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The anti-diabetic effect of *Lupine turmos* compared with anti-diabetic 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. Some diabetic patients are suffering from side effects of anti-diabetic drugs.

Purpose: To determine the biological effects of *Lupine turmos* which is used traditionally by diabetic Sudanese patients comparing with anti-diabetic 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. 30 albino rats of either sex weighing (135-250 g) and aged two months were used. 6 animals served as control, 6 animals were treated with anti-diabetic drug (Glibenclamide10 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 was 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, 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.

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