

## Phytochemical Screening and Diuretic Activity of selected Palestinian Medicinal plants in Mice using an Aqueous Extract Division of Physiology, Pharmacology and Toxicology

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### ABSTRACT

**Purpose:** Man used various natural materials as a remedy for the treatment of various diseases and recently witnessed a vastly growing and renewed interest in herbal medicine globally. In Palestinian folk medicine, *Crataegus aronia*, *Rosmarinus officinalis* known as rosemary and *Nigella sativa* is used as a diuretic and for treatment of hypertension. This study aimed to assess the preliminary phytochemical properties and the diuretic effect of the aqueous extracts of these plants in mice after its intraperitoneal administration.

**Methods:** It is an experimental trial applied on mice (n=8, Male, CD-1, weight range: [25-30 gram]), which are divided into two groups (4 in each). The first group administered with the plant extract (500 mg/kg), and the second with normal saline as negative control group. Then urine output and electrolyte contents were quantified up to 6 hours for the three groups and then compared to the control one.

**Results:** Preliminary phytochemical screening reveals the presence of tannins, alkaloids and flavonoids as major phytoconstituents in aqueous extract. Significant diuresis was noted in those received the aqueous extract of *Crataegus aronia* ( $p < 0.05$ ) compared to controls. Moreover, aqueous extract had an acidic pH and a mild increase in the electrolyte excretion (Na, K). On the contrary, the aqueous extracts from the Rosemary and *Nigella sativa* showed no diuretic activity.

**Conclusions:** Our results revealed that *Crataegus aronia* aqueous extract has a significant potential diuretic effect. Further studies are needed to evaluate this diuretic effect in the relief of diseases characterized by volume overload.