

## Efficacy of *Lepidium Sativum* to act as an anti-diabetic agent

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**A**- Conception and study design; **B** - Collection of data; **C** - Data analysis; **D** - Writing the paper; **E**- Review article; **F** - Approval of the final version of the article

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### ABSTRACT

**Objective:** *Lepidium sativum*, commonly known as *chandrashoor* in India, has been used in the Indian traditional medicine system for the treatment of various diseases. The present study was undertaken to investigate the hypoglycemic effect of *Lepidium sativum* in normal and streptozotocin-induced diabetic rats.

**Materials and methods:** Thirty (30) adult male Wistar rats weighing 157±51g were randomly assigned to five groups of six rats each as Normal control, Diabetic control, Diabetics supplemented with *Lepidium sativum* extract, Diabetics treated with insulin, and Normal rats supplemented with *Lepidium sativum*. All rats were fed with a normal laboratory diet, nutrient rich pellets, and had free access to drinking water. The rats were injected with streptozotocin at a dose of 45 mg/kg body weight intraperitoneally to induce diabetes. The extracts

were then given orally to different groups of rats at a dose of 20mg/kg body weight for 16 days. Thereafter, the rats were sacrificed, and blood samples collected by cardiac puncture were used for the determination of Glucose, Creatinine, Alkaline Phosphatase, Cholesterol, Malondialdehyde level, % DPPH, and FRAP content.

**Results:** Administration of lepidium extract showed a significant reduction in glucose, creatinine, and alkaline phosphatase levels. Elevated cholesterol level was restored approximately to normal; a significant decrease in malondialdehyde levels was also observed compared to diabetic controls.

**Conclusion:** *Lepidium sativum* extract shows efficacy in the prevention and management of diabetes mellitus and its related complications.

**Keywords:** *Lepidium sativum*, diabetes, insulin, streptozotocin, oxidative stress, cholesterol

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