

## STUDY OF *RHODNIUS PROLIXUS* IMMUNE SYSTEM DURING FUNGAL CHALLENGES

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Insect immunity is based in physical, cellular and humoral constituents. The first is the protection provided by the cuticle and midgut that avoids invasion by pathogens. The second involves the phagocytosis and destruction of antigens by hemocytes. The last constituent comprises mainly the synthesis of antimicrobial peptides and proteins secreted in the hemolymph. Our goal is to access the physiology of the immune system of *Rhodnius prolixus* during fungal challenges and to isolate peptides with antifungal activity from infected animals. As models for stimulating immune response we injected the fungus *Aspergillus niger* and Zymosan (a sterile preparation of fungi cell wall) into the insect hemocoel. The parameters analyzed during challenge were: phenoloxydase and pro-phenoloxydase activities; protein concentration in the hemolymph; reproductive fitness; protein profile in SDS-electrophoresis. Our results showed a different profile on the hemolymph of control and infected animals, with no substantial changes on the protein concentration. Loss of reproductive fitness during immune challenge, as has been described in other models, with the increase on the phenoloxydase activity was observed in challenged animals. The isolation of antimicrobial peptides is still in course.  
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