

Cautious optimism for malaria vaccine

Author : Jonathan Pryke

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A 'maverick' malaria vaccine called PfSPZ has become the [first in the world](#) to provide 100% protection against the disease in its phase 1 safety trial. The results of the trial, [reported](#) this week in *Science*, show that six subjects given the vaccine (considered maverick because of its use of a weakened form of the whole malarial parasite) were 100% protected from later bites of infectious mosquitoes.

The announcement is now making waves across the internet (see a good write-up of it [here](#)), with two major cautions already being raised. The first is that this discovery comes at the very start of the [clinical trial process](#) and there is a long way to go for the vaccine to reach the market. The second, as outlined in *Nature*, is that even if found effective on a larger scale, logistical difficulties might limit its applicability (it must be applied intravenously and remain frozen).

One thing that reports to date have not sufficiently highlighted is that aid funding is part of the story. The Gates Foundation is [providing](#) a grant to support work on a more thermostable form of the vaccine. Gates and others are also supporting the Malaria Vaccine Initiative, a product development partnership (PDPs) that is [working](#) with the company Sanaria on this project. (The Australian Government [announced](#) last year its intention to start funding selected PDPs as part of its new medical research strategy for the aid program.)

It's important also to note that in mass vaccination campaigns for the world's poorest, affordability is everything. While the news about effectiveness as measured in phase 1 clinical trials is good, it could prove difficult to overcome at least some of the logistical difficulties mentioned above. In that case, it might well be that less effective but more affordable vaccines eventually provide a better result (for example, see [this](#) commentary, especially the final paragraph, on a possible Mosquirix combination vaccine).

This last point aside, this is still good news in the fight against a disease that infects some [220 million people](#), most of whom live in poverty, a year, killing more than 650,000 thousand of them—mostly children under the age of five.