

# Antidepressant and Anxiolytic Effects and Subchronic Toxicity of the Aerial Parts of *Psychotria ankasensis* J.B.Hall (Rubiaceae) in Murine Models

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**Background.** The present study aimed at validating the traditional use and toxicity profile of a methanolic extract of the aerial parts of *Psychotria ankasensis* in alleviating depression and anxiety disorders.

**Method.** The antidepressant effect of methanol extract of *Psychotria ankasensis* (PAE 30, 100, and 300 mg/kg, *p.o.*) was assessed in mice using the forced swim test (FST) and the tail suspension test (TST). The plant's anxiolytic potential was also evaluated in mice using the elevated plus-maze (EPM) and the open field tests (OFT). The subchronic toxicity was assessed via oral administration of PAE at doses of 100, 300, and 1000 mg/kg in rats for 28 days.

**Results.** PAE 100 and 300 mg/kg showed antidepressant-like properties by significantly (at least  $p < 0.05$ ) decreasing the frequency and duration of immobility in FST and TST. PAE (100 and 300 mg/kg) also showed a significant (at least  $p < 0.05$ ) anxiolytic effect in both EPM and OFT.

In the EPM test,  $E_{max}$  for PAE and diazepam were  $92.52 \pm 40.11\%$  and  $85.95 \pm 45.92\%$ , respectively, whereas  $E_{max}$  was approximately 100% for both test drugs in the OFT. Subchronic administration of PAE did not reveal any toxic effects with respect to organ weight index, haematological, serum biochemical, and histopathological parameters.

*Conclusions.* Methanolic extract of *P. ankasensis* exhibited antidepressant-like and anxiolytic-like effects devoid of significant toxicity at the doses tested in murine models.