

## Secondary metabolites and antifertility potential of *Atriplex farinosa* Forssk

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### Abstract

*Atriplex farinosa* Forssk was evaluated for its phytochemical contents. Moreover, its effect on the reproductive organs of male rats was studied. Five compounds were isolated from this plant (Three flavonoids and two coumarins). No alterations were observed in the fertility parameters of the male rats after the exposure to *A. farinosa* extract in a dose of 100 mg/kg (group B) for 6 weeks. Significant reduction was observed in the relative weight of reproductive organs of the male rats of groups C (200 mg/kg) and D (400 mg/kg). Administration of the ethanol extract of *A. farinosa* to groups C and D significantly reduced the serum levels of testosterone. The test extract significantly increased the serum level of prolactin in groups C and D. Significant reduction was observed in sperm count, sperm motility and sperm viability of the male rats of groups C and D. The observed sperm abnormalities included detached head and coiling of end tail. In conclusion, daily administration of *A. farinosa* extract to male Albino rats may lead to reduction of their fertility.

**Keywords:** *Atriplex farinosa*, flavonoids, male fertility

### Introduction

The genus *Atriplex* comprises about 200 species and belongs to subfamily Chenopodiaceae. *Atriplex farinosa* is a tall shrub of yellow white appearance with large, naked panicles, but leaf base cordate with long, obtuse auricles, fruit bracts entire, longer than broad, acute (Tackholm, 1974). Some reports suggested the presence of naringin, naringenin 7-*O*-glucoside, isorhamnetin-3-*O*-rhamnosyl (1-6) glucopyranoside and isorhamnetin-7-*O*-glucopyranoside in *A. farinosa* (Al-Jaber et al, 1991).