

CURATIVE EFFECT OF *EUPHORBIA NERIIFOLIA* AND ITS BIOACTIVE CONSTITUENTS ON HEPATOCARCINOMA INDUCED BY N-NITROSODIETHYLAMINE IN ALBINO MICE

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ABSTRACT : Hepatoprotective efficacy of *Euphorbia neriifolia* (EN) leaves and an isolated flavonoid (ENF) was investigated against N-Nitrosodiethylamine (DENA)-induced hepatic carcinogenicity. Experimental mice were pretreated with 150 and 400 mg/kg body wt of EN, 0.5% and 1% mg/kg body wt of butylated hydroxyanisole (BHA) as a standard antioxidant and 50 mg/kg body wt of ENF for 21 days prior to the administration of a single dose of 50 mg/kg body wt of DENA. Levels of liver markers (AST, ALT & ALP), xenobiotic metabolic enzymes (Cyt P450 and Cyt b5), lipid peroxidation (LPO), antioxidants (SOD, CAT, GST and GSH) and other biochemical parameters TP and TC were measured to determine the hepatic-carcinogenicity caused by DENA. DENA administration significantly ($p < 0.001$) decreased the body weight and increased the tissue weight. Activities of liver markers, antioxidants and TP content were significantly decreased ($p < 0.001$), while Cyt P450, Cyt b5, LPO and TC levels were significantly ($p < 0.001$) increased after DENA administration as compared with the normal control group ($p < 0.001$). Pretreatment with EN and ENF counteracted DENA-induced oxidative stress (LPO) and exerted its preventive effects by restoring the levels of liver markers, antioxidants and other biochemical parameters and xenobiotic enzymes in liver tissue. In conclusion, study showed significant anti-carcinogenic potential of the *E. neriifolia* extract and ENF against DENA.

Key words : *Euphorbia neriifolia*, N-Nitrosodiethylamine, flavonoid, hepatocarcinoma, xenobiotic enzymes, butylated hydroxyanisole.