

Evaluation of the Anti-Inflammatory and Antinociceptive Properties of *p*-Cymene in Mice

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We attempted to identify the antinociceptive and anti-inflammatory actions of the monoterpene *p*-cymene. Firstly, behavioural screening was carried out to verify the influence of *p*-cymene [25, 50, and 100 mg/kg intraperitoneal (i.p.)] on the central nervous system (CNS) activity. The antinociceptive activity of *p*-cymene was evaluated by the acetic acid-induced writhing response, formalin, and hot-plate test, respectively. The leukocyte migration induced by injection of carrageenan was used to assess the anti-inflammatory activity. *p*-Cymene showed depressant activity on CNS after 4 h of treatment and also a possible action on the autonomous nervous system (ANS), mainly at the dose of 100 mg/kg (i.p.). It was found that *p*-cymene (50 and 100 mg/kg, i.p.) significantly ($p < 0.05$) reduced the writhing responses induced by acetic acid. *p*-Cymene also decreased the licking time in the first and second phase, respectively, of the formalin test. The results of the hot-plate test showed that all doses of *p*-cymene increased significantly the latency time of the response to the thermal stimulus in both licking and jumping parameters. In addition, there was a significantly ($p < 0.05$) decreased leukocyte migration at all doses of *p*-cymene. The experimental data demonstrate that *p*-cymene possesses antinociceptive and anti-inflammatory activities.

Key words: Monoterpene, *p*-Cymene, Pain, Inflammation