

Fever Diagnostic Biomarkers Study

Laboratory of Emerging Pathogens
Fondation Mérieux



PARTNERSHIP RESEARCH

Type of activity:

Applied research,
Technology transfer
and training

Regions/ Beneficiary countries:

Madagascar

*Partners:

Institut Mérieux

Caprion

Centre of Infectiology
Charles Mérieux in
Madagascar

NIAID / NIH

Principal Investigator:

Gáucia Paranhos-
Baccalà, PhD

[glaucia.baccala@
fondation-merieux.org](mailto:glaucia.baccala@fondation-merieux.org)

Project Description

The study on Fever Diagnostic Biomarkers in Children was launched in May 2011 in the framework of Fondation Mérieux's applied research activities coordinated by the Laboratory of Emerging Pathogens (LPE) and partners*.

This prospective study for biomarkers discovery and discrimination of Fever illnesses related to Malaria / ALRI is carried out in a study population of children under 5 years old living in the Malaria endemic region of Ampasimanjeva – district of Manakara, South Madagascar in collaboration of the local hospital.

The study follows a protocol that has gone through central and site IRB/IRE approval and run under good clinical practices (GCP) and SOP compliance.

The enrolled patients will benefit of accurate diagnosis and treatment.

The goal of this study is to identify biomarkers that are specifically induced by pathogens responsible for fevers in children (bacterial, virus and / or atypical bacteria, parasite) in a Malaria endemic region to seek an understanding of biomarkers causative of either of these diseases for the potential development of more accurate diagnostic devices to overcome the overlapping of these febrile illnesses.

Study Objectives

- To identify (discover, qualify and verify) candidate biomarkers in sera of children under five of age with malaria and ALRI - pneumonia living in a Malaria endemic region of Madagascar.
- To establish a correlation between the type of pathogens identified and the new discovered biomarkers and known biomarkers such as C-reactive protein (CRP) and Procalcitonin (PCT).
- To tailor an algorithm of the relationships between biomarkers and disease.

Project Activities

- Study baseline, conception and ethical validation
- Technology transfer and training
- Study phases: Study Initiation, Study Implementation and Monitoring and Study Closing
- Data analysis and evaluation
- Publication of findings from the Pilot Study and discussion with stakeholders and civil society groups and public health actors.

