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Research Article

In vivo antioxidant potential of Anogeissus latifolia bark in Ethanol-induced Oxidative stress in Rats

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ABSTRACT

Substances that have a hepatoprotective activity are those that can inhibit oxidation to protect the cells of the body from the damaging effects of oxidation. It can bind to free oxygen radicals preventing these radicals from damaging healthy cells. The aim of the present investigation is to evaluate the *in vivo* antioxidant potential of the bark of *Anogeissus latifolia* in ethanol-induced hepatotoxicity. Animals were treated with the methanol extract of *Anogeissus latifolia* (MEAL) for 15 days and oxidative stress was induced with a single dose of ethanol (36mg/kg., p.o). The activity was determined by measuring the levels of oxidative stress markers such as lipid peroxidation (LPO), reduced glutathione (GSH), superoxide dismutase (SOD), and catalase (CAT) levels in hepatotoxic rats. Administration of MEAL at the dose of 100 and 200mg/kg b.w., markedly decreased ethanol-induced elevation levels of oxidative stress markers and liver in a dose dependent manner. The effects of extract was compared with Silymarin, standard, at 100mg/kg b.w. In methanol extract treated animals, the toxic effect of ethanol was controlled significantly ($P<0.05$) by restoration of the levels of enzymes of enzymes as compared to the normal and standard treated groups. Based on the results, it was concluded that the methanol extract of *Anogeissus latifolia* bark possesses significant *in vivo* antioxidant activity and can be employed in protecting hepatic tissue from oxidative stress.

Key words: *Anogeissus latifolia*, ethanol, oxidative stress markers, *in vivo* antioxidant activity.

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