

## عنوان مقاله:

The effects of Peganum harmala seed extract on caspase-3 gene expression in the kidney of diabetic rats

## محل انتشار:

سومین کنگره بین المللی علوم و مهندسی (سال: 1398)

تعداد صفحات اصل مقاله: 14

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## خلاصه مقاله:

Clinical conditions show that apoptosis of kidney cells are associated with the diabetes disease. This study pointed to discover the various protective activities of peganum harmala in diabetic kidney disease. In the present experimental research, 80 male Wistar rats were studied and diabetes condition was induced by streptozotocin (65 mg/kg). They were randomly divided into 10 groups of control, diabetic, control and diabetic recipient of seed extract, control and diabetic recipient of leaf extract, control and diabetic recipient of harmine and control and diabetic recipient of extract solvent. P. harmala methanolic extracts from the seeds and leaves were selected. Then percentages of apoptotic cells were determined by flow cytometry and real time PCR. In addition, histological stainings and blood serum biochemical parameters were measured. The results indicated that Mean fasting blood urea level was significantly lower in seed extract ( $P<0.05$ ) and harmine diabetic rats ( $P<0.001$ ) compared to the diabetic. A significant albumin increase was observed only in control rats treated with the seed extract compared to control ( $P<0.001$ ). Histopathological results showed diabetic complications in the kidney improved following to treatment by seed extract of P. harmala and harmine. Seed extract also caused a statistically significant reduction ( $P<0.05$ ) of apoptosis in renal cell compared to diabetic leaf extract group and decrease in caspase-3 expression compared to diabetic control ( $P<0.001$ ). In general, our findings suggested that harmine beta-carbolines in the seed extract inhibited diabetic kidney diseases. But leaf extract with lower harmine percentage and higher flavonoids was not able to reduce these symptoms.

## کلمات کلیدی:

Apoptosis, P. harmala, Beta-carboline, Kidney, Caspase-3

## لینک ثابت مقاله در پایگاه سیویلیکا:

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