

**HISTOPATHOLOGICAL EXAMINATION ON THE UROGENITAL
ORGANS OF *Bufo marinus* (GIANT MARINE TOAD) EXPOSED
TO TOLERABLE CONCENTRATIONS OF
LAMBDA – CYHALOTHRIN**

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ABSTRACT

The study was conducted to determine the possible effects of the pesticide lambda-cyhalothrin on the urogenital organs of *Bufo marinus* specifically the kidneys, testes and ovaries and was limited to histopathological examination.

Eighteen frogs were grouped into six and acclimatized for one week. Two treatments of pesticide lambda-cyhalothrin were used: T₁ (0.625 ppt) and T₂ (1.25 ppt). Treatments were administered through direct spraying for one month. After one month of administration of treatment, frog organs were dissected, collected and weighed for histopathological assessment.

The study proved that there were effects on the cells of the urogenital organs of the frogs exposed to the pesticides. Frogs can tolerate an amount of 0.625 ppt and 1.25 ppt. Cells of the kidney of the untreated frog exhibited normal architecture of cells. On the other hand, cells of the treated kidneys displayed a presence of Necrosis and other cellular damages. Untreated cells of the testes have a normal cellular architecture and organization while the treated testes showed severe necrosis, hyperpigmentation and clumping of spermatids. Untreated cells of ovaries displayed normal cell architecture. While treated cells of the ovaries displayed hyperpigmentation, cellular swelling and the presence of decreased maturation rate. The increase in the amount of the pesticide lambda-cyhalothrin affected the weight of *Bufo marinus* as well as the cells of the kidneys, testes and ovaries due to long-term exposure of administration.

Based on the findings of the study, the following recommendations are offered: further analysis and additional test be made using the pesticide lambda-cyhalothrin for other organs of the frogs; a longer exposure of the frogs to the pesticide; other species of frogs be used for comparison and variation; expanded study be performed on the different kinds of pesticide.

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