

Molecular monitoring of the Leu-164 mutation of dihydrofolate reductase in a highly sulfadoxine/pyrimethamine-resistant area in Africa

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Abstract:

The selection of point mutation at codon 164 (from isoleucine to leucine) of the dihydrofolate reductase (DHFR) enzyme in *Plasmodium falciparum* is associated with high sulfadoxine /pyrimethamine (SP) resistance. Using the yeast expression system that allows the detection of dhfr allele present at low level, the presence of this mutation had previously been reported between 1998-1999 in Muheza, Tanzania, an area of high SP resistance. Eighty five *P. falciparum* isolates, obtained from the same area between 2002 and 2003, were analysed for the presence of Leu-164 mutation, using standard protocol based on PCR-RFLP. None of the isolates had the Leu-164 mutation