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## Histopathological and biochemical investigations of protective role of honey in rats with experimental aflatoxicosis

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The aim of this study was to investigate the antioxidant properties and protective role of honey, considered a part of traditional medicine, against carcinogen chemical aflatoxin (AF) exposure in rats, which were evaluated by histopathological changes in liver and kidney, measuring level of serum marker enzymes, antioxidant defense systems, and lipid peroxidation content in liver, erythrocyte, brain, kidney, heart and lungs. For this purpose, a total of eighteen healthy Sprague-Dawley rats were randomly allocated into three experimental groups: A (Control), B (AF-treated) and C (AF+honey-treated). While rats in group A were fed with a diet without AF, B, and C groups received 25 µg of AF/rat/day, where C group additionally received 1mL/kg of honey by gavage for 90 days. At the end of the 90-day experimental period, we found that the honey supplementation decreased the lipid peroxidation and the levels of enzyme associated with liver damage, increased enzymatic and non-enzymatic antioxidants in the AF+honey-treated rats. Hepatoprotective and nephroprotective effects of honey is further substantiated by showing almost normal histological architecture in AF+honey-treated group, compared to degenerative changes in the liver and kidney of AF-treated rats. Additionally, honey supplementation ameliorated antioxidant defense systems and lipid peroxidation content in other tissues of AF+honey-treated rats. In conclusion, the present study indicates that honey has a hepatoprotective and nephroprotective effect in rats with experimental aflatoxicosis due to its antioxidant activity.

### Biography

Turan Yaman has completed his PhD from Yuzuncu Yil University School of Veterinary Medicine. He has published more than 4 papers in reputed journals.

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