

## Tracking malaria through genetic surveillance

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The goal of eliminating malaria is one-step closer thanks to a National Health and Medical Research Council's (NHMRC) Ideas grant.

There are more than 14 million cases of vivax malaria a year, affecting poor and vulnerable people in more than 49 malaria-endemic countries. Menzies School of Health Research (Menzies) senior research fellow Dr Sarah Auburn's new program aims to support the elimination of one of the parasites that causes malaria – *Plasmodium vivax* (*P. vivax*).

Dr Auburn's new project *Novel genetic tools for tracking the origins and spread of Plasmodium vivax* will help to eliminate this major public health burden by establishing genetic data on more than 6,000 *P. vivax* cases from across the globe.

This data will be used to develop an online platform that uses analytical tools to identify the main reservoirs of infection, how parasites are spreading within and across national borders, and how effectively interventions have impacted on parasite transmission.

The containment of the parasite is constrained by its ability to form dormant liver stages, as well as limited surveillance tools to inform on key reservoirs and how the parasite is adapting and spreading geographically.

Dr Auburn says that generating new genetic surveillance tools for *P. vivax* will empower policy makers in resource-limited malaria-endemic countries to allocate resources to where they are needed most.

"With new information such as how *Plasmodium vivax* infections are spreading within and across borders and adapting in response to interventions such as antimalarial drugs, policy makers can make evidence-based decisions to optimise the elimination of this deadly and debilitating parasite," Dr Auburn said.

Dr Auburn also emphasises the importance of partnerships in participating countries to implement the project.

"The project is a major collaborative effort that brings together policy makers and research partners with expertise in genetics, bioinformatics and clinical epidemiology," explained Dr Auburn.

The NHMRC Ideas grant will enable Dr Auburn and her team to begin the three-year project, with the aim of demonstrating proof of concept for genetic surveillance to identify and map *P. vivax*, and ultimately implement these tools into local policy.

Menzies was also successful in securing two of the NHMRC postgraduate scholarships announced today:

- Dr Sarah Lynar - Improving microvascular dysfunction in falciparum malaria

- Dr James Marangou - The Two Hearts Beat Study: Determining the benefits and barriers of echocardiographic screening in pregnancy for Indigenous women in the Top End of the Northern Territory.

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**Menzies School of Health Research**

Menzies School of Health Research is one of Australia's leading medical research institutes dedicated to improving Indigenous, global and tropical health. Menzies has a history of over 35 years of scientific discovery and public health achievement. Menzies works at the frontline, joining with partners across the Asia-Pacific as well as Indigenous communities across northern and central Australia. Menzies collaborates to create new knowledge, grow local skills and find enduring solutions to problems that matter.