

**Title: Evaluation of the immune response and infection process on *Musca domestica* larvae inoculated with *Metarhizium anisopliae* in different periods**

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**Abstract:**

The infection caused by the fungus *Metarhizium anisopliae* in *Musca domestica* results in an immune response to attempt reverse the infection and this was studied in different exposure times on *M. domestica* larvae. The larvae were immersed in a conidia solution of *M. anisopliae* at concentration of  $10^8$  / ml and at 24, 48, 72 and 96 hours after infection the hemolymph was collected for counting hemocytes and the images of development conidia and stages of infection on cuticle of the larvae were obtained by scanning electron microscopy. In results, an increase in the number of hemocytes until the time 48 hours after infection was observed, then followed by a decline in the number of hemocytes until death of the larvae. In the stages of the cuticle infection were observed conidia adhesion on epidermis, germination of conidia, germ tubes and apressoría, fungus extrusion through the body of the larvae. In conclusion, we observed that the fungus *M. anisopliae* acts decreasing the immune response of the *M. domestica* then 48 hours and contact with the cuticle of the larvae begins to infection process and develop germ tubes and apressoría.

**Keywords:** Hemocytes, fungal infection, biological control, scanning electron microscopy.

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