

# ANTIDEPRESSANT LIKE EFFECT OF HYDRO-ALCOHOLIC EXTRACT OF NIGELLA SATIVA IN TAIL SUSPENSION TEST IN MICE

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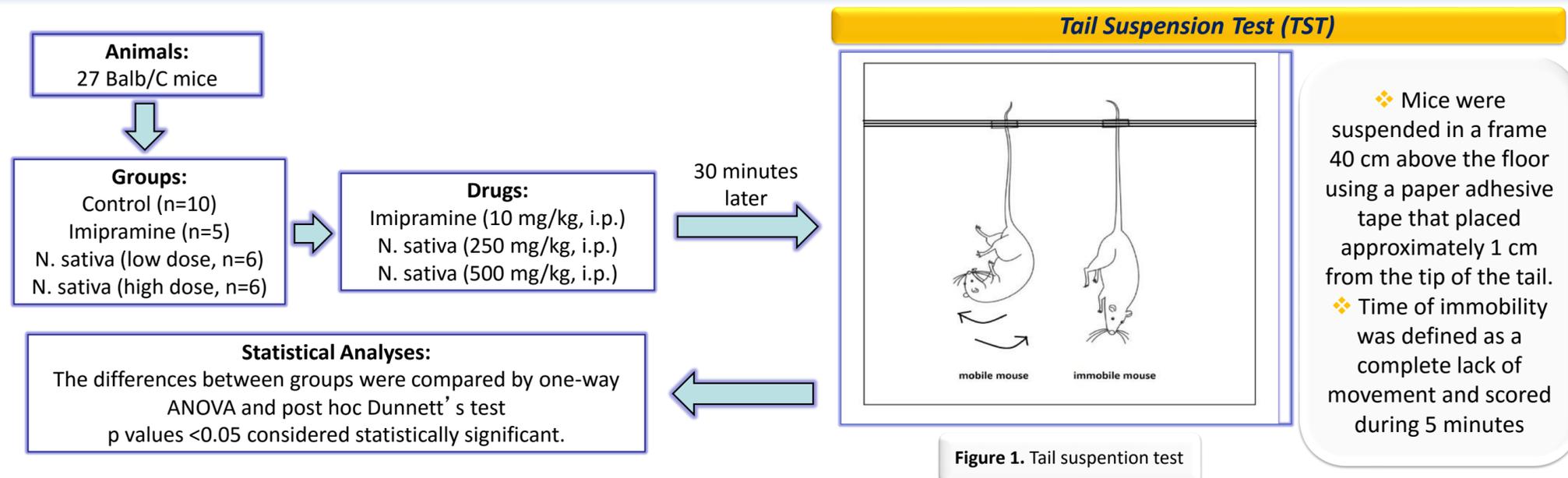


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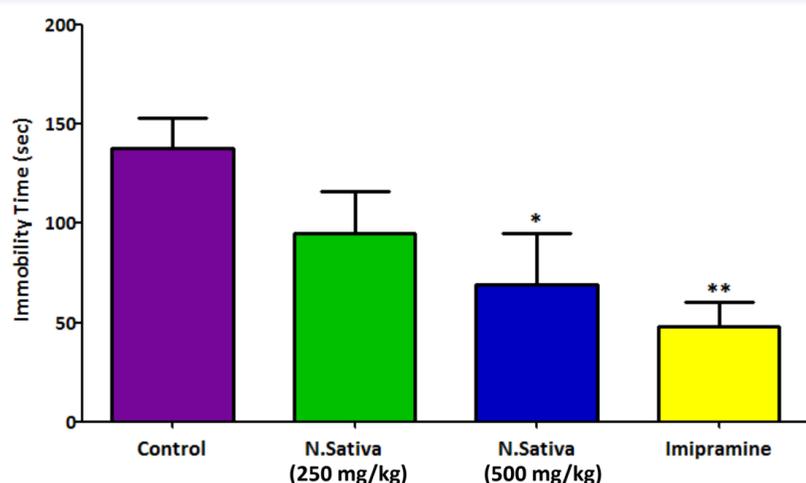
## Background

- ❖ Nigella sativa (N.sativa, black cumin) has a rich historical background since many researches showed its wide spectrum of pharmacological potential. The seeds, oil and various extracts of N. sativa have been widely used for centuries in the treatment of various ailments.
- ❖ N. sativa has a number of pharmacological activities such as antibacterial, antifungal, antioxidant, antiarthritic, antidiabetic, anticancer, antiinflammatory, analgesic, immunomodulatory, cardiovascular, gastroprotective, hepatoprotective, nephroprotective, antiasthmatic and anticonvulsant [1]. Moreover it has been shown to have central nervous system effects, such as anxiolytic, antidepressant actions and improving learning and memory [1,2].
- ❖ Repeated administration of N. sativa oil in rats decreases serotonergic turnover and produces anxiolytic effects in open field test and elevated plus maze test [3]. The results of previous experimental studies have supported the pharmacological effects of the seeds of N.sativa or major ingredient thymoquinone. Moreover N. sativa has shown to prevent lipopolysaccharide-induced depression like behavior in rats [4].
- ❖ The aim of the present study was to investigate potential acute antidepressant effect of hydro-alcoholic N. sativa extract in the tail suspension test.

## Methods



## Results



- ❖ Immobility time was significantly reduced in imipramine group compared to control group ( $p < 0,01$ ).
- ❖ In N.sativa (250 mg/kg) group, there was a tendency of decrease in immobility time but it was not statistically significant.
- ❖ N. sativa (500 mg/kg) significantly decreased the immobility time compared to control group ( $p < 0,05$ ).
- ❖ There was no change in locomotor activity in N. Sativa doses which are applied.

**Figure 2.** Immobility time in TST. Data are expressed as mean  $\pm$  S.E.M and \* $p < 0.05$ , \*\* $p < 0.01$  with the control group.

## Conclusions

- ❖ The results of this preliminary study showed that hydro-alcoholic extract of N. sativa has an antidepressant like effect. This results has confirmed the previous studies. Since whole extract was used, it is necessary to investigate all biologically active groups in the extract especially thymoquinone and compare with synthetic equivalents. Further studies are also needed to understand the mechanism of the action.

### References

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