A233 Pharmacological effects of strictosamide on Charles River mice

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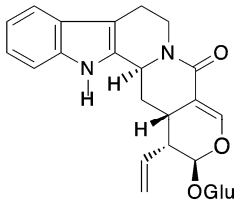
In previous publications we have reported the isolation of indole alkaloids from the stem bark and roots of *Sarcocephalus latifolius* (Smith) Bruce (*Nauclea latifolia* Sm.) (Rubiaceae) collected in Guinea-Bissau, as well as the antisplamodial activivity of its main constituent, strictosamide, which accounts for 11% of the total ethanol extract (1,2). In this communication we present the pharmacological effects of strictosamide on Charles River mice.

Acute toxicity of strictosamide was evaluated according to Pizzi (3) with an i.p. DL_{50} = 600 mg/kg (n=5). The behaviour and physical appearance of the mice were observed immediately after injection of 50, 100 or 200 mg/kg of strictosamide for two succeeding 30 minutes time intervals and hourly until 6 hours. As main effect we observed depression of CNS, with a decrease of motor activity, ataxia and hindlegs paralysis. During the assay, body temperature was decreased with the studied doses. A crude synaptosomal preparation, obtained by homogenation of a pool of 5 animal brains in sucrose solution, was used for *in vitro* evaluation of the strictosamide effects on Na,K-ATPase activity. The profile of Na,K-ATPase inhibition by strictosamide allowed to graphically calculate the IC_{50} as 4.5 mM.



Strictosamide

These results strongly suggest that strictosamide is the active principle responsible for pharmacological effects of *S. latifolius* extracts, which have been previously reported (4,5).

References: 1. P. Abreu and A. Pereira (1998) Heterocycles, 48: 885. **2.** P. Abreu and A. Pereira (2001) Nat. Prod. Letters, 15: 43. **3.** M. Pizzi, (1950) Human Biol. 22: 151. **4.** Silva et al. (1964) Garcia da Horta, 12: 309. **5.** F.V. Udoh (1993) Phytoth. Res. 9: 239.

A234 Acute oral toxicity study of Artemisia essential oil (AEO) in the female rat

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Artemisia sieberi from Compositae family is cultivated in desert area in Iran in order to prevent sand invasion to populated area. About 2% essential oil can be obtained, which composition includes: β-thujone (35.8%), α- thujone (10.77%), 2-methyl cyclopentane- carboxylic acid (9.45%) and camphor (4.58%).

AEO has got antifungal activity in the range of 1/640 to 1/80 dilution titre on the dermatophytes, *Candida albicans* and *Cryptococcus neoformans*. The LD_{50} of β- thujone, the most toxic constituent of AEO, was reported previously, however there is no report for LD_{50} of this essential oil. In this present study LD_{50} of AEO was measured in the female rats and histopathological study was performed on vital organs. Female Spraw-Dawly rats were chosen and acclimated in normal condition (12:12 dark & light; temperature 25±2°C). In order to find the range of toxicity dosage area a pretest was performed. Six doses of AEO were chosen for final tests according to result obtained from pretest. LD_{50} of AEO was calculated using moving average method. Histological samples from vital organ of dead animals freshly were removed and prepared for paraffin wax microtomy. Five µm tissue slices were stained by Harris Haematoxylin & Eosin and were assessed for possible pathological injury. Results of this experiment showed that AEO is less toxic than β- Thujone. LD_{50} of AEO is 1532 mg/kg, which is classified as slightly toxic compound. However inflammation and fibrosis in septal lung duct was observed.