

THE ANTIDIABETIC EFFECT OF *LUPINE TURMOS* COMPARED WITH ANTIDIABETIC DRUG (GLIBENCLAMIDE)

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Statement of the Problem: The problem of the study lied behind the fact that Sudanese diabetic patients are using some plants as a treatment, without any experimental data on their biological effects, their suitable dose and their role in diabetic treatment. Few of the diabetic patients suffer from side effects of antidiabetic drugs. The purpose of this study is to determine the biological effects of *Lupine turmos* which used traditionally by diabetic Sudanese patients comparing with antidiabetic drug (Glibenclamide).

Methodology: The essays of the present study were conducted on albino rats which obtained from the faculty of Pharmacy, University of Khartoum, Sudan. Thirty albino rats of either sex weighing (135-250 g) and aged two months were used. Six animals served as control, six animals were treated with antidiabetic drug (Glibenclamide 10 gm/kg-body-weight) and 18 animals (three groups N=6) were

administered with three different doses (200, 400 and 800 mg/kg-b.w) respectively. Blood specimens were collected from each group and serum levels of blood glucose, lipid profile and α -amylase concentrations were estimated.

Findings: The results shows an insignificant difference between the means of blood glucose in the two treated groups, group (4) which treated with (400 mg/kg-b.w) *Lupine turmos* aqueous extract (blood glucose 111.9 mg/dl) and group (2) with (10 mg/kg -b.w) Glibenclamide (blood glucose 98.416 mg/dl). Cholesterol and triglycerides of treated groups were the same as group (3) with (10 mg/kg -b.w) Glibenclamide and there was no significant difference between two groups and control group. The aqueous extract of the plant inhibited α -amylase enzyme activity at a dose (200 mg/kg-b.w), in group (3) versus group (2) with Glibenclamide drug there was no significant difference between two groups ($p \leq 0.05$).

Conclusion & Significance: It can be concluded from this study that *Lupine turmos* aqueous extract have a hypoglycemic effect by reducing both blood glucose and α -amylase enzyme without any side effects.