ANTINOCICEPTIVE AND ANTI-INFLAMMATORY POTENTIAL OF EXTRACT FROM *SIDA TUBERCULATA* (MALVACEAE)

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Introduction - *Sida tuberculata* R.E.Fries has been used as a traditional herbal medicine for antimicrobial and inflammatory processes. Until now, there are few studies showing pharmacological properties. Objectives - This study evaluated the antinociceptive and anti-inflammatory effects of the methanolic extract (ME) from leaves of *Sida tuberculata* in mice and investigated the major compounds in extract. Materials and methods - Dry leaves samples of were extracted in methanol (1:10, w,v) for 4 hours under magnetic stirring at 40 °C. The solvent was evaporated and the dry extract was used for *in vivo* tests. The phytochemical analyses were performed using LC-ESI-MS system, operated in positive ion mode. For *in vivo* assays, the mice (female) were orally treated with different concentrations of ME 1 h before the induction of nociceptive response by acetic-acid (AA) or formalin. In AA test we record the number of writhing (20 min) and in formalin test the amount of time spent licking or biting the injected hind paw (0-5 min neurogenic phase and 15-30 min inflammatory phase). Results and Discussion – Phytochemical characterization detected ecdysone derivatives as major compounds in extract. The pretreatment with ME from 10 mg/kg inhibited the behavior induced by AA. Similarly, ME caused a significant inhibition of both neurogenic (0–5min) and inflammatory (15–30 min) phases of formalin-induced licking from 10 and 100 mg/kg, respectively. So, the inhibitory property of ME on inflammatory nociception effect could be attributed, at least in part, by the presence of steroidal compounds in extract. Conclusions - These results demonstrate that *S. tuberculata* extract presents significant anti-inflammatory and also antinociceptive effects on chemical behavioral models of nociception. These findings support, at least partially, the use of *S. tuberculata* in traditional medicine.

Key words – *Sida tuberculata*, Analgesic, Ecdysteroids