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Chronic Toxicity of Halofenozide on a Larvivorous Fish, Gambusia affinis: Acetylcholinesterase, Glutathione S-transferase Activities and Glutathione

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Abstract : The present study is a part of biological control against mosquitoes. It aims to assess the impact of a selective insect growth regulator: halofenozide in mosquitofish: Gambusia affinis. Acetylcholinesterase (AChE), glutathione S-transferase (GST) and glutathione (GSH) used in assessing of environmental stress were measured in juveniles and adults males and females. The response of these biomarkers reveals an inhibition of AChE specific activity, an induction of GST activity, and decrease of GSH rates in juveniles in the end of experiment and during chronic treatment adult males and females. The effect of these biomarkers is more pronounced in females compared to males and juveniles. These different biomarkers have a similar profile for the duration of exposure.

Keywords : biomarkers, chronic toxicity, insecticide, halofenozide, Gambusia affinis, pollution
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