

**B169 A  $\beta$ -adrenoceptor agonist isolated from the flowers of the Mexican tree *Chiranthodendron pentadactylon* Larr.**

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*Chiranthodendron pentadactylon* Larr. is a tree growing wild in southern Mexico and cultivated in some parts of the country for ornamental purposes. Its flowers are used in Mexican traditional medicine for the treatment of heart conditions and epilepsy and, applied topically, as an antiinflammatory remedy. Since an aqueous extract of *C. pentadactylon* flowers was reported to relax the noradrenaline-contracted rat aorta (1), the plant was included in a screening program designed to identify Mexican medicinal plants with possible cardiovascular activity. A methanolic extract of the flowers was found to lower blood pressure in the anesthetized rat and to elicit vasodilatation in the perfused mesenteric vascular bed of the rat. Activity-guided fractionation of the crude extract led to isolation of a single crystalline active compound which in the chloralose-urethane anesthetized rat produced immediate and long-lasting hypotension accompanied by a slowly-developing tachycardia. In pharmacological studies in this model designed to determine the mechanism of these effects, it was found that previous selective  $\beta_1$  adrenergic blockade with atenolol abolished the tachycardia but had no effect on the hypotension. In contrast, non-selective  $\beta_1$  and  $\beta_2$  blockade with propranolol eliminated both responses. These results are compatible with a  $\beta$ -adrenoceptor agonist eliciting tachycardia through  $\beta_1$  cardiac receptors and hypotension through  $\beta_2$  vascular receptors. Chemical characterization of the compound is in course.

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**Reference:** 1. Perusquia M. et al. (1995) *J. Ethnopharmacol.* 46: 63-69.

**B170 Effects of the crude and semipurified extracts of *Paullinia cupana* var. *sorbilis* (Martius) Ducke ("guaraná") in forced swimming test**

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The seeds of "guaraná" are well known as a psychostimulant drug. Previous studies carried out in this laboratory showed a potential antidepressive activity with "guaraná" seeds crude extract in forced swimming test (FST). The objective of the present study was to evaluate the role of the crude (EBPC) and semi-purified (EPA and EPB) extracts (requeried patent) obtained of the seeds of "guaraná" in its experimental model. Male Wistar rats (n=7-8) were given daily EBPC (30.0 and 60.0 mg/kg) EPA and EPB (2.0 and 4.0 mg/kg, *p.o.*), saline (S, *p.o.*) and imipramine (IMI, 10.0 mg/kg, *i.p.*) during 30-40 days. The animals were then submitted to the forced swimming test (FST) and to the open-field test (OFT). When compared to S, EBPC (30.0 mg/kg) and EPA (4.0 mg/kg) decreased immobility time at 50.7% (3.5 $\pm$ 0.76) and 73.12% (4.0 $\pm$ 1.8, *p*<0.05), respectively, without affecting mobility time in FST or locomotor activity in OFT. IMI decreased significantly immobility time and increased mobility time, without affecting locomotor activity. The different doses of EPB did not affect any of the parameters analyzed. These results suggest that the EBPC and EPA of the extract of the seeds of "guaraná" present a potential antidepressive activity and that the responsible compounds for this activity is still under investigation at our laboratory.

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