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Poster Presentations

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Improving effects of *Trifolium pratense* extract on histopathological changes in the testis of diabetic rats

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Background: Diabetes is the most common endocrine disorders. It has adverse effects on male reproductive function. There are many natural agents available to treat and control diabetes *Trifolium pratense* L. (*T. pratense*) has traditionally been used for their anti-diabetic and antioxidant effects.

Objective: The purpose of the current study was to examine the effect of hydroalcoholic extract of *T. pratense* on testicular tissue changes in diabetic rats.

Materials and Methods: In this study, 42 male Wistar rats (200 ± 10 g) were divided into groups: control, diabetic, 100 and 200 mg/kg doses of *T. pratense* extract and diabetic treated groups by 100 and 200 mg/kg extract. Rats were treated for 21 days. Diabetes was induced by intraperitoneal injection of streptozotocin at a dose 55 mg/kg. The immunohistochemical expression of bcl-2 and p53 were assessed. Testicular tissue changes were also examined.

Results: The expression of p53 and bcl-2 were increased by diabetes, but it was decreased significantly ($p < 0.001$) in diabetic treated rats with *T. pratense* extract. Furthermore, the extract reduced the testicular tissue destruction induced by diabetes.

Conclusion: *T. pratense* extract improved the undesired side-effects of diabetes on reproductive indices by improved diabetes-induced impairment in testis.

Key words: *Trifolium pratense*, Sperm, Testis.