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Evaluation of anti-depressant effect of methanol extract of *Aegle marmelos* (bael fruit tree) leaves in mice

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Background: Depression is one of the most common mental disorders, characterized by sad mood, loss of interest and pleasure, worthlessness and suicidal thoughts. Currently, tricyclic anti-depressants and SSRIs are most commonly employed drugs for the treatment of depression. Synthetic drugs available for treatment of depression have various adverse effects like sedation, dry mouth, postural hypotension and tachycardia etc. Drugs obtained from natural sources are known to cause fewer side effects compared to synthetic drugs despite of same ability to cure disease. Therefore this study is undertaken to evaluate the antidepressant property of methanol extract of *Aegle marmelos* (AM) (an ayurvedic medicinal tree, commonly known as the bael fruit tree) leaves in mice.

Materials & Methods: Methanol extract of *Aegle marmelos* (100 mg/kg, 200 mg/kg and 400 mg/kg), 2% of Gum acacia (control), Imipramine 20 mg/kg (standard) are administered orally to randomly divided albino mice of either sex. Anti-depressant activity is assessed by Tail suspension test (TST) and Actophotometer (locomotor activity) models.

Results: In TST and Actophotometer models, ANOVA with post hoc test was used to assess anti-depressant activity between groups. AM of all doses (100 mg/kg, 200 mg/kg, 400 mg/kg) have shown statistically significant decrease in immobility time ($p < 0.05$) compared to control and results are comparable with standard in TST. In Actophotometer model, AM in all the doses have shown statistically significant increase in locomotor activity ($p < 0.05$) compared to control and results are comparable with standard.

Conclusion: Methanolic extract of *Aegle marmelos* showed significant anti-depressant activity.

Biography

Deepa Halemani is currently pursuing Post-graduate studies in the Department of Pharmacology at Jagadguru Jayadeva Murugarajendra Medical College, Karnataka, India.

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