

Original Paper

## Effect of hydro-alcoholic extract of *Pimpinella anisum* seed on anxiety in male rat

Niksokhan M (B.Sc)\*<sup>1</sup>, Hedarieh N (Ph.D)<sup>2</sup>  
Najafifard Maryam (B.Sc)<sup>1</sup>, Najafifard Masoomeh (B.Sc)<sup>1</sup>

<sup>1</sup>M.Sc Student in Physiology, Islamic Azad University, Qom Branch, Qom, Iran.

<sup>2</sup>Assistant Professor, Department of Physiology, Islamic Azad University, Qom Branch, Qom, Iran.

---

### Abstract

**Background and Objective:** Anxiety is a common psychological disorder. This study was carried out to evaluate the effect of hydro-alcoholic extract of *Pimpinella anisum* seed on anxiety in male rat.

**Method:** In this experimental study, 42 male Wistar rats, randomly allocated into six groups including: negative control group (no injection), positive control (saline) and experimental groups (receiving doses 100, 200, 250, 300 mg/kg/bw of hydro-alcoholic extract of *Pimpinella anisum* seed, intraperitoneally). Indices of anxiety including time spent in open arms and number of open arm entries were evaluated using elevated plus maze, 30 minutes after injection.

**Results:** At doses of 250 and 300 mg/kg/bw of hydro-alcoholic extract of *Pimpinella anisum* seed, the time spent in open arms of maze were significantly increased and the time spent in maze close arms were decreased in compared to controls ( $P<0.05$ ). At dose of 300 mg/kg/bw of *Pimpinella anisum* seed extract, number of open arm entries increased in compared to control group ( $P<0.05$ ). None of the doses showed any significant effect on locomotor activities.

**Conclusion:** Hydro-alcoholic extract of *Pimpinella anisum* seed with dosage of 250 and 300 mg/kg/bw reduces anxiety in male rats.

**Keywords:** Anxiety, *Pimpinella anisum*, Maze test, Rat

---

\* **Corresponding Author:** Niksokhan M (B.Sc), E-mail: maryamniksokhan@yahoo.com

Received 25 Jan 2014

Revised 20 Jul 2014

Accepted 21 Jul 2014