

MOLECULAR SURVEILLANCE OF DRUG RESISTANCE THROUGH IMPORTED ISOLATES OF *PLASMODIUM FALCIPARUM* IN EUROPE: SENTINEL DATA FROM TROPNETEUROP

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Results from numerous studies point convincingly into the direction of correlations between the detection of point mutations at selected genes and phenotypic resistance against antimalarials in *Plasmodium falciparum* isolates. In order to move molecular assays for point mutations on resistance-related genes into the realm of applied tools for surveillance, we investigated a selection of *P. falciparum* isolates that were imported during the year 2001 into Europe for the prevalence of resistance-associated point mutations at relevant codons. In particular, we tested for developing resistance to antifolates and chloroquine. The screening results were used for mapping the prevalence of mutations and, thus, levels of potential drug resistance in endemic areas world-wide. Altogether, 294 isolates have been tested until now. Prevalence of mutations that are associated with resistance to chloroquine on the *pfcr* and *pfmdr* genes of *P. falciparum* was demonstrated at high levels. However, the prevalence of mutations associated with resistance to antifolates at the DHFR and DHPS genes was unexpectedly low, rarely exceeding 60% in endemic areas. Constant screening of imported isolates will enable TropNetEurop to establish a screening tool for emerging resistance in endemic areas.