Antinociceptive activity of the methanolic crude extract from *Discaria americana* in Swiss mice

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Introduction: *Discaria americana* belongs to the family Rhamnacea, species commonly known in Brazil as quina, quina-do-brasil, quina-do-rio grande (SEMA-RS, 2009). It is popularly used in the treatment of diabetes, epithelial disorders, stomach disorders and antipyretic (Giacomelli, tese de doutorado, 2005). With the object of evaluating other possible biological effects, we tested the antinociceptive activity of the methanolic crude extract (MCE) in mice.

Material and Methods: Male mice were used (4.7 ± 26g, n = 8). The MCE was provided by the Center for Natural Products Research Center of Natural and Exact Sciences UFSM. The student’s test t was used. In the hot plate test (56°C) the antinociceptive activity was evaluated by the latency the animal took to lick the hind paw. Cutting time was 30s. The animals were acclimatized 48, 24 and 1 hour prior the experiment. The MCE was diluted in 5% ethanol and saline. The doses of 100, 300 and 1000mg/kg of MCE p.o. were tested 1 h before the experiment. Controls received vehicle. After the initial measurement, mice were recorded with MCE and after 1, 2 and 4 hours new measures were taken. In the test of abdominal contortions induced by intraperitoneal injection of acetic acid (0.6%), the animals received the same MCE doses described. After 1h, acetic acid was injected i.p. (0.1 mL/10g) and the animals were placed individually under glass funnel and the number of writhes was counted for 20 minutes.

Results: In the hot plate test was observed that the MCE significantly increased the mean latency time at all doses tested. At 100mg/kg the maximum peak was in the 2nd hour with 40% MPE [(measured post-pre/30-pre) x100] and those of 300mg/kg and 1000mg/kg was in the 1st hour with 30% and 26%, respectively. In the writhing test, all of the MCE doses significantly inhibited writhing by 70%, 76% and 78% at doses of 100, 300 and 1000mg/kg, respectively.

Conclusion: The results showed that MCE of *Discaria americana* have antinociceptive properties in the hot plate test and abdominal writhing induced by acetic acid in mice.

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