

Evaluation of antidiabetic activity of *Grewia tiliaefolia* stem bark in streptozotocin-Nicotinamide induced type II diabetic rats

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The antidiabetic activity of methanolic extract of stem bark of *Grewia tiliaefolia* was investigated in streptozotocin nicotinamide induced type 2 diabetic rats. The *G. tiliaefolia* showed a dose dependent hypoglycaemic effect and prevented rise in blood glucose levels in diabetic rats. The blood glucose levels were measured at 0,2,4,6 and 8h after the treatment. The methanolic extract of *G. tiliaefolia* a doses of 250 and 500 mg/kg body weight reduced the blood glucose levels of the normal rat from 79.89 ± 2.60 to 63.79 ± 1.89 mg/dl and 80.46 ± 1.78 to 60.34 ± 1.89 respectively at 4 h after oral administration of the extract and also significantly lowered blood glucose levels in streptozotocin Nicotinamide induced diabetic rats from 288.89 ± 6.24 to 267.78 ± 4.04 and 288.33 ± 6.24 to 258.33 ± 6.24 . In glucose tolerance test, extract markedly reduced the external glucose load. The antihyperglycaemic activity of *G.tiliaefolia* was compared with glibenclamide (10 mg/kg). In sub acute model of diabetic, methanolic extract of *G. tiliaefolia* at a dose of 250, 500 (mg/kg), Glibenclamide (10 mg/kg) were administered for 14 days. There was a significant decrease in fasting blood glucose, total cholesterol, serum triglycerides and liver enzymes. The results suggest that *G. tiliaefolia* stem bark have potent antidiabetic property.

Biography

Sravan Kumar Polepaka and Rohith Nagendra Thota carried out this project under supervision of Goverdhan Puchchakayala. Sravan Kumar Polepaka completed Masters Degree and Rohith Nagendra Thota going to complete master's degree from Pharmacological screening and Herbal drug studies, Department of Pharmacology, Vaagdevi college of Pharmacy. Rohith is awarded with child scientist at National Children Science Congress- 2003, Lucknow and has Profound interest in research of diabetes and metabolic disorders. Goverdhan Puchchakayala has completed his Ph.D. at the age of 32 years from Kakatiya University and postdoctoral studies from Tuebingen University School of Physiology. He is the professor and Head department of Pharmacology, Vaagdevi college of Pharmacy and director of synapse life sciences, a preclinical organization. He has published more than 30 papers in reputed journals.

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