

How individual and spatial heterogeneity of immune responses Against plasmodium falciparum can characterize low transmission sites central highlands of Madagascar?

Background

Malaria antibody dynamics are misunderstood In central highlands of Madagascar

Data collection:

From May-July 2014, investigations were carried out in 7-targeted districts of central highlands

Statistical question:

How does the distribution of antibody response vary among and between individual (e.g. age, sex) and spatial strata
=> Generalied Linear Mixed Model

Mechanistic question:

How antibody titers can be used to characterize aspects of the transmission dynamics by the distribution of antibody response variation across individual and spatial scales?

=> Adaptive immune response model /
Agent based model

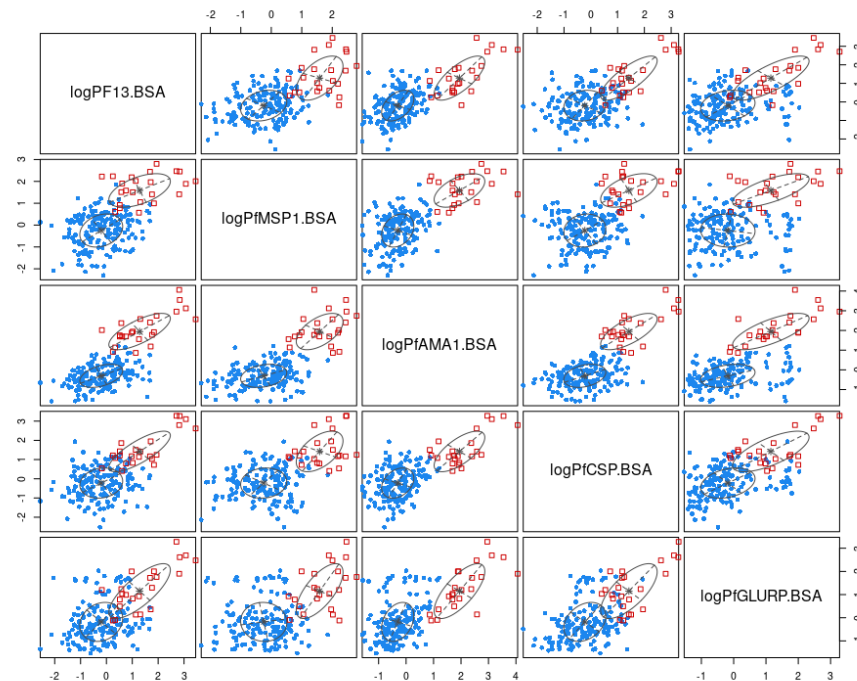


Fig 1: Distributions of 5 school-children anti-plasmodium falciparum (pf), Using Gaussian mixtures of two by two cluster (n=2)