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

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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

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