

## Publication

A large Plasmodium vivax reservoir and little population structure in the South Pacific

## JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

**ID** 2048416

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**Year** 2013

Title A large Plasmodium vivax reservoir and little population structure in the South Pacific

Journal PLoS ONE

## Volume 8

## Number 6

The importance of Plasmodium vivax in malaria elimination is increasingly being recognized, yet little is known about its population size and population genetic structure in the South Pacific, an area that is the focus of intensified malaria control.; We have genotyped 13 microsatellite markers in 295 P. vivax isolates from four geographically distinct sites in Papua New Guinea (PNG) and one site from Solomon Islands, representing different transmission intensities.; Diversity was very high with expected heterozy-gosity values ranging from 0.62 to 0.98 for the different markers. Effective population size was high (12'872 to 19'533 per site). In PNG population structuring was limited with moderate levels of genetic differentiation. F ST values (adjusted for high diversity of markers) were 0.14-0.15. Slightly higher levels were observed between PNG populations and Solomon Islands (F ST = 0.16).; Low levels of population structure despite geographical barriers to transmission are in sharp contrast to results from regions of low P. vivax endemicity. Prior to intensification of malaria control programs in the study area, parasite diversity and effective population size remained high.

Publisher Public Library of Science

ISSN/ISBN 1932-6203

edoc-URL http://edoc.unibas.ch/dok/A6165025

Full Text on edoc Available;

Digital Object Identifier DOI 10.1371/journal.pone.0066041

PubMed ID http://www.ncbi.nlm.nih.gov/pubmed/23823758

**ISI-Number** WOS:000320576400048

Document type (ISI) Article