

## Hepatoprotective and antioxidant activity of *Thespesia lampas* (Cav.) Dalz & Gibs

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**Received:** 6 October 2011, **Revised:** 5 November 2011 **Accepted:** 8 November 2011

### Abstract

*Thespesia lampas* (Cav.) Dalz & Gibs an important folk medicinal plant was evaluated for hepatoprotective and antioxidant activity against carbon tetrachloride (CCl<sub>4</sub>) induced hepatic damage in rats. In the present study, the *T. lampas* stems extracts at dose of 200 mg/kg body wt. were administered orally once daily for nine days and on seventh day after one hour of drug administration CCl<sub>4</sub> (1ml/kg s.c.) given orally. After 24 h of ninth day, they were sacrifice and their livers were dissected for biochemical and histopathological studies. The extracts showed significant hepatoprotective and antioxidant effect by lowering the serum levels of transaminases (SGOT and SGPT), alkaline phosphatase (ALP), bilirubin, protein, cholesterol and triglyceride as compared to silymarin as a standard hepatoprotective agent. The extracts showing increased levels of superoxide dismutase (SOD), catalase (CAT) and reduced glutathione (GSH) and decreased level of lipid peroxidation (LPO). The biochemical observations were supplemented with histopathological examination of rat liver sections. The results of *T. lampas* stems extract showed significant protection to the liver against carbon tetrachloride induced damages. Our finding suggested that among comparative significance of various extracts, the methanolic extract of *T. lampas* stems having better efficacy and significant activity. The present study support the traditional believes of this plant and highlighted profound potential of *T. lampas* to be investigated for bioactive compounds responsible for hepatoprotective and antioxidant effect.

**Keywords:** *Thespesia lampas*, Malvaceae, carbon tetrachloride, hepatoprotective activity, antioxidant effect

### Introduction

*Thespesia lampas* (Cav.) Dalz & Gibs (*T. lampas*) belong to the Malvaceae family, vernacularly known as “*Ranbhendi*” is found as a wild herb growing during monsoon on the hills in a throughout India and also in Eastern Tropical Africa (Nadkarni, 2007; Kirtikar et al., 2005). In the folk medicine, this plant has been considered to be hepatoprotective and