

THE EFFECTS OF *CANNABIS SATIVA* L. EXTRACT ON ANTIOXIDANT STATUS IN MICE BLOOD AND ORGANS



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Background. *Cannabis sativa* L. is now gaining importance because of its potent antioxidant activity. Hundreds of biologically active substances (e.g., cannabinoids) have been extracted from this plant and some recent research works demonstrated that they have several pharmacological properties, such as antimicrobial, insecticidal and anti-inflammatory activities. Hempseed has been identified as a valuable antioxidant food.

The aim of this study. Therefore, the aim of this study was to determine, for the first time, the ability of *Cannabis sativa* L. extract to attenuate levels of oxidative stress markers (glutathione, malondialdehyde concentrations as well as Catalase activity) in the blood, brain and liver of mice.

Conclusions. *Cannabis sativa* L. extract is high in antioxidant components, including a wide range of terpenes, phenols, especially stilbenoids and lignanamides and may play a role in reducing the risk of chronic diseases. In this study we determined decrease in the tissue (liver and brain) MDA levels and increase in the antioxidant enzyme parameter (CAT) of animals that were administered *Cannabis sativa* L. extract in association with Al³⁺, in comparison to the group that was administered *Cannabis sativa* L. extract alone. By increasing the activities of antioxidant enzymes, this extract reduces the levels of free radicals and ROS and increase the production of molecules capable of protecting against oxidative stress. It is importance in the prevention of chronic diseases and health problems.

