

## Project REAC: Prevalence and Duration of False-Positive HIV Test Results in Acute Malaria

**PI:** Edwin Charlebois PhD MPH

### Project Description

The HIV and malaria epidemics inflict the greatest harm in sub-Saharan Africa and overlap significantly. We have recently identified an interaction between acute malaria and false positive HIV EIA test results. This project will investigate this interaction in three of the most common rapid EIA HIV tests used in sub-Saharan Africa among a cohort of 450 HIV-uninfected children aged 2-17 years being followed longitudinally for malaria in Kampala, Uganda as part of a larger, parent study.

Children will be HIV counseled and tested once at baseline. For those who test HIV-negative we will retest blood samples at the time of first new malaria diagnosis using samples already being collected for the parent study, and again as blood is collected for the parent study for a period of up to 180 days. The study will be conducted at the MU/UCSF Malaria Clinic in Kampala, Uganda. The study clinic is located within the Mulago Hospital Complex, the primary referral hospital in Uganda.

The aims of the study are to:

- Determine the prevalence of false positive HIV EIA test results in children with uncomplicated malaria.
- Estimate the duration of false positive HIV EIA test results in children with uncomplicated malaria.
- Compare the positive predictive value, sensitivity and specificity of serial rapid HIV testing algorithms to parallel rapid HIV testing algorithms in children with uncomplicated malaria.
- Identify risk factors and predictors of false positive HIV EIA test results in children with malaria.

### Significance

Given the widespread use of rapid HIV testing without traditional Western blot confirmation in malaria endemic regions in sub-Saharan Africa, it is crucial that we identify the extent to which acute malarial infection may be associated with false positive HIV test results that lead to a misdiagnosis of HIV infection.

**Project End Date:** October 2008