

NOTE

**SEDATIVE ACTIVITY OF THE CRUDE EXTRACT
OF *RAUVOLFIA DENSIFLORA***

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ABSTRACT

The sedative activity of Rauvolfia densiflora Benth ex Hook. f. (Apocynaceae) roots and leaves was evaluated using the rat hole board technique. The results indicate that crude extracts of R. densiflora has sedative properties as the leaf extract significantly reduced dips and rearing, and the root extracts reduced dips, motor and rearing activities related to exploratory behaviour of rats.

INTRODUCTION

Rauvolfia densiflora Benth. ex. Hook.f. (Apocynaceae) is a small tree occurring in the forests between 700 and 2200 m in Sri Lanka. It is reported that this plant contains reserpine type alkaloids, (Youngken, 1951) and is also used as an adulterant for *Rauvolfia serpentina* (L.) Benth ex. Kurz (Mukarji, 1956). This study was carried out to investigate the possible sedative activities of *R. densiflora* using rat hole board technique (File & Wordwill, 1975)

MATERIALS AND METHODS

Plant Materials

Rauvolfia densiflora plants were collected from Rattota (Matale district), Sri Lanka and identified by Mr.

Keywords: Exploratory behaviour, rat hole board technique, *Rauvolfia densiflora*, *Rauvolfia serpentina*, sedative activity.

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R.M.S. Ratnayake of Royal Botanical Gardens, Peradeniya. The identity was authenticated by the late Prof. S. Balasubramaniam, University of Peradeniya. The herbarium specimens are available at Royal Botanical Gardens, Peradeniya.

Extraction of Plant Materials

Shade dried powdered leaves and root bark of *R. densiflora* were separately extracted by agitation with ammoniated methanol (1:10) and filtered. The marc was again extracted by shaking with methanolic NaOH (1%) for 2 h and filtered. The filtrates were treated separately. The ammoniated MeOH was evaporated to dryness under reduced pressure and at 50°C and the resultant residue was dissolved in 1 M HCl and extracted with pet ether to remove fatty materials. The aqueous layer was extracted with chloroform in acidic and basic media, to obtain the bases. The methanolic NaOH layer was similarly treated. The bulked chloroform extracts were evaporated to dryness under reduced pressure and weighed to calculate the percentage yields of alkaloids in the leaves and the roots (1.62 and 1.68%, respectively).

Preparation of Crude Extracts for Animal Studies

The crude extract (CE) was dissolved in 8–10 ml of MeOH. Polyvinyl pyrrolidone (500 mg of PVP, Aldrich Chemical Co.), used as a vehicle for the extract, was dissolved in 10–12 ml of MeOH. The CE and PVP solutions were mixed at 1:2 (w/w) ratio, dried (50°C) under pressure and kept under vacuum. The dried mixture was dissolved in saline for interperitoneal administration to rats.

Test Animals

Cross bred albino rats (250–260 g, age 100–115 days) from our own colony were housed 3/cage under natural