

## Effects of Ethanolic Purslane Shoot and Seed Extracts on Doxorubicin-Induced Hepatotoxicity in Albino Rats

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**Abstract :** Doxorubicin (DOX), an anthracycline antibiotic is a broad-spectrum antineoplastic agent, which is commonly used in the treatment of uterine, ovarian, breast and lung cancers, Hodgkin's disease and soft tissue sarcomas as well as in several other cancer types. The effect of doxorubicin (4 mg/kg b.w.week) without or with oral administration of ethanolic purslane (*Portulaca oleracea*) shoot (leaves and stems) extract (50 mg/kg b.w. day) or ethanolic purslane seeds extract (50 mg/kg b.w.day) co-treatments for 6 weeks was evaluated in adult male rats. Serum ALT, AST, ALP, GGT, total bilirubin, total protein, and albumin levels were assayed. Lipid peroxidation (indexed by MDA) and antioxidants like hepatic glutathine, glutathione transferase, peroxidase, SOD, and CAT were assessed. There was an increase in serum levels of ALT, AST, ALP, GGT and total bilirubin. In addition, hepatic glutathine, glutathione transferase, peroxidase, SOD, and CAT activities were decreased while lipid peroxidation in the liver was increased. Co-administration of ethanolic purslane and seed extracts successfully improved the adverse changes in the liver functions with an increase in antioxidants activities and reduction of lipid peroxidation. In conclusion, it can be supposed that dietary purslane extract supplementation may provide a cushion for a prolonged therapeutic option against DOX hepatopathy without harmful side effects. However, further clinical studies are required to assess the safety and efficacy of these extract in human beings.

**Keywords :** doxorubicin, purslane, hepatotoxicity, antioxidants

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