

Essential oils of *Myrtus communis* L. produce a non-sedating anxiolytic effect in mice model of anxiety

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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

Eyob Hailu had done M.sc. project at the age of 25 under the title "Essential oils of *Myrtus communis* L. produce a non-sedating anxiolytic effect in mice model of anxiety" in Experimental Pharmacology Department, Addis Ababa University. He participated and presented his research work in different international conferences that held in Ethiopia {International brain research organization (IBRO) Neuroscience Course, the 10th International Conference of the Society of Neuroscientists of Africa (SONA)} and abroad like {Germany (the XXth World Congress of Psychiatric Genetics, Hamburg), Morocco (IBRO ALUMNUS School, Fes), UAE}. Currently, he is working as lecturer of Pharmacology and Coordinator of Research and Community Service in Debre Brhane University.

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