

Abstract

Diabetes mellitus is one of the metabolic diseases in which it associate with relative or absolute lack of Insulin , increase in blood glucose level and disorder in the metabolism of the carbohydrates , fats and proteins . Many of plants are effective for the treatment control and prevention of diabetes. Here we focused on *Prosopis farcta* plant on diabetes treatment . Glycokinase enzyme causes facilitaling of glucose phosphorilation and changing to glucose 6-phosphate thus it has key role in the using of glucose . The purpose of the study is the effect of hydroalcoholic extract of *Prosopis farcta* fruit on glucokinaze gen expression in diabetic rats . For this reason , 45 male wistar rats with 150-200 gr weight was selected , and they was divided into a groups of 15 rats : Healthy controls ,diabetic control and treated diabetic rats . with injection of rats by intraperitoneal procedure , the rats addicted to diabetes . The treated diabetic rats nourished dialy 300 mg/kg of *Prosopis farcta* fruit extract by gavage method for 30 days . The healthy controls and diabetic controls nourished with drstilled water , then the day before injection of extract , day 15 and day 30 after injection the blood glucose level measured . based on evidence to on day 15 level of the blood glucose level decreased in treated diabetic rats in comparision with diabetic controls . And in day 30 there was no different between them . With Real-Time PCR method on liver tissue , the amount of Glucokinase gen expression analysed . So results show that the F test is not significant and there is not any significant different between out of nine .

Key words : *Prosopis farcta*, Diabetes mellitus type 1, Glucokinase, Real Time PCR



University of Zabol
Graduate School
Department of Agronomy
Faculty of Agriculture

**The Thesis Submitted for the Degree of Master of Science (M. Sc) in the field of
Genetics**

Title

**Effect of hydro-alcoholic *Prosopis farcta* fruit extract on gene
expression of gluco kinase in diabetic rats type (1)**

Supervisor

Dr. Hamid Reza Miri
Dr. Mohammad Reza Hajenegad

Advisors

Dr. Sedeighe Esmailzade Bahabadi
Dr. Mohammad Ali Najafi

By

Habib. Noora

September 2014