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### Exploration of antidiabetic & hypolipidemic activity of roots of *Croton zambesicus*

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The aim of this study was to investigate the potential antidiabetic and hypolipidaemic effects of aqueous and ethanolic extracts of roots of *Croton zambesicus* in alloxan induced diabetic models to ascertain its pharmacological applicability. The roots of *Croton zambesicus* were collected, dried and extracted. The phytochemical screening as well as Median Lethal Dose determination (LD50) was done. The ethanolic extract of the roots was prepared using soxhletion technique while the aqueous extract was prepared using maceration technique. The pharmacological effects of the two extracts were monitored on the blood glucose level and the lipid profile for a period of 28 days on the alloxan induced diabetic rats and their effect was evaluated. The ethanolic (100 mg/kg) and aqueous (100 mg/kg) extracts caused a significant ( $p < 0.05$ ) reduction in the blood glucose levels and the lipid profiles of the alloxan induced diabetic rats. However the ethanolic extract was found to be more potent than aqueous extract in the blood glucose and lipid lowering effects in the rats. The activities of the extracts were compared with the reference drug, glibenclamide (0.5 mg/kg). Treatment with *C. zambesicus* showed considerable lowering in the blood glucose, serum total cholesterol, triglycerides, LDL cholesterol, VLDL cholesterol and an increase in HDL cholesterol in the alloxan treated diabetic rats. The results of this study suggests that the roots of *Croton zambesicus* possess antidiabetic and hypolipidaemic activities in the treated diabetic models.

#### Biography

Krishna Murti completed his PhD in Pharmacology and Pharmaceutical Sciences from Singhania University and M Pharm in Pharmacology from Manipal University, India. He is presently associated as Lecturer in Dept. of Pharmacy Practice at National Institute of Pharmaceutical Education & Research (NIPER), Hajipur, Bihar, India. He has published more than 50 papers in journal of repute and also serving as reviewer for many international journals. He is having a total experience of 14 years in Pharmacy profession. He has also served as a faculty at 7th October University, Misurata, Libya.

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