

Evaluation the diuretic activity of the aqueous extract of *Ephedra alata* and *Plumbago europaea* in Mice

Students:

Amnah Raba
Maram Hroub
Sujud Khwailed

Supervisor:

Dr. Belal Rahhal

Abstract:

Background: Throughout history, man used various natural materials as a remedy for treatment of various diseases and recently witnessing a vastly growing and renewed interest in herbal medicine globally. In Palestinian folk medicine *E. alata* and *P. europaea* used as diuretics and for treatment of hypertension. This study aimed to evaluate the diuretic and acute toxicity effects of the aqueous extracts for these two plants in mice after oral administration.

Methods: Adult mice were administered orally aqueous *E. alata* and *P. europaea* extracts (500 mg/kg). Urine output and electrolyte contents were then quantified up to 4 h and compared with those administered with furosemide 10 mg/kg as a positive control group and normal saline as a negative control group.

Results: The aqueous extract of *E. alata* produced significant diuresis ($p < 0.001$), while the *P. europaea* aqueous extract had shown mild diuresis, but statistically not significant by the end of the fourth hour compared to control mice. Moreover, both aqueous extracts had an alkaline pH and a mild increase in the electrolyte excretion (Na, K).

Conclusion: Our investigations strongly revealed that *E. alata* aqueous extract had potential diuretic effect which can be utilized for treatment of hypertension and other diseases related to the diuresis also for manufacturing natural and safe diuretic drug.