

# **The Possibility of Using Honey as Cytoprotective Against Pathological Effect of Doxorubicin; Morphological Changes, Toxicological Symptoms, Histological Structure and Functions of Mice Liver**

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*Abstract.* Doxorubicin (DOX) is one of the most important cytotoxic drugs in cancer chemotherapy. However, it causes pathological effects on many organs. The aim of the present study was to investigate the possible protective effect of honey. Albino mice of MF1 (*mus musculus*) strain weighting  $37\pm 3$  g were obtained from king Fahd medical research center. Mice body and liver weight, morphological and behavior changes as well as liver function and pathological effects on liver were recorded. Administration of DOX to mice induced weakness in general activities of animals with several morphological changes during experiment such as bleeding, ulcerations, dermatitis, alopecia, abnormal limbs, and bosselation. Toxicity study of DOX showed that the  $LD_{50}$  and LD were 20 and 30 mg/kg of DOX, respectively. The results of honey administration to mice reduce pathological symptoms caused DOX as indicates by body weights and liver, which were higher than that of DOX only. In addition, daily administration of honey for seven weeks decreased these histopathological changes, the structure of liver and hepatocytes appearance was more or less similar to control group as well its function. The present results indicate that honey may play an important role as Cytoprotective and pave the way for further studies on the possible use of honey.