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## **ANTI-GENOTOXIC EFFECT OF OLEUROPEIN AGAINST AFLATOXIN B<sub>1</sub>**

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### **Abstract**

Aflatoxin B<sub>1</sub> when binds to DNA bases, cause DNA damage, thus, affects the functioning, growth, division, and control of cells. Oleuropein is a fundamental polyphenol founded in olive leaf, fruit, oil and has many benefits for human health. In this study, the possible effect of oleuropein was assessed against toxicity of aflatoxin B<sub>1</sub>. For this purpose, the single cell gel electrophoresis and micronuclei assays were performed using the cells of human peripheral blood. As a result of this study, it was determined that oleuropein has not genotoxic effect and exhibited anti-genotoxic properties caused by aflatoxin B<sub>1</sub> (with especially 625 μM application) ( $p < 0.05$ ). On this basis, the observed anti-genotoxic effect of oleuropein against aflatoxin B<sub>1</sub> may occur as oleuropein has sufficient capability to reduce the lipid peroxidation and inhibit the loss of membrane integrity.

*Key words:* aflatoxin B<sub>1</sub>, carbonic anhydrase, comet assay, micronuclei assay, oleuropein

*Received: November, 2020; Revised final: March, 2021; Accepted: May, 2021; Published in final edited form: November, 2021*

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