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OPEN ACCESS

Evaluation of Hepatoprotective Effects of *Sesbania grandiflora* L. in Wistar Rats

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ABSTRACT

Background and Aims: *Sesbania grandiflora* L. commonly known as vegetable hummingbird belongs to family Fabaceae. It is found in South East Asia and many parts of India and Sri Lanka and exhibits numerous medicinal properties like antiarthritic, antihelmintic, anti-inflammatory and antidiarrhoeal. The present study is aimed to evaluate hepatoprotective effects of *S. grandiflora*.

Methods: Hepatoprotective activity of ethanol and aqueous extract of *S. grandiflora* leaf was evaluated using ethanol induced hepatotoxicity and CCl_4 induced hepatotoxicity in rats. Parameters such as triglycerides level, serum cholesterol level, wet liver weight and liver volume were also assessed along with some biochemical investigations including estimation of SGOT, SGPT, ALT, AST, Direct bilirubin and Total bilirubin. Further antioxidant and histopathological studies of *S. grandiflora* leaf were also performed.

Results: Oral administration of ethanolic and aqueous extract of *S. grandiflora* leaf (250 mg/kg and 500 mg/kg) resulted in significant reduction in triglycerides level, serum cholesterol level, wet liver weight and liver volume of rats. Biochemical investigations revealed good hepatoprotective action of ethanol and aqueous extract of *S. grandiflora* leaf against ethanol and CCl_4 induced hepatotoxicity in rats. The elevated levels of SGOT, SGPT, ALT, AST, Direct bilirubin and Total bilirubin were restored to normal level in extract treated rats as compared to saline treated rats. Antioxidant activities also demonstrated marked elevation in superoxide dismutase and catalase enzymes and significant decrease in malondialdehyde level in rats treated with extracts. Further histopathological studies also confirmed hepatoprotective potential of ethanol and aqueous extract of *S. grandiflora* leaf by restoring normal architecture of hepatic cells in treated rats.

Conclusion: Ethanolic and aqueous extract of *S. grandiflora* leaf possess impressive hepatoprotective activity and justifies its usage as hepatoprotective agent in traditional system of medicine.

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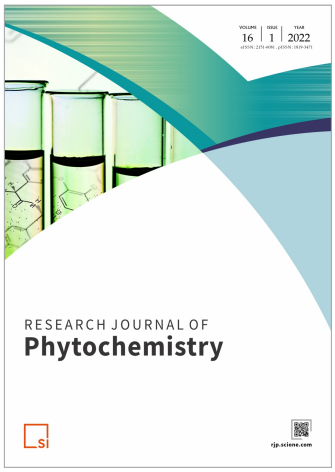

Aims & Scope

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