

Histological Changes in the Culex pipiens Mosquito Larvae Treated by the Entomopathogenic Fungus Beauveria bassiana

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Abstract : The Culicidae are biting insects, the most harmful to people, they are almost all bloodsuckers, and they are responsible of the spread of many important diseases such as malaria, yellow fever, and elephantiasis. Entomopathogenic microorganisms occupy an important place among the alternative methods of fighting against pests insect. The fungus Beauveria bassiana is an entomopathogenic agent naturally present in the ecosystems. It offers a very interesting potential for controlling populations of mosquitoes. This study aimed to show the histological changes that occurred in Culex pipiens larvae infected with Beauveria bassiana. The 4th instar larvae were infected with B. bassiana in 10⁻⁷ spore/ml dilution, the histological section was studied showing that the fungi infected all the body parts specially Cuticle, Epiderms, fat bodies and midgut. After then the insect have a white appearance and covered with a thick coat of hyphae. The obtained results show that the application of Beauveria bassiana on cuticle of the fourth stage larvae of Culex pipiens was dependent of an apparent disturbance on the structure of the cuticle or there has been the degeneration of its different parts, infection of the fungus does not stop at the body walls. Therefore, it affects even the Adipose tissue, epidermal cells and intestine.

Keywords : Culex pipiens, Beauveria bassiana, histological changes, cuticle, intestine and adipose tissue

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