

## ABSTRACT

The prevalence of genetic polymorphism(s) at codon 268 in cytochrome b gene which is associated with Atovaquone-proguanil treatment failure was analyzed in 227 *Plasmodium falciparum* parasites from western Kenya. Prevalence of wild type allele was 63% and Y268S mutant allele was 2%. There were no pure Y268C or Y268N mutant alleles, but mixture with wild type. There was a correlation between parasite IC<sub>50</sub> and parasite genetic polymorphism; mutant alleles had higher IC<sub>50</sub>s than the wild type