

Área: ORG**Effect of Fractions of *Aloysia virgata* var. *platyphylla* in Forced Swim Test in Mice**

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Highlights

Effect of Fractions of *Aloysia virgata* var. *platyphylla* in Forced Swim Test in Mice: Sub-chronic (7-day) treatment with the hexane, dichloromethane, and butanol fraction of *Aloysia virgata* var. *platyphylla* reduced immobility time in forced swimming tests in mice, consistent with an antidepressant-like effect.

Resumo/Abstract

Depression is a major mental disorder and one of the leading causes of disability worldwide. In Paraguay, about 5.23% of the population suffers from depressive disorders, emphasizing the need for new therapeutic alternatives. Previously, ethanolic extract of *Aloysia virgata* var. *platyphylla* (Avp) was assayed and showed antidepressant like activity. Hexane and butanol fractions exhibited also mild effect reducing immobility time in forced swimming test in mice after acute treatment (3 doses in 24h). This study evaluated the antidepressant effect of *Aloysia virgata* var. *platyphylla* (Avp) fractions in mice, after sub-chronic administration. The material was extracted with ethanol, and the dried crude extract was partitioned with hexane, dichloromethane, ethyl acetate, and butanol. Groups of male Swiss mice received vehicle, imipramine (32 mg/kg, i.p.), or fractions (0.1 and 1 mg/kg, p.o.) of Avp during 7 consecutive days. Animals were subjected to the Tail Suspension Test (TST) and Forced Swim Test (FST). Hexane, dichloromethane, and butanol fractions significantly reduced immobility time in FST (hexane: $p < 0.05$; dichloromethane: $p < 0.01$; butanol: $p < 0.001$) whereas no effect was evident in TST. In conclusion, *Aloysia virgata* var. *platyphylla* butanol fraction showed the strongest antidepressant like effect after sub-chronic administration in mice.

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