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Hypoglycemic and hypolipidemic effects of oligomeris linifolia in alloxan-induced diabetic mice
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Abstract

The current study was focused to evaluate the hypoglycemic and hypolipidemic effect of methanolic extracts of *Oligomeris linifolia* in Alloxan-induced diabetic mice. Albino mice were orally treated for 15 days with methanolic extract of *Oligomeris linifolia* at dose of 200 mg/kg body-weight. The antidiabetic effect was analyzed by measuring blood glucose (BG) at 0, 3, 6, 9, 12, and 15 days. Total cholesterol (TC), high density lipoprotein cholesterol (HDL-C), low density lipoprotein cholesterol (LDL-C), Serum Bilirubin (SBR), Alkaline Phosphatase (ALP), Alanine Aminotransferase (ALT), Urea, Creatinine, and triglycerides (TG) levels at sacrifice (day 16) were measured. Glibenclamide (10 mg/kg) was used as standard. Alloxan-induced diabetic mice showed adequate to significant increase in the level of BG, TC, TG, LDL-C, SBR, ALT, ALP, Urea, Creatinine, while HDL-C and body-weight were decreased as compared to control group (non-diabetic mice). Administration of plant methanolic extract to Alloxan-induced diabetic mice at a dose of 200 mg/kg body-weight resulted in a notable decrease in BG, TC, TG, LDL-C, SBR, ALT, ALP, Urea and Creatinine whereas HDL-C level and body-weight were increased markedly after 15 days as compared to diabetic control group. The methanolic extract at the dose of 200 mg/kg, produced similar results compared to group treated with Glibenclamide. © 2023, Association of Biotechnology and Pharmacy. All rights reserved.

Author Keywords

Antidiabetic activity; Lipid profile; *Oligomeris linifolia*; White Albino mice

Index Keywords

alanine aminotransferase, alkaline phosphatase, antidiabetic agent, antilipemic agent, aspartate aminotransferase, bilirubin, cholesterol, creatinine, glibenclamide, glucose, high density lipoprotein cholesterol, low density lipoprotein cholesterol, methanol, *Oligomeris linifolia* extract, plant extract, triacylglycerol, unclassified drug, urea; albino mouse, alloxan-induced diabetes mellitus, animal experiment, animal model, antidiabetic activity, Article, blood sampling, body weight gain, controlled study, diabetes control, glucose blood level, hypolipidemic activity, lipid fingerprinting, mouse, nonhuman

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