

Central Effects of the Constituents of *Mimosa ophthalmocentra* Mart. ex Benth.

Leônia Maria BATISTA and Reinaldo Nóbrega de ALMEIDA*

Departamento de Fisiologia e Patologia/Laboratório de Tecnologia Farmacêutica,
Universidade Federal da Paraíba, Caixa Postal 5009, CEP 58051-970,
João Pessoa, Paraíba - Brasil.

SUMMARY. A fraction containing the total alkaloids (FTA) of the plant *Mimosa ophthalmocentra* Mart. ex Benth. 50 and 100 mg/kg, i.p. and N,N,- Dimethyltryptamine (DMT), one of the compounds isolated, at 32, 64 and 128 mg/kg, i.p. produced the "5HT behavioral syndrome" in rats. Another substance isolated from the plant, *hordenin*, had no such effect. Pretreatment with ketanserin (10 mg/kg) inhibited all the behavioral syndrome elicited by FTA (100 mg/kg) and DMT (64 mg/kg) suggesting an action of the agents on 5HT₂ receptors subtype in rat brain.

RESUMEN. "Efectos Centrales de los Constituyentes de *Mimosa ophthalmocentra* Mart. ex Benth.". La fracción conteniendo los alcaloides totales (FTA) obtenidos de *Mimosa ophthalmocentra* Mart. ex Benth. en dosis de 50 y 100 mg/kg por vía intraperitoneal (v. ip.) y N, N- Dimetilriptamina (DMT) en dosis de 32, 64 y 128 mg/kg (v. ip.) produjo, en ratones, el "síndrome serotoninérgico". En el caso de hordenina, el otro compuesto obtenido de *M. Ophthalmocentra*, no mostró diferencias significativas en relación a los animales del grupo utilizado como control. En los ratones tratados con quetanserina (10 mg/kg) se observó un efecto inhibitorio del síndrome producido por medio del tratamiento con DMT y FTA. En conclusión, este efecto puede estar relacionado con la acción sobre los receptores 5 HT₂ en cerebro de ratones.

INTRODUCTION

Mimosa ophthalmocentra Mart. ex Benth. is a plant which belongs to the Mimosaceae family and is popularly known as "Jurema Preta". The plant is widely spread throughout the North-East of Brazil, and is used in mystico-religious ceremonies and also in folk-medicine as an antiseptic and anti-inflammatory¹. Since some Mimosaceae species demonstrate hallucinogenic activity, it was thought worthwhile to evaluate the central effects of this plant.

The purpose of this study consisted of an evaluation of the effects of a fraction containing total alkaloids (FTA), and of N,N,- Dimethyl-tryptamine (DMT) and hordenine (HRD) obtained from the stem bark of *M. ophthalmocentra*.

KEY WORDS: *Mimosa ophthalmocentra*, Central activity, Alkaloids.

PALABRAS CLAVE: *Mimosa ophthalmocentra*, Actividad central, Alcaloides.

* Author to whom correspondence should be addressed.