

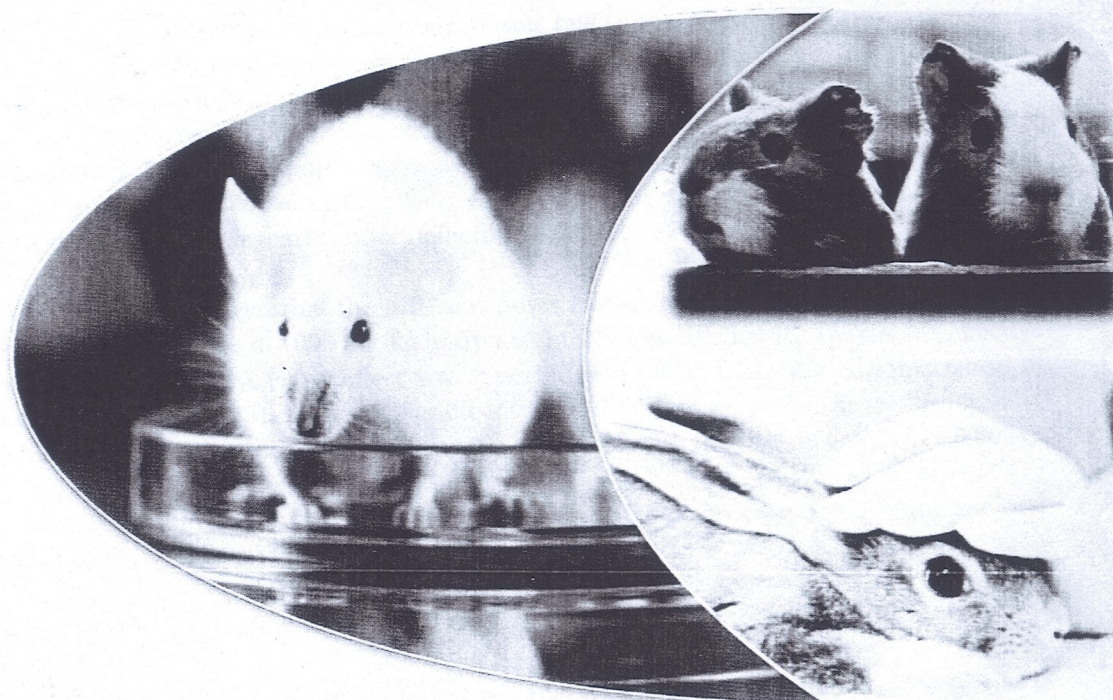


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HYPOGLYCAEMIC EFFECT OF THE WHOLE PLANT AQUEOUS EXTRACT OF
Desmodium triflorum IN NORMAL RATS

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Introduction: This study was conducted to investigate the oral hypoglycaemic effect of *Desmodium triflorum* in healthy, male Wistar rats. *D. triflorum* is a well-known Sri Lankan medicinal plant which is in folkloric use and has been given as a porridge to treat diabetes. Recent pharmacological studies have established its antioxidant, anti-inflammatory, anti-convulsant and analgesic activities.

Objectives: The objective of this study was to determine the hypoglycaemic activity of *D. triflorum* in normal Wistar rats.

Methods: Crude aqueous extracts of *D. triflorum* was prepared in different doses (500, 600, 700, 800 and 1000 mg/kg body weight) and were administered to healthy, male Wistar rats (n=6). Negative control group (n=6) received distilled water. Rats were subjected to glucose challenge (3g/kg body weight) after administration of extracts and blood samples were drawn from the lateral tail vein under light anaesthesia, two hours after the administration of extracts. Oral hypoglycaemic activities were evaluated comparing serum glucose concentrations of test and control groups of rats. A dose - response curve was prepared. Optimal time of action of the extract was investigated using the maximally effective dose. Effects of repeated doses were evaluated following oral administration of optimal dose of the crude extract once daily for one week.

Results and discussion: The results showed that the different doses of the extract possessed significant oral hypoglycaemic activity ($p < 0.05$). The dose of 1000 mg/kg body weight was identified as the maximally effective dose ($p = 0.001$). Maximum oral hypoglycaemic effect was reported two hours following administration of the dose of 1000 mg/kg of crude extract. There was a significant serum glucose reduction in test group after administration of the maximally effective dose for one week when compared with the control group ($p = 0.0004$).

Conclusion: Aqueous extract of the whole fresh plant of *Desmodium triflorum* possess a significant oral hypoglycaemic activity in healthy Wistar rats.

Key words: Hypoglycaemic effect, *Desmodium triflorum*, Glucose challenge, Wistar rats

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