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PRESS STATEMENT

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MALARIA: IS CHLOROQUINE RESISTANCE DECLINING?

Malaria is spread by mosquitoes carrying blood infected by parasites that can alter their structure to become resistant to a range of antimalarial drugs.

These highly adaptable parasites, such as *Plasmodium falciparum* and *Plasmodium vivax*, can develop ways to evade the effects of anti-malarial drugs, with devastating results for communities where malaria is entrenched.

Tamarah Koleala is working on an IMR study testing the effectiveness of antimalarial drugs used now and in the past in PNG. She joined IMR in Madang as part of her University of PNG Honours program.

"To conduct our study, we collect samples of blood from our study participants and analyse them in test tubes (in vitro) in our laboratories," Ms Koleala said.

"We isolate the malaria parasites and test them against antimalarial drugs used now and in the past in PNG, looking for changes in antimalarial drug resistance patterns.

"We want to know if having had multiple *Plasmodium falciparum* infections affects drug treatments and if chloroquine susceptibility measurements are associated with genetic markers of drug resistance.

"While our preliminary results are similar to observations made in the same area in 2007, it appears that the level of chloroquine resistance has dropped compared to previous studies.

"The sample size was small, but it fits with studies in other countries that showed parasites become less resistant to chloroquine after usage had been withdrawn for a time.

"This is part of a study of two Artemisinin Combination Therapies in Madang Province, where we are testing compounds used to treat children in the trial, including chloroquine," she said.

Symposium Paper: Investigation of the effect of strain multiplicity on in vitro drug susceptibility measurements of Plasmodium falciparum isolates in Madang Province.
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