Analysis of the antinociceptive activity and phytochemistry of fractions and subfractions from *Pterodon polygalaeoflorus*


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**Introduction:** The *Pterodon* seeds are commercially available in the medicinal flora market, being used to their pharmacological properties. Phytochemical studies of Pterodon genus have revealed the presence of alkaloids, isoflavones and diterpenes. The aim of this work was to evaluate the antinociceptive activity of hexanic extract/fractions/subfraction of *P. polygalaeoflorus*.

**Methods:** EhxPpg and Fr2 were fractionated on silica gel. The antinociceptive activities were evaluated by one model, acetic acid abdominal constriction test. All animal experiments were approved by the ethics committee of IBRAG-UERJ by protocol 05/2009. Statistical analysis used OneWay Anova, followed by Tukey’s test.

**Results:** EHxPpg was fractioned giving four fractions. In this work Fr2 was fractionated yielding five subfractions. SF2.5 was the subtraction which exhibited highest inhibition. In the writhing test, Fr2 have shown the highest activity inhibiting 92.7% and 55.8% of contortions (0.1 and 1 mg/kg, respectively). Fr4 showed an antinociceptive activity in the lowest doses tested, inhibiting 51.60% and 27.87% of contortions (0.01 and 0.1 mg/kg). SF2.5 showed writhing inhibition of 74.2%, 54.4% e 48.3% (0.01, 0.1 e 1 mg/kg respectively).

**Conclusion/ Discussion:** The results suggest that Fr2 and SF2.5 might be acting on mediators of peripheral action and on opioid receptors. This fraction/subfraction must be tested in other models of antinociceptive activity (models of central analgesic action) sensible to opioid drugs, like morphine, which action is mediated by receptors coupled to G protein and by receptors of peripheral action.

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**Key words:** Nociception, *Pterodon polygalaeoflorus*