



Name of Candidat **Maha Husien Abd- El-Rahman Ewais**

Degree **M.SC**

Title of Thesis

Assessment of Antifertility Activity of Amitraz Pesticide and Treatment with Date Palm Fruit Extract in Male Rats

Supervisors 1- **Dr. Azza Ali Said Shaban**

2- **Dr. Attalla Farag El Kott** 3- **Dr. Samira Mahmoud Mohammed El-Sayad**

Approval: **18/9/2013**

Department: **Zoology**

ABSTRACT

The previous studies indicated that amitraz pesticide has serious effects on fertility and reproduction. The present study performed to assess effectiveness of aqueous dates extract *Sakkoty Dates* (1/10, w/v) in modulating the anti-fertility activities of amitraz 1/20 LD₅₀ (529 mg/kg b.wt) in male rats. Oral administration of amitraz to adult *Sprague Dawely* male rats increased head, tail, multiple abnormalities of sperm significantly and increased malondialdehyde level, decreased superoxide dismutase, total anti-oxidant activity level, decreased testosterone and increased estradiol level significantly. Amitraz had no effect on hemoglobin and erythrocytes count but it significantly decreased white blood cells count. The examined testes of the rats treated with amitraz showed marked degeneration, vacuolization of the seminiferous epithelium, necrosis of germ cells, interstitial hemorrhage and necrosis of Leydger's cells.

Pretreatment of male rats with dates extract before amitraz treatment did not significantly restore the body weight but it improved the weight of testes, epididymis, sperm motility, viability and count and decreased the head, tail and multiple abnormalities of sperm. It improved malondialdehyde, superoxide dismutase and total anti-oxidant activity level, testosterone and estradiol level. It improved arrangement of seminiferous tubules with moderate of hyaline regions and some vacuoles.