ABSTRACT BOOK

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OP-98 ANTIOXIDANT EFFECT OF HONEY AND POLLEN ON LIPID PEROXIDATION IN CADMIUM ADMINISTERED RATS

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Cadmium is a toxic metal widely used in the industry threatening human health seriously with the cause of environmental pollution. The adverse effects of free radicals due to oxidative damage in the living organism after cadmium intoxication can be reduced by antioxidants taken with different foods. The aim of this study was to determine the effects of orally administered honey and pollen on MDA, GSH, GSH-Px, CAT, vitamin A, vitamin E and β-carotene in Cd expose rats.

Animals were divided into 5 groups: Group 1: Control, Group 2: Cd administered, Group 3: Cd+honey, Group 4: Cd+pollen, Group 5: Cd+honey+pollen. The study was lasted for 6 weeks. At the end of the study, serum samples were be collected and the levels of MDA, GSH, GSH-Px, CAT, vitamin A, vitamin E and β-carotene were measured.

After statistical analyses, while the differences of amount of plasma vitamin E and vitamin A, erythrocyte MDA, GSH-Px and CAT between control and Cd groups were statistically important, Plasma β-carotene and erythrocyte GSH levels were not. The differences of plasma vitamin E were important between Cd and Cd+honey, Cd and Cd+honey+pollen groups. It was not between Cd and Cd+pollen groups. While levels of plasma vitamin A were important between Cd and Cd+honey, Cd and Cd+honey+pollen, Cd and Cd+honey+pollen groups, β-carotene was not in all groups mentioned above. Activities of erythrocyte GSH-Px were important between Cd and Cd+honey, Cd and Cd+honey+pollen but it was not between Cd and Cd+pollen groups. Activities of erythrocyte CAT, were important between Cd and Cd+honey, Cd and Cd+pollen, Cd and Cd+honey+pollen. While the levels of erythrocyte MDA, were important between Cd and Cd+honey, Cd and Cd+honey+pollen, levels of GSH in erythrocyte were not important in all groups.

Keywords: Antioxidant, Honey, Cadmium, Lipid Peroxidation, Pollen.