

## **ANALYSIS OF A FATTY ACID-BINDING PROTEIN EXPRESSION IN *RHODNIUS*' MIDGUT DURING THE INFECTION WITH *T. CRUZI***

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The Chagas' disease is a human tropical disease which occurs particularly in South America. Its agent is a protozoan called *Trypanosoma cruzi*, which is transmitted to humans and other mammals mostly by hematophagous bugs, like *Rhodnius*. The *T. Cruzi* development is confined to the insect gut and to survive the parasite needs the host's metabolism. We have previously demonstrated that *Rhodnius* midgut infected with *T. Cruzi* incorporates more free fatty acids. We also demonstrated by Real time-PCR analysis the expression of a fatty acid-binding protein (FABP) in *Rhodnius*' midgut during the digestion. As we know the parasite incorporates the fatty acids from the insect vector. For this reason, we are investigating the relation between the expression of FABP in midgut and the infection with *T. Cruzi*. In order to do this, adult females were fed with rabbit blood containing the parasites. In different days after infection, five midguts were dissected, the RNA was extracted and a real time-PCR was made. Preliminary results suggest that FABP expression is increased in the midgut by *Trypanosoma cruzi* infection, especially in the third day after blood feeding. At this day the parasite is already attached in the insect gut and initiates its multiplication.

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