GENETIC DIFFERENTIATION BETWEEN BRAZILIAN POPULATIONS OF *ANOPHELES CRUZII* USING CLOCK GENES AS MOLECULAR MARKERS

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Anopheles cruzii (Diptera:Culidae) is a malaria vector belonging to the *Kerteszia* subgenus. Between 1930 and 1960 it was responsible for an endemic occurrence of the disease in Southern Brazil. Nowadays, this mosquito is responsible for a few cases of malaria in the Brazilian Southeastern coast. The taxonomic status of *An. cruzii* is unclear. Banding pattern analysis of the *X* chromosome inversion frequencies in populations from Southeastern and Southern Brazil revealed three sibling species. Study using isoenzymes reported two genetically isolated groups; one from Northeastern Brazil and the other from Southeastern/Southern Brazil. In the present study, the *timeless* gene, a locus controlling circadian rhythms, was used as a molecular marker to analyze the genetic differentiation between five Brazilian populations of *An. cruzii*. Our results show that mosquitoes from Bahia (Northeastern Brazil) constitute a different group compared to the other four populations from Southern and Southeastern Brazil. These results strongly suggest that *An. cruzii* is a complex of at least two cryptic sibling species. We are now using other clock genes to analyze the molecular differentiation between populations from Bahia and Santa Catarina (Southern Brazil).

Work supported by HHMI, CNPq and FIOCRUZ.

Key Words: *Anopheles cruzii*, clock genes, cryptic species.