



Assessment of Roridin a Mycotoxin on Serum Protein and Genotoxicity of Male Mice Liver

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Abstract: To study the effect of roridin A on mice liver, 50 inbreeding white male mice were divided into 5 groups (10 mice each). Mice were treated by using oral gavage either with the solvent carrier (dimethylsulfoxide saline) of roridin A (control group) or with a single dose of roridin A (0.6 mg/kg body weight) then left for one (treated group T1), two (T2) or three (T3) weeks. T4 was treated daily with thymoquinone (10 mg/kg B.W) for 6 days before treating with the mycotoxin and left for one week. The percentage of serum albumin was significantly increased in T1, T2 and T3. In T1, the percentages of α_1 and α_2 globulins were significantly decreased in the mean values; however no significant differences were recorded in β and γ globulins compared with the control values. In T2, the percentage of β was significantly increased, whereas those of α_1 , α_2 and γ were significantly decreased. In T3, the percentage of γ fraction was significantly decreased, but no significant differences were noticed in the percentages of α_1 , α_2 and β . In T4 group, the percentages of albumin, α_1 and β globulins had no significant differences, however α_2 percentage was significantly decreased and γ was significantly increased compared with controls. Based on cell viability on mouse hepatocyte cell model exposed to roridin A, lactate dehydrogenase was increased after 24, 48 and 72 hours from toxin administration and according to the DNA degradation, roridin A induced apoptosis after 48 hours, more pronounced by 72 hours.

Keywords: Roridin A Mycotoxin, Liver, Toxicity, thymoquinone, mice.

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