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PRELIMINARY INVESTIGATION OF TOXIC AND ANTINOCICEPTIVE ACTIVITY OF A NEW SESQUITERPENE LACTONE

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Abstract: A new sesquiterpene lactone with molecular formula $C_{24}H_{35}NO_5$ (417 u.m.a.) (P5) was isolated from *Pterodon pubescens* Benth dichloromethane crude extract fraction with analgesic, anti - inflammatory and antiarthritic activity. Herein the role of this compound with previously antinociceptive effects described for this species is reported. The acute oral toxicity test was the first step to assess toxicological profile, followed by proposed OECD / 420 protocol. and also has shown the toxic potential and select the P5 maximum dose that was used in pharmacological tests . The open field test evaluated locomotor activity of animals treated with P5 to determine a possible central or peripheral sedative action which could lead to false-positive results for antinociception tests that are fundamentally behavioral test (Spindola *et al*., 2010). A 300mg / kg dose was chosen as maximum for pharmacological tests. In the writhing acetic acid test with Swiss male rats in 5 groups (n = 6) P5 30, 50 , 100, 200 and 300 mg / kg group and negative control saline 0.9 % (n = 6) were used. The animals were treated with P5, and after 60 minutes were given an intraperitoneal injection of acetic acid (0.8% 0.1 ml / 10 g). The contractions of the abdominal wall , followed by twisting of the trunk and extension of hind limbs were counted throughout 15 minutes. The percentage reduction in writhing at 30, 50, 100, 200 and 300 mg / kg doses were respectively 47.9%, 45.8 %, 53.3 %, 62% and 87.7 % which allowed us to establish the 50 % effective dose (ED50 = 72,41mg / kg).Compared to results obtained with other sesquiterpene lactone previously isolated (m / z 362 and m / z 404) P5 exhibited a higher ED50, suggesting a lower potency under this test (Spíndola, *et al* 2011).

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