Evaluation of the effects on the cerebellar cortex of CF-1 mice exposed to a single dose of cypermethrin

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 Cypermethrin is a Type II pyrethroid widely used for pests control in agriculture. The principal effect of this insecticide is to alter voltage-dependent sodium channels in the nervous system, but it also affects GABA levels in the CNS of mammals. The cerebellar circuit has as its principal neurotransmitter GABA for transportation of CI-, allowing its inhibitory and modulatory function. In this work, the effects of cypermethrin on the cerebellar cortex are studied. Thirty three adult CF-1 male mice were distributed in three groups: 1) untreated, 2) vehicle (oil) and 3) experimental (cypermethrin in oil at 1/5 DL50). The animals were euthanized at days 1, 8, 17, 25 and 34; then processed for histology (haematoxylin-eosine) and im munohis-tochemistry (Apaf-1 and Ki-67). The Purkinje cells and the im-munoreactive Purkinje and Granular cells were quantified. The results showed a significant decrease in Purkinje cells numbers at all the