

ANTIPARASITIC NEOLIGNANS FROM AQUATIC MACROPHYTE *Saururus cernuus* (SAURURACEAE)

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Saururus cernuus (Saururaceae) is one of the emerging freshwater angiosperms commonly found throughout America. Popularly known as the lizard's tail and breast weed, this species has been widely used as a popular remedy for inflammation of the breasts, bladder, kidneys and as sedative. Phytochemically, different lignans/neolignans have been identified in this species [1], but with few results regarding pharmacological aspects of these substances. In this context, the dried leaves of *S. cernuus* were exhaustively extracted with MeOH to afford 89 g of crude extract. This material was evaluated against trypomastigote forms of *T. cruzi* and displayed strong activity (100% of parasite death at 300 µg/mL). After partition with hexane, EtOAc and n-butanol each phase, the antitrypanosomal activity was evaluated and the hexane phase was the most active (100% of parasite death at 300 µg/mL). Based on this result, this material (8.9 g) was subjected to silica gel column chromatography eluted with increasing amounts of EtOAc in hexane to afford 12 groups (A – L). Groups B (1500 mg), C (500 mg), F (604 mg) and G (313 mg), bioactives, were subjected to successive fractionation procedures over silica gel to afford neolignans **1** (austrobailignan, 719 mg), **2** (erythro-austrobailignan, 41 mg), **3** (meso-dihydroguaiaretic acid, 115 mg) and **4** ((+)-saucernetin, 8 mg). These substances were identified by spectroscopic and spectrometric analyzes, mainly NMR and HRESIMS, followed by comparison with data described in the literature¹. This is the first report of antitrypanosomal potential of *S. cernuus* extracts and compounds **1** – **4** in the literature.

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References: [1] Brown, P.J. ; Fenical, W. ; Hay, M.E. ; Kubanek, J. ; Lindquist, N. Two antifeedant lignans from the freshwater macrophyte *Saururus cernuus*. *Phytochemistry*, 54, 281-287, 2000.