5th BCNP Brazilian Conference on Natural Products
XXXI RESEM
Atibaia – SP – Brazil
ISBN: 978-85-66836-10-3
Oct. 26–29th 2015

COMPARISON OF *PTERODON pubescens* BENTH. (SUCUPIRA)DICHLOROMETHANE AND ETHANOLIC EXTRACTS EVALUATED IN ANTINOCICEPTIVE AND ANTIINFLAMMATORY EXPERIMENTAL MODELS

M.C. Figueiredo[1]; H.M. Spindola[1]; V.H.S. Souza[1]; R. Grando[1]; N.C.A. Queiroz[1]; N.C. N. Niizu[1]; M.A. Foglio[1]

[1]*CPQBA, University of Campinas, P.O. Box 6171, 13083-970 Campinas-SP, Brazil*
Author´s contact: maricecchettof@gmail.com; +55 19 21392875; +55 19 981742904

Purpose: Crude *Pterodon pubescens* Benth. fruits extracts are commercially available at Brazilian medicinal market used in folk medicine as anti-inflammatory, analgesic, and anti-rheumatic preparations [1]. Herein a chemically friendly approach considering green chemistry strategies for production of standardized *Pterodon pubescens* extract products is reported. Therefore a comparative evaluation of the antinociceptive and anti-inflammatory properties of dichloromethane and ethanol standardized extracts were determined to establish the feasibility of extract production with a non-toxic solvent. **Methods and Results:** Dichloromethane crude extract (EBD) and ethanol crude extract (EBE) were produced from *P.pubescens* fruits. *Swiss* mice (25-35 g) were used in the experimental models (Ethics protocol 3725-1). The samples dose-response curves (30, 100, and 300 mg/kg, p.o.) in the formalin test demonstrated that on phase I (neurogenic phase), EBD (300 mg/kg) and EBE (100 and 300 mg/kg) were effective in reducing the reaction time of mice compared to the control group. In the second phase (inflammatory pain) both extracts demonstrated antinociceptive activities with EBD (ED_{50} 63.5 mg/kg) significantly more potent than EBE (ED_{50} 110.5 mg/kg) ($P<0.001$). In the carrageenan test, the p.o. treatments with 100 and 300 mg/kg of EBD and EBE extracts were effective in reducing paw edema compared to the control group (vehicle), especially 4 and 6h after carrageenan injection ($P<0.01$). The positive control group tested dexamethasone (5 mg/kg, i.p.) demonstrated effectiveness in all time points evaluated. **Conclusion:** Results showed herein provided consistent data to consider the use of *P. pubescens* ethanolic extracts for development of herbal medication with similar efficiency observed for the dichloromethane extract.

[1]Spindola, H.M., Servat, L., Rodrigues, R.A.F., Sousa, I.M.O., Carvalho, J.E., Foglio, M.A. 2011. Geranylgeraniol and 6α,7β-dihydroxyvouacapan-17β-oate methyl ester isolated from Pterodon pubescens Benth.: Further investigation on the antinociceptive mechanisms of action. Eur. J. Pharmacol. 656: 45-51.