B167 Phytochemistry and pharmacological evaluation of anticonvulsant, sedative and anxiolytic activities of *Agastache mexicana* subsp. *mexicana*

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The *Agastache mexicana* subsp. *mexicana* and the *A. mexicana* subsp. *xolocotziana* have been used in Mexican traditional Medicine for the treatment of disorders such as insomnia and anxiety.

The aim of this study was to evaluate the behavior effects in male mice produced by *A. mexicana* subsp. *mexicana*. The avoidance behavior test was employed to analyze the anxiolytic-like actions of this plant. The anticonvulsive actions were evaluated on generalized tonic-clonic seizures produced by pentilenetetrazole (PTZ), 4-amine pyridine (4AP), and bicuculine (BIC). The sedative effects were evaluated through hole board test, and this effect was confirmed, since *A. mexicana* subsp. *mexicana* prolonged the pentobarbital sleeping time.

The aqueous extract did not show anxiolytic-like effects. However, showed an important sedative effect, and exhibited an anticonvulsant activity in the seizures induced by PTZ and 4AP. In addition, the bioassay guided fractionation indicated that the anticonvulsant activity lies in the flavoniod fraction, since this fraction protected animals from tonic seizures induced by PTZ, and showed a sedative effect in the hole board test. It is worth to know three flavonoids products (acacetin, 7-O-(2"-O–acetyl)-glucosylacacetin, and 7-O-glucosyl-acacetin) were isolated from active fraction.

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B168 Neuropharmacological evaluation of species used as central nervous system depressant in Brazilian traditional medicine.

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Several botanical species are used by different populations due to their reputed sedative/hypnotic activity, or are used against convulsive episodes. Based on their ethnopharmacological use, seven species (*Citrus aurantium*, *Cymbopogon citratus*, *Ocimum basilicum*, *Ocimum gratissimum*, *Rosmarinus officinalis*, *Passiflora alata* and *Passiflora edulis*) were selected and evaluated in order to investigate their activity upon the central nervous system (CNS). Preparations obtained from different parts of each specie, according to their traditional use, were coded as: Essential Oil (EO), 70% v/v hydroethanolic extract (HE) submitted to successive partitions resulting in hexanic (HF), dichloromethanic (DF) and final aqueous (AF) fractions. Preparations were administered orally to male Swiss mice (30-40 g) 30 min before experimental procedures. Sedative activity was evaluated by sleeping time induced by sodium pentobarbital (40 mg/kg, ip); anticonvulsant activity was determined by PTZ (pentylenetetrazole: 85mg/kg, sc) and MES (maximal eletroshock: 50 mA, 0.11 s, corneal). EO obtained from *R. officinalis*, *O. gratissimum* and *C. citratus* reduced the occurrence of tonic episodes induced by the MES test in 42%, 55%, and 78% respectively (Fisher's exact test; $p<0.05$). Sleeping time induced by sodium pentobarbital was significantly increased when compared with control group [median (IQ25-IQ75): 39 (29-60) min] in animals treated with EO from *O. gratissimum* (3.2 times), EO from *C. citratus* (3.5 times), and EO (2.1 times), HF (2.8 times) and DF (3.0 times) obtained from *C. aurantium* (Kruskall-Wallis non-parametric ANOVA followed by Dunn's multiple comparison test; $p<0.05$). No effects were observed on experimental models with preparations obtained from *O. basilicum*, *P. alata* or *P. edulis*, in spite of their traditional use as CNS depressant. The positive results obtained are according to ethnopharmacological use of the species and, after toxicological investigation, the preparations could be useful in primary medical care. In the same way, identification of compound(s) responsible for biological activity could be a source of prototypes to chemical and pharmacological studies, in order to design new safer drugs potentially useful in CNS disorders.

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