

Malaria vaccine 'first to meet WHO efficacy target'

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For the first time, the world has a serious malaria vaccine candidate. Credit: Army Medicine (CC BY 2.0)

A malaria vaccine candidate tested on children in West Africa has shown an efficacy of around 77 percent, say scientists, hailing it as a breakthrough in the fight against the disease.

Malaria causes more than 400,000 deaths a year globally, according to the World Health Organization (WHO), mostly among children in Sub-Saharan Africa.

The R21/Matrix-M [vaccine](#), developed by the Clinical Research Unit of Nanoro (CRUN), Burkina Faso and their partners at the University of Oxford in the UK, is the first malaria vaccine to reach the 75 percent efficacy target set by the WHO.

Researchers recruited 450 children aged five to 17 months in the area of Nanoro, central Burkina Faso, and divided them into three groups for the Phase IIb trial.

One group of 150 received the vaccine with a low dose of the Matrix-M adjuvant, which helps create a stronger immune response. Another group of 150 received the vaccine at a higher dose of adjuvant, while the last group of 150 received the

[rabies vaccine](#) as a control vaccine.

Halidou Tinto, principal trial investigator at the CRUN, said: "Once we vaccinated them with three doses one month apart [...], we followed them in each group to see how they were going to behave in terms of vaccine safety, tolerance, but also efficacy."

The subjects in the study reported no [serious side effects](#) from the vaccine, which was found to be safe and can be manufactured at low cost on a large scale, they added.

Despite more than 100 vaccine candidates entering clinical trials in recent decades, none have previously reached the target of 75 percent efficacy which the WHO set as a target to be achieved by 2030.

The Serum Institute of India, which has manufactured the vaccine, says it will be able to deliver more than 200 million doses of the vaccine once it is approved by regulators.

Epidemiologist Gauthier Tougouri, coordinator of the National Malaria Control Program in Burkina Faso, hailed the study as a great achievement in the fight against malaria.

Last year the country recorded more than 11 million cases of malaria and almost 4,000 malaria-related deaths, including pregnant women and children, official figures show.

A larger Phase III trial will now be conducted involving 4,800 children aged five to three years in four countries.

"I hope that the forthcoming results will confirm phase two of the study so that we can reach the 2030 target for the elimination of malaria," said Tougouri.

In Burkina Faso, children will be recruited for the next phase in Nanoro and Dande, in the south-west of the country from next month.

"It is important for us to see if such a vaccine, tested in an area like Nanoro which has a transmission of medium duration, will give the same effectiveness in an area like Dande where the transmission is much longer," explained Tinto.

Researchers hope that by testing the vaccine in different contexts on a larger number of children, its efficacy will be confirmed and the vaccine can be considered for registration.

Charlemagne Ouedraogo, Minister of Health for Burkina Faso, said the findings offer hope for the elimination of malaria in the country and across the continent.

"We believe that the solution against malaria will come from Burkina. We encourage the team to continue the third phase to give us results that will allow us to go further so that a vaccine is put on the market that will allow us to reduce morbidity and mortality from [malaria](#)," he said.

Ida Sawadogo, program officer at the Access to Essential Medicines Network, said: "We have been waiting for this for years and we are happy that at last a vaccine is being found against this disease which is the number one killer in our country."

Provided by SciDev.Net

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