine that confers high levels of protection and is made using the good manufacturing practices that are required for vaccine licensure."

ACSH's Dr. Gilbert Ross, who has long been interested in malaria preventive techniques, including both public health measures such as DDT and swamp clearance, had this to say: While this surely gives hope to workers in malaria prevention and the many millions of actual and potential victims, the hurdles that would need to be overcome to make this available on a mass scale boggle the mind. Breeding anopheles mosquitoes, infecting them with malaria, and harvesting the sporozoites under sterile conditions, and irradiating them to weaken the infection,

are difficult enough. But then assembling the logistics to inoculate impoverished villagers intravenously at least four times seems extraordinarily distant. However, progress is essential, given the huge cost of malaria in lives and health.

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Links

[1] <http://acsh.org/wp-content/uploads/2013/08/Malarial-mosquito.jpg>

[2] <http://www.sciencemag.org/content/early/2013/08/07/science.1241800>

[3] <http://www.firstwordpharma.com/node/1130260#axzz2bTH0rTi7>