

## **Abstract**

Diabetes mellitus is an endocrine disruption, which occurs in the tissues due to a defect in the insulin and pancreatic beta cells or develop insulin resistance. The plants are indicator a huge source of supplemental Food useful for improving the glycemic control and prevent long-term complications of diabetes. The use of medicinal plants in the treatment of diabetes has shown significant impacts in reducing blood glucose in diabetic patients. *Prosopis farcta* is one of the medicinal plants in southern Iran, that the effects of anti-diabetic, anti-inflammatory and heal of this plant has been reported in some studies. In this study, 45 rats were randomly divided into three groups: Control, diabetes control and diabetes treated *Prosopis farcta* extracts, respectively. By injection of streptozotocin (60 mg/kg) in male rats (300- 150 g) was established type 1 diabetes. Group treated received daily (300 mg/kg) *Prosopis farcta* root extract to orally for 30 days. The control group and control of diabetes received distilled water in this period. In the days before the "Extract" and days 15 and 30 after the Extract, Blood glucose were measured, and *pyruvate kinase* gene expression of liver tissue was performed by Real-Time PCR. Results indicated that in the diabetes treated in 15 days, blood glucose was unchanged to control group. But on day 30, observed significant differences between the control group and treated. *PK* gene expression analysis also showed; Gene expression in groups treated at day 15 compared to control diabetes increased and at day 30 compared to control diabetes declined. This study suggests: administration of extract *Prosopis farcta* root for 30 days could reduce blood glucose possibly by increasing the expression of *PK*.

**Keywords:** *Prosopis farcta*, Pyruvate kinase; Type 1 Diabetes.



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## **Title**

**The effect of hydro-alcoholic extract of *Prosopis farcta* on gene expression of Pyruvate Kinase in Diabetic Rats Type 1.**

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