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Evaluation of anxiolytic effect of the essential oil of *Myrtus communis* L. in mice

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The present study was undertaken to evaluate the anxiolytic effect of the essential oil of *M. communis* using different models of anxiety including, elevated plus maze, stair case and open field models. Control groups were given Tween 80 in distilled water. Positive controls received diazepam (0.5 mg/kg, orally), test groups were given the oil suspended in the vehicle at doses of 50, 100, 200 and 400 mg/kg. Both 100 mg/kg and 200 mg/kg of the oil produced a significant increase in percentage of open arm time ($P < 0.01$ and $P < 0.05$ respectively) as compared to the control in elevated plus maze. However, it was only 100 mg/kg of the essential oil that produced a significant increase ($P < 0.05$) in the percentage of open arm entry as compared to the control. In addition, the percentage of time spent in open arm entry by 100 mg/kg of the oil was higher than diazepam (52.82% Vs 50.98%). Evaluation of stair case showed significant reduction of rearing in mice treated with the oil of *M. communis* at 100 mg/kg ($P < 0.01$) and 200 mg/kg ($P < 0.05$) compared to the control. However, at a dose of 50 mg/kg and 400 mg/kg the oil did not exhibit significant effects on the measured parameters of both elevated plus maze and stair case models. In conclusion, 100 mg/kg of the essential oil of *M. communis* showed better anxiolytic activity compared to the standard drug. The possible mechanism by which the oil showed the activity could be through GABA-related mechanism.

Biography

I got my MSC degree in Experimental Pharmacology in Addis Ababa University at the age of 25 and I had worked in different organization for more than five years as a department head and also as lecturer. I had participated in international brain research organization (IBRO) Neuroscience Course and also and present my research work on the 10th International Conference of the Society of Neuroscientists of Africa (SONA) and attend IBRO ALUMNUS School in Fes, Morocco. Currently I am working as lecturer of Pharmacology in Debre Brhane University.

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