

## Activity of *Cassia auriculata* leaf extract in rats with alcoholic liver injury.

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This study was undertaken to investigate the effect of *Cassia auriculata* leaf extract on tissue lipid peroxidation and antioxidant status in experimental hepatotoxicity. Administering ethanol to rats for 60 days resulted in significantly elevated levels of serum total bilirubin, aspartate transaminase (AST), alanine transaminase (ALT) and alkaline phosphatase (ALP) as compared with those of the experimental control rats. Significantly elevated levels of tissue thiobarbituric acid reactive substances (TBARS), hydroperoxides and lowered activities of superoxide dismutase (SOD), catalase (CAT) and reduced glutathione (GSH) were also observed on alcohol treatment as compared with those of experimental control rats. Concentration of serum non-enzymic antioxidants such as vitamin E and vitamin C were also significantly lowered on alcohol supplementation. Treatment with *Cassia auriculata* leaf extract at a dose of 250 mg kg<sup>(-1)</sup> body weight and 500 mg kg<sup>(-1)</sup> body weight to rats administered alcohol, lowered the levels of TBARS and hydroperoxides and elevated the activities of SOD and CAT and the levels of reduced GSH in the liver, brain, kidney and intestine significantly compared to unsupplemented alcohol treated rats. *Cassia auriculata* leaf extract treatment restored the serum vitamin E, and vitamin C levels also to near those of the experimental control animals. Our data indicate that supplementation with *Cassia auriculata* leaf extract can offer protection against free radical mediated oxidative stress in experimental hepatotoxicity. In addition, histopathological studies of the liver and brain confirmed the beneficial role of *Cassia auriculata* leaf extract.