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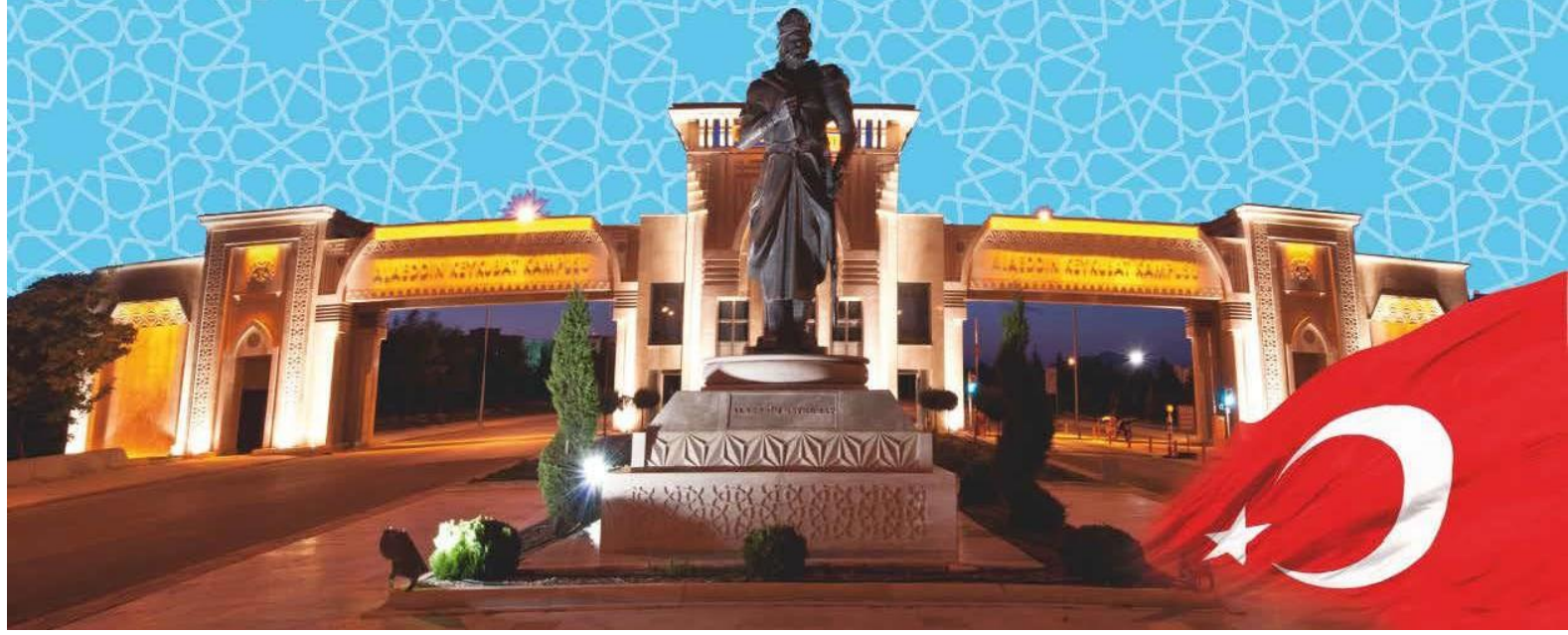


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ABSTRACT BOOK



Effects of Soybean Seed (*Glycine max*) on Some Biochemical Parameters in Streptozotocin- Induced Daibetic Rats

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Introduction: Diabetes mellitus is the most widespread and increasingly global prevalence and incidence, and is a chronic metabolic disorder resulting from insulin deficiency or insulin insufficiency. A consequence of this is chronic hyperglycaemia with disturbances of carbohydrate, fat and protein metabolism. In this study, soybean (*Glycine max* L.) seed extract in wistar rats created experimentally diabetic was aimed to investigate of the effects to some biochemical parameters (Urea, Creatinine, AST, ALT, Cholesterol, Triglycerides, Glucose, LDL, HDL, VLDL) and hyperglycemia.

Material and Method: Firstly, this study was approved by institutional ethical committee (Decision number is 2015/34). Rats were totally divided into five groups in total: control, diabetes and treatment groups (100, 200 and 400 mg / kg extract). Diabetic rats were created by giving Streptozotocin (STZ) with intraperitoneal injection (35 mg/ kg). Water soluble extracts were orally given with gavage way at the indicated quantities. All treatment was once daily and lasted for four weeks. Venous blood were taken the animals by heart puncture and the animals scarified. Then, blood glucose and some biochemical parameters were measured using autoanalyser (Biotecnica Instruments, BT3000 Plus, Italy).

Findings: Serum glucose concentration increased significantly ($p<0.05$) in diabetic rats. Soybean treatment decreased the elevated glucose concentration significantly ($p<0.05$) in treated diabetic rats; however, their glucose concentrations were still significantly higher ($p<0.05$) than those of the control group. The biochemical parameters like Urea, AST, SGPT / ALT, Cholesterol, Triglyceride, Glucose, LDL-cholesterol, VLDL-cholesterol were lower than diabetic control and considered significant ($p<0.05$). Besides, HDL-cholesterol parameter was higher than diabetic control ($p<0.05$). However, creatinine parameter considered insignificant ($P >0.05$).

Results and Discussion: According to our results, Soybean treatment in diabetic rats had beneficial effect on some biochemical parameters. These findings support the reports of the beneficial and health promoting effects of soybean. And, it can be concluded that *G. max* is hypoglycemic in diabetic rats and reduce the complications of diabetes mellitus

Anahtar Kelime: Biochemical parameters; Diabetic rats; *Glycine max* (L); Soybean seed