

Investigation of Local Anesthetic Effect and Toxicity of *Ottonia Propinqua* (Piperaceae)

Stela Maris KUZE RATES*, Célia G. CHAVES and Gilsane L. VON POSER

Faculdade de Farmácia, Universidade Federal do Rio Grande do Sul,
Av. Ipiranga, 2752, Porto Alegre (Brazil), CEP 90.610.000

SUMMARY. The local anesthetic effect of the ethanolic extract of *Ottonia propinqua* roots was tested *in vivo* with twich response of guinea-pig skin. The extract trends to produce reversible and no dose dependent anesthesia. The extract displayed signs of local irritation and its LD₅₀ in mice was 33 mg/kg, i.p.

RESUMEN. "Investigación del Efecto Anestésico Local y Toxicidad de *Ottonia Propinqua* (Piperaceae)". El efecto anestésico local *in vivo* del extracto etanólico de las raíces de *Ottonia propinqua* fue estudiado utilizando el método de la anestesia intradérmica comparada con conejillos de las Indias. Los resultados demostraron una actividad anestésica que fue independiente de la dosis. Se observan también muestras de irritación local. La dosis letal mediana (DL₅₀) en ratones fue 33 mg/kg, i.p.

INTRODUCTION

The Piperaceae family comprises 12 genera and about 1400 species of mainly pantropical distribution. *Piper* and *Peperomia* are the best represented genera in the Brazilian flora, with about 170 and 150 species, respectively ¹.

The majority of phytochemical research in Piperaceae was performed with the genus *Piper*. The most characteristic chemical constituents are amides, lignans and essential oils ^{2,3}. The genus *Ottonia* has 23 described species, of which 21 are from Brazil ⁴. To the best of our knowledge only amides as piperovatine and piperlongumine are reported for this genus ⁵⁻⁷.

Several species display pungent taste probably due to amides. Many of them provide intense salivation and are known as "jaborandi". This popular name is derived from Indian's language "Tupi-Guarani" and means "that makes you slobber". Besides Piperaceae "jaborandi" is employed to name many plants from different families which have the same property (e.g. *Pilocarpus* sp., Rutaceae). Therefore, some species of *Piper* and *Ottonia* have been used in homemade medicine as anesthetic for toothache ⁸.

KEY WORDS: *Ottonia* sp., *Ottonia propinqua*, Piperaceae, Anesthetic, Amides.

PALABRAS CLAVE: *Ottonia* sp., *Ottonia propinqua*, Piperaceae, Anestésia, Amidas.

* Correspondence to Stela Maris Kuze Rates