

Natureza do trabalho: Resumo

TÍTULO

ANTINOCICEPTIVE ACTIVITY OF EXTRACT AND ISOLATED COMPOUNDS FROM PIPER AMALAGO AGAINST SPONTANEOUS PAIN IN MICE

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RESUMO

In popular medicine, Piper amalago has been used as an anti-inflammatory agent. The objective of this study was to evaluate the antinociceptive activity of the ethanolic extract obtained from P. amalago (EEPA) and its compounds N-[7-(3',4'-methylenedioxyphenyl)-2(Z),4(Z)-heptadienoyl] pyrrolidine (compound 1) and N-[7-(3',4'-methylenedioxyphenyl)-2(E),4(E)-heptadienoyl]pyrrolidine (compound 2) in experimental model of spontaneous pain induced by formalin in mice. In this model, male Swiss mice (20-25 g) were treated orally with the EEPA (100 mg/kg), compound 1 (1mg/kg), compound 2 (1 mg/kg). After 1 h, an intraplantar injection of 50 µL of formalin was performed. Immediately after formalin injection, the time that animals spend licking, biting the paw was measured. The observations were between 0 to 5 min (Phase I – neurogenic pain) and 15-30 min after formalin (Phase II – inflammatory pain). The cold hypersensitivity was assessed by the test of acetone, also the open field test and the measurement of edema with plethysmometer was performed. The oral administration of the EEPA and its compounds significantly decreased nociceptive behavior when compared to control group. In open field test there was no significant difference between groups. The administration of EEPA, compound 1 and compound 2 significantly decreased the edema formation when compared to control. Thus, the present study demonstrates that the EEPA and its compounds present antinociceptive activity on formalin-induced nociceptive model inhibiting the spontaneous pain and the pain induced by col stimulus. Studies are being conducted to demonstrate the mechanism of analgesic effect.