# Experts discover ways to tackle drug resistant parasites that cause the killer disease malaria

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Credit: St. George's University of London

A new analysis of all relevant previously published clinical data shows how parasites causing malaria become resistant to a commonly used

treatment for malaria in travelers.

This insight may help recognise when resistance arises and therefore reduce the risk of its spread.

The malarial parasite Plasmodium falciparum is spread by mosquitoes when they ingest blood from people. Infection with Plasmodium spp. is a major cause of mortality worldwide.

In 2015, there were 149 to 303 million clinical cases of malaria, resulting in between 236 and 635 thousand deaths. Most cases are in endemic countries, although malaria is also one of the most frequent causes of morbidity in travellers returning to non-endemic countries.

Experts at St George's, University of London say their research shows that a standard combination of drugs: atovaquone and proguanil (Malarone), which is commonly used to treat P. falciparum malaria in travellers provides a potentially cheap alternative to artemisinin-based combination therapies (ACT), which are the current frontline antimalarial option for treatment in areas of malaria.

Malarone is notable for having fewer side effects than other, older antimalarial drugs. As the combination is now free from patent it should become a more cost effective treatment option.

Henry Staines, a lecturer at St George's, said: "This study really provides an overall understanding of how well this drug combination works based on the research available.

"Doctors treating patients need to know they can use this drug combination effectively and know what to look for on the odd occasion when this treatment fails.

"It also provides important information to scientists so that they can determine future research efforts and protect this important resource, as we strive to eradicate this dreadful global disease."

**More information:** Henry M Staines et al. Clinical implications of Plasmodium resistance to atovaquone/proguanil: a systematic review and meta-analysis, *Journal of Antimicrobial Chemotherapy* (2017). DOI: 10.1093/jac/dkx431

Provided by St. George's University of London