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## Anti-inflammatory activity of *Pleurotus ostreatus* mushroom in diabetic Wistar rats

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This study investigates the anti-inflammatory activity of *Pleurotus ostreatus*(*P.o*) in alloxan induced diabetic Wistar rats. This was done using the carrageenan-induced rat paw edema model. The rats were injected with alloxan monohydrate (40 mg/kg b.w.,i.v.) to induce hyperglycaemia. Five groups of diabetic rats (n = 6 / group) were selected and the volume of the left hind paws were measured using a plethysmometer. Groups 1, 2 and 3 were orally administered with suspensions of freeze-dried and powdered (SFDP) *P.o* 500 mg/kg, 1000 mg/kg and acetone extract (AE) of *P.o* (500 mg/kg) respectively. The fourth group was treated with indomethacin whereas the control group received distilled water. After 1 hour, 0.1 ml of 1% carrageenan was injected subcutaneously into the plantar surface of the left hind paw. Paw volumes were measured at hourly intervals up to the 5$^{th}$ hour. Treatment with SFDP *P.o* (500 and 1000 mg/kg), AE of *P.o* and indomethacin showed statistically significant inhibition of paw edema when compared with the control group, ($P < 0.05$, One way ANOVA). The dose 1000 mg/kg showed a similar pattern of inhibition to that of indomethacin. The AE of *P.o* showed maximum inhibition of edema of 86%. ($P < 0.01$). The SFDP *P.o* and AE of *P.o* have long lasting anti-inflammatory activity which is comparable with indomethacin. In conclusion, this study confirms the capability of *P.o* in the treatment of inflammatory pathologies in rats with diabetes.

Keywords: Anti-inflammatory, carrageenan, diabetic, paw edema, *Pleurotus ostreatus.*

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