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# Hepatoprotective and antidyslipidemic effect of Ferula asafoetida in CCI4 induced hepatotoxicity and CCI4 associated dyslipidemia in rats

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### Abstract

**Objective**: The present study was conducted to evaluate hepatoprotective and antidyslipidemic activity of aqueous extract of *Ferula asafoetida* in CCl<sub>4</sub> induced hepatotoxicity and associated dyslipidemia and oxidative stress in rats. **Material and methods:** Hepatotoxicity was induced by administration of CCl<sub>4</sub> (1mg/kg) in alternate days for a period of 14 days. The animals were divided into 6 groups and aqueous extract of *F. asafoetida* at dose level of 50mg/kg, 100 mg/kg and 200 mg/kg was administered respectively for 21 days. Liv-52 (1ml/kg) was used as the standard drug. At the end day of the experiment, the blood was collected by retro-orbital puncture and the hepatoprotective effect was evaluated by analyzing biochemical parameters involved in liver damage. **Result:** The extract was effective in protecting the liver against the injury induced by CCl<sub>4</sub> in rats. This was evident from significant reduction in serum glutamic-pyruvic transaminase (SGPT), serum glutamic oxaloacetic transaminase (SGOT) and total bilirubin content. The extract revealed antioxidant and antihyperlipidemic activity too. **Conclusion:** It was concluded from the result that the aqueous extract of asafoetida possesses hepatoprotective activity against CCl<sub>4</sub> induced hepatotoxicity in rats and also play a beneficial role in CCl<sub>4</sub> associated dyslipidemia and status of oxidative stress.

Key words: Asafoetida, hepatoprotective, liver enzymes, lipid profile, oxidative stress

#### Introduction