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Analgesic activity and phytochemical screening of Bougainvillea xbuttiana ethanolic extract

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Bougainvillea is extensively used in Mexican traditional medicine to treat several diseases including painful disorders. This study was designed to investigate the analgesic activities of the B. *xbuttiana ethanolic* extract to support its use in folk medicine. The total extract (BxbEE) and bipartition named as phase: aqueous (BxbEEa) and organic (BxbEEo) to evaluate their analgesic activity. Extracts were subjected to phytochemical screening for the total flavonoids and total phenolic contents were estimated according to standard protocols. BxbEEo was subjected to gas chromatograph-mass spectrometry (GC-MS) for the identification and characterization of major compounds. To determine the analgesic activity at doses of 0.04, 0.4, 4 and 40 mg/kg of different extracts was evaluated using: a) acetic acid induced writhing test, b) formalin test with an early and late phase, and c) tail immersion test. Elevated levels of total flavonoids and total phenolic contents were detected in all extracts. In the GC-MS the BxbEEo showed the presence of six compounds. BxbEE and BxbEEa showed significant analgesic activity (p<0.01) in the acetic acid induced writhing on the mice at doses of 0.4 to 40 mg/kg, formalin model on the animals at dose of 40 mg/kg (both phase) and tail immersion test on the mice at doses of 4 and 40 mg/kg. For groups of animals treated with BxbEEo the highest percentage of analgesia in all methods used was observed in the groups of mice treated with 4 mg/kg. The results obtained suggest that BxbEE acts peripherally and centrally to relieve pain.

Biography

Rigoberto Villanueva Guerrero completed a degree in Chemical Pharmaceutical Biologist at the Autonomous University of Guerrero. Currently, he is pursuing a Master's course in Molecular Medicine at the Autonomous University of Morelos state, working in a research group on the pharmacological activity of Bougainvillea xbuttiana.

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