PHOSPHOTYROSINE PROFILE OF *Aedes aegypti* INFECTED BY *Plasmodium gallinaceum*

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In recent years malaria research has focused in the molecular events occurring within mosquito upon infection by the parasite. Signaling cascades are triggered by infection and the final target of every cell-signaling pathway involves the reversible phosphorylation of proteins. The study was designed to identify mosquito proteins whose tyrosine phosphorylation state is modified by infection. *Aedes aegypti* females were blood-fed in *Plasmodium gallinaceum* infected chickens, dissected 24 hours latter and blotted against anti-phosphotyrosine. A decrease was observed on the total tyrosine phosphorylation in infected midguts and heads. Identification of such phosphoproteins is being conducted by 2D electrophoresis coupled to mass spectrometry. We also employed tyrosine phosphatase assays as an overall sensor of changes on tyrosine phosphorylation. A significant increase was observed in midgut and head tyrosine phosphatase activity 24 hours after infected blood meal. A tyrosine phosphatase gene sequence from Aedes midgut was used to design a primer and analize gene expression in all parts investigated. We detected expression in all conditions analized of midgut and head. By Real Time PCR an increase in tyrosine pohsphatase expression was observed in infected midguts. Studies of interference RNA are being conducted to known the importance of this enzyme to parasite infection. Detailed knowledge of these signaling mechanisms may be exploitable in the future towards developing novel strategies of blocking malaria transmission. Supported by CNPq, OMS, FAPERJ.