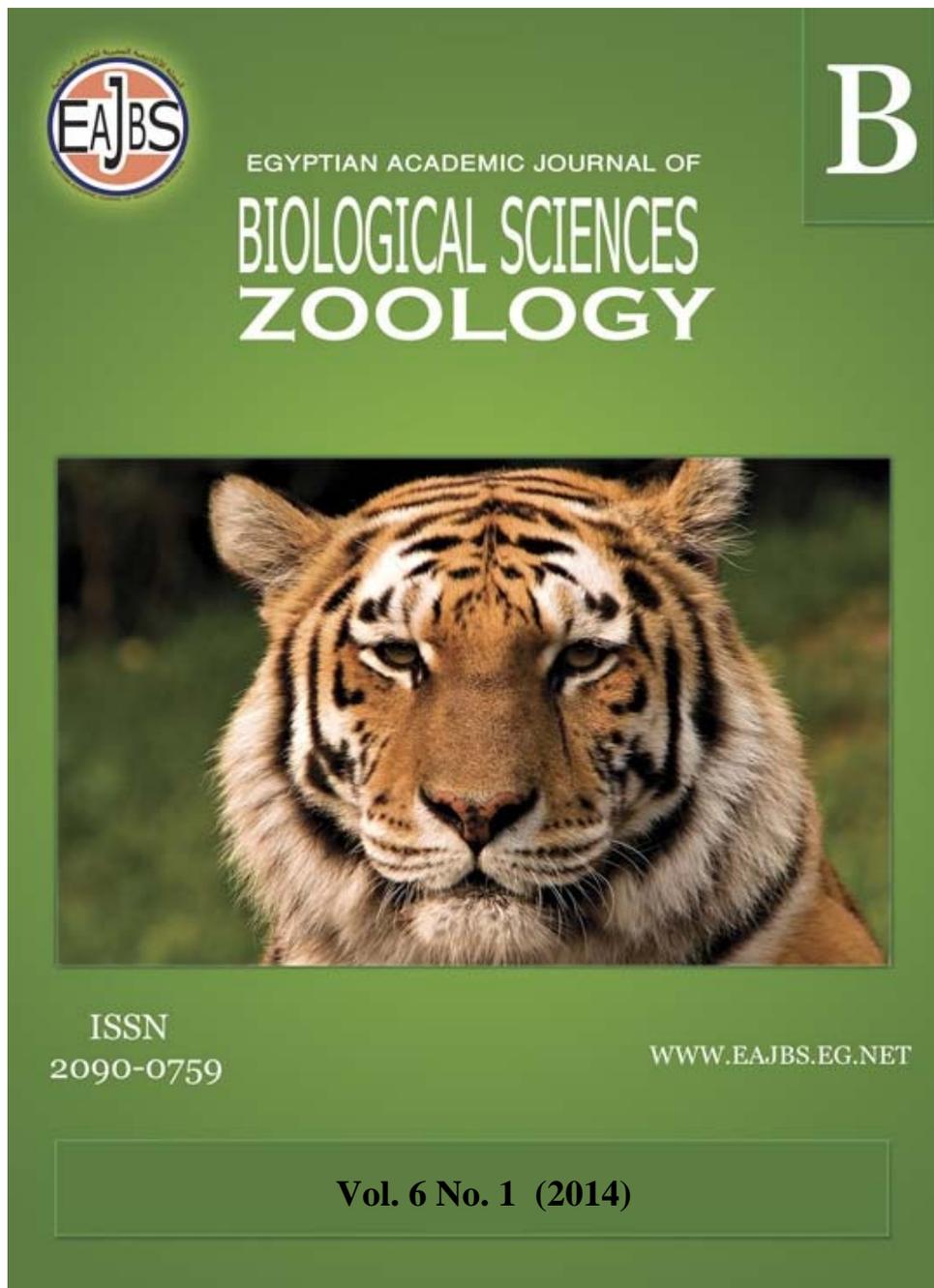


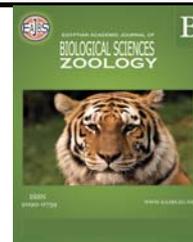
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## Impact of neem ;*Azadiracta indica* extract on adrenaline and noradrenaline in rabbits

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### ABSTRACT

The present study was planned to investigate the effect of the biopesticide triology which extracted from the neem tree (*Azadirachta indica*) on the hormones adrenaline and nor-adrenaline in male rabbits.

Two sublethal doses (i) low: 1/10 LD<sub>50</sub> (450 mg/kg) and (ii) High:1/4 LD<sub>50</sub> (1125 mg/kg) were used by oral administration each 5 days for 60 days followed by 30 days as recovery period. Blood samples were collected every 15 days. The obtained results can be summarized in the followings:-

**Adrenaline:** Treatment with 1/10 LD<sub>50</sub> caused up regulation in the level of adrenaline ranged from 13.8% to 58% then it started to recover recording 22.4% at the end of recovery period. The up regulation during treatment with the high dose (1/4 LD<sub>50</sub>) was more pronounced where it was 60.6% at the end of treatment period and continued during the recovery period recording 108% after 15days then 64.8% after 30 days.

**Nor- adrenaline:** This hormone exhibited a slight non-significant (P>0.05) increase in the beginning of treatment with low dose then showed marked increase reached to 100% after 60 days of treatment. The hormone reached near to the control value at the end of recovery period recorded 3.9% increase on the other hand, it exhibited gradual increase during treatment with the high dose ranged from 17.8% to 200%. However, this hormone showed fast trend of recovery where it reach 12.4% after 30days of recovery.

In conclusion, the used biopesticide may cause stress for the experimental rabbits and thus the levels of adrenaline and nor adrenaline were increased.