

## Hypoglycemic Effect of Flavonoids from the Leaves of *Olea europaea* L. in Normal and Alloxan Induced Diabetic Rats

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**Abstract :** The hypoglycemic and antihyperglycemic effects of flavonoids rich extract obtained from leaves of *Olea europaea* L. was analyzed in normal and alloxan induced diabetic rats. The extraction was performed by confrontation with organic solvents method, which yielded four extracts: Di ethyl Ether, Ethyl Acetate, Butanolic, and Aqueous extract. A single oral dose of 100 mg/kg of the different extract was evaluated for hypoglycemic activity in a glucose tolerance test in normal rats and 200 mg/kg, 400 mg/kg, 600 mg/kg of AE for anti-hyperglycemic activity in alloxan-induced (125 mg/kg) diabetic rats. Dosage of 100 mg/kg of the extract significantly decreased ( $p < 0.05$ ) blood glucose levels in the glucose tolerance test after 120 min. However, a better activity is obtained with the AE. For the anti-hyperglycemic study, the results showed a substantial decrease in blood glucose during the 2 h of treatment for all groups treated with different doses of flavonoids. From the results it can be concluded that flavonoids of *O. europaea* can be a potential candidate in treating the hyperglycemic conditions.

**Keywords :** alloxan, antihyperglycemic effect, diabetes mellitus, flavonoids, hypoglycemic effect, *Olea europaea* L.

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