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ALLEVIATION CHRONIC CADMIUM STRESS TOXICITY IN ALBINO RATS USING SOME DOMESTIC PLANTS

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Cadmium (Cd) is an environmental contaminant in air, soil, water and can induce damage to various tissues in very low concentration. Biological experiment has been occurred to focus on Cd oxidative stress. In drinking water rat received daily 100 mg/kg body weight cadmium ($CdCl_2.2^{½}H_2O$). Female rats fed standard chow diet mixed with 100 mg/kg body weight N-acetyl cysteine (NAC) as standard protective agent. Rats in other tested groups fed chow diet mixed with 200 mg/kg body weight dried husk tomato, nabk and sycamore in separated groups as natural edible powder plants. The toxicity of cadmium in biomedical and histopathological analysis was investigated without and with protective powder plants compare to NAC. Four weeks experiment showed the toxic contaminated cadmium in serum alkaline phosphatase, creatinine, malondialdehye and catalase activity beside the histological patterns for liver, kidney, ovary and brain sections. Results showed that husk tomato poses high protective effect closed to that for NAC in most values. Moreover, the proven potential for NAC and husk was clearly found in body weight, food efficiency ratio, and liver and kidney disorders. The health values of lipid peroxidation and catalase activity as oxidative stress markers were observed in NAC and husk as well. Liver tissue, the most related organ to Cd toxicity was improved in histology patterns through NAC and husk administration.

Biography

Emad Shaker has done his PhD work in UCD, and He has done his post doctoral research in Food Science Technology at Cork, Ierland. He Identified chemical structure of compounds and his aim is to measure the antioxidant potential effect in oxidative stress. He did his research in analyzing the biological role of extracted natural antioxidants *in vivo*. He is presently working as a Professor of Biochemistry at Minia University, Egypt.

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