



PRESS STATEMENT

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MALARIA: FIRST, KNOW YOUR PARASITE ENEMY

All mosquitoes are annoying, but not all mosquitoes carry the killer malaria parasite species, *Plasmodium*.

“Knowing which species of *Plasmodium* is present in a mosquito is a vital part of vector control to eradicate malaria,” said Rebecca Vinit, who works with IMR in Madang as part of her University of PNG Honours program.

“It helps us decide where and how to introduce mosquito control programs,” she said.

“We can test for malarial parasites using microscopes and the PCR and ELISA molecular diagnostic methods. However, these methods have their limitations when detecting *Plasmodium* DNA,” Ms Vinit said.

“Our study seeks to detect the rate of malarial infection in mosquitoes in entomological laboratories to produce results for our vector control studies.

“We extract DNA from infected mosquitoes, testing single insects or groups of five to work out whether the PCR or ELISA molecular diagnoses gives more sensitive and specific results. We use known uninfected and infected mosquitoes as the control group for our tests.

“It is likely the two methods will produce the same results, however we expect the nested PCR method to be more accurate and suitable for finding out the malarial infection rate in mosquitoes in PNG, a country with a high rate of malaria transmission,” Ms Vinit said.

Symposium Paper: Comparison of the effectiveness of detecting *Plasmodium spp.* in *Anopheles* mosquitoes using the ELISA and the Nested PCR molecular diagnostic methods.

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