

Hope for an effective malaria therapy with just one tablet

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Approximately 584,000 people worldwide die of malaria each year. The epidemic strongly associated with poverty claims most of its victims in Africa, where it particularly affects the weakest, children and pregnant women. Current therapies have to be taken over several days to be effective against malaria. "Due to supply bottlenecks, but also the quick reduction of symptoms, the administration of therapies over several days is often inadequate which can lead to treatment failure and ultimately represent a threat to the patients", so Michael Ramharter of the Infectiology and Tropical Medicine Division of the University for Internal Medicine I at MedUni Vienna on the occasion of the World

Malaria Day. First results of a multicentre study with Ramharter as "Principal Investigator" now provide hope for the malaria therapy with just one dose.

"Once the fever falls one day after commencement of the malaria therapy, the reliable intake of medication is often forgotten. Effective treatment with just one dose would therefore be a giant step forward", explains the expert for the clinical development of malaria combination therapies who has been working as Manager of the scientific working group "Infectious Disease Control Group" at the Albert Schweitzer Spital in Lambaréné in Gabun, Central Africa for 15 years.

In an ongoing, multicentre study initiated by the non-profit organisation MMV (Medicines for Malaria Venture) and supported by the Austrian Federal Ministry for Science, Research and Economy, scientists are now investigating a new substance with the potential of being utilised as a single dose therapy in the future. It involves the synthetic substance OZ439 (active ingredient Artefenomel), which is examined in combination with the known active ingredient Piperaquin. Ramharter: "One dose of the tablet dissolved in water kills all malaria parasites and even protects the patient from reinfection for a few weeks."

The safety of the medication has now been successfully tested in phase IIb studies in adults, youths and children in eight countries in Africa, South America and Asia. Now, also small children are included in the study. The objective is to particularly also determine the optimum dosage of the new medication combination.

Looking for the optimum malaria prevention for pregnant women

In a further study supported by the EU, which substantially involves

malaria experts of MedUni Vienna, scientists are working on the optimum prevention therapy for pregnant women. Malaria in pregnant women is associated with the risk of premature birth, a lower birth weight of the infant and anaemia in the mother. Current medications as well as the newly applied [active ingredient](#) Mefloquin have not turned out ideal. Ramharter: "This can be further improved for the protection of mother and child."

On one hand, the current therapy includes the imperative application of mosquito nets for [pregnant women](#), on the other a medicated malaria therapy whenever the women visit for their preventive medical check-ups - regardless whether or not the women suffer from [malaria](#). "This therapy regime has principally provided a great advantage for mother and child."

Provided by Medical University of Vienna

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