Partial Cloning and Sequencing of ABC Transporters (P-gp and MRP) in Ovary from *Aedes aegypti*

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ABC-transporters are present in several species and are related to the development of a multidrug-resistance phenotype in the cellular resistance to retroviral and chemotherapeutic drugs. They are also involved with cellular protection and transport processes. The aim of this study is a genetic and biochemical characterization of ABC-transporters in the ovary of *Aedes aegypti* mosquito. The *AAEL010379* and *AAEL005026* genes present in genome of the *Aedes aegypti* code for the ABC transporters, one P-gp and MRP respectively. We now report the construction of pGEM-T Easy plasmids which carries partially *AAEL010379* and *AAEL005026*. Using these plasmids, we have sequenced 317 base pairs of DNA of the *P-gp* and 494 bp of the *MRP* genes, which are the coding regions. These DNA sequences allowed the deduction of the primary peptide sequence for P-gp and MRP proteins. The *P-gp* gene was expressed in ovaries of non-fed and fed females in 24 and 48h hours after blood meal. However, *MRP* gene expression was detected only 48 h after blood meal. The ribosomal gene was used as a control in RT-PCR. One P-glycoprotein homologue was recognized by the JSB1 antibody in ovaries by western blotting. The immunolocalization assay showed that P-glycoprotein is present in the follicular epithelium. Biochemical assays of putative P-glycoprotein was performed using mosquito *A. aegypti*-Rockfeller strain treated or not with temephos-insecticide. The typical ATPase and UTPase activities of ABC-transporters were significantly increased in ovaries treated with insecticide when compared to control. A similar result was observed in embryonated eggs from a supposed temephos-resistant strain obtained from field. These data suggest the involvement of ABC-transporters in insecticide resistance and oogenesis processes in *Aedes aegypti*. Supported by:CNPq/FAPERJ/MS/FJPF.