

## **Effect of methanol extract of *Dicranopteris linearis* leaves against paracetamol- and carbon tetrachloride (CCl<sub>4</sub>)-induced liver toxicity in rats**

### **ABSTRACT**

The present study aimed to determine the hepatoprotective activity of methanol extract of *Dicranopteris linearis* leaves (MEDL) using two models of liver injury in rats. Rats (n = 6) received 10% DMSO (negative control), 200 mg/kg silymarin (positive control) or MEDL (50, 250, and 500 mg/kg) orally once daily for 7 days and 3 hours after the last administration of the test solutions, they were subjected to the hepatotoxic induction either using carbon tetrachloride (CCl<sub>4</sub>) or paracetamol (PCM). The bloods and livers were collected and subjected to biochemical and microscopical analysis. From the data obtained, all doses of MEDL significantly ( $P < 0.05$ ) reduced the alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels in CCl<sub>4</sub>-induced hepatotoxic rats while only the 500 mg/kg MEDL caused significant ( $P < 0.05$ ) reduction in the level of both enzymes in the PCM-induced liver toxicity model. The histological results obtained were in line with the biochemical analysis. In conclusion, the MEDL-induced hepatoprotective activity is attributed partly to its free radicals scavenging and antioxidant activities and high flavonoids content.

**Keyword:** *Dicranopteris linearis*; Gleicheniaceae; In vivo; Hepatoprotective activity; Methanol extract; Leaves