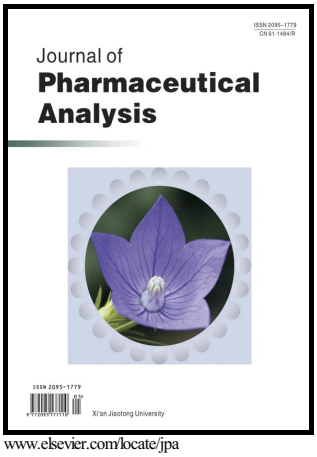

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Hepatoprotective activity of *Macrothelypteris torresiana* (Gaudich.) aerial parts against CCl_4-induced hepatotoxicity in rodents and analysis of polyphenolic compounds by HPTLC

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Abstract

Macrothelypteris torresiana is a fern species belonging to family Thelypteridaceae. The present study was conducted to evaluate hepatoprotective potential of ethanol extract from *Macrothelypteris torresiana* aerial parts (EEMTAP) and detect the polyphenolic compounds present in the extract using high performance thin layer chromatography (HPTLC). Hepatoprotective potential of EEMTAP were tested at doses of 300 and 600 mg/kg, per os (p.o.), on Wistar albino rats. The extract and silymarin treated animal groups showed significant decrease in activities of different biochemical parameters like serum glutamic oxaloacetic transaminase (SGOT), serum glutamate-pyruvate transaminase (SGPT), alkaline phosphatase (ALP), which were elevated by carbon tetrachloride (CCl_4) intoxication. The levels of total bilirubin and total protein alongwith the liver weight were also restored to normalcy by EEMTAP and silymarin treatment. After CCl_4 administration the level of hepatic antioxidant enzymes such as Glutathione (GSH) and Catalase (CAT) were decreased whereas the level of hepatic lipid peroxidation (LPO) was elevated. The level of these hepatic antioxidant enzymes were also brought to normalcy by EEMTAP and silymarin treatment. Histological studies supported the biochemical findings and treatment with EEMTAP at