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## Antioxidant potential of *Sapium ellipticum* (Hochst.) Pax. leaf extract against CCl<sub>4</sub>-induced reactive species *in vivo*

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The antioxidant potential of *Sapium ellipticum* (SE) leaf extract against CCl<sub>4</sub>-induced reactive species *in vivo* was examined in adult female Wister rats. Toxicity was induced in the animals via a single intraperitoneal (i.p) dose of CCl<sub>4</sub> (20% 2 mL/Kg of body weight, BW). SE extract was orally administered twice daily for 28 days at 8 hours interval (400 and 800 mg/kg BW) to different groups of CCl<sub>4</sub>-treated animals. Its effects were measured against known antioxidants, Butylated hydroxytoluene (BHT) and L-Ascorbic acid (L-AA). The activities of superoxide dismutase (SOD), catalase (CAT), glutathione-S-transferase (GST) and glutathione peroxidase (GP<sub>x</sub>) were analyzed in the post mitochondrial fractions (PFM) of the liver and kidney of rats. The level of tissue protein, reduced glutathione (GSH) and malondialdehyde (MDA) was also estimated. The data obtained showed that SE elicited its antioxidant functionality mainly through anti-peroxidation effect and promotion of superoxide dismutase and catalase activities. The extract significantly (p 0.05) lowered the degree of peroxidation (76.7%) and improved the activities of superoxide dismutase (51.2%) and catalase (43.5%) relative to the CCl<sub>4</sub>-untreated group. However, its ability to improve endogenous GSH level as well as GST and GP<sub>x</sub> activities was poor. Overall, SE leaf extract appears to have the phyto-proficiency to protect against membrane peroxidation and to improve the functions of some first line antioxidant enzymes *in vivo* in the face of overwhelming reactive species. This postulation is substantiated by the identification of antioxidant compounds like  $\alpha$ -tocopherol, amentoflavone, lupeol and luteolin-7-O-glucoside in the active fractions of SE through HPLC-MS technique.

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