B13. Levels of Testosterone, Luteinising Hormone and Follicle Stimulating Hormone of Nicotine and Habbatus Sauda Treated Rats

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Introduction: Nigella sativa, well known as Habbatus sauda or its English name Black cumin, has been found to exhibit various medicinal properties and general well being effects, most likely due to its anti-oxidant properties. In contrast, nicotine is considered as a toxic and detrimental substance, which can be found in tobacco smoke.

Objectives: The possibility of Habbatus sauda oil having effects against nicotine was investigated, by looking at blood hormonal level of rats as results of experimental treatments conducted.

Methodology: Forty five Sprague-Dawley male rats (7-9 weeks old, 200-250g) were randomly divided into five treatment groups: Nicotine (N) (nicotine 0.5mg/100g body weight), Nicotine Control (NC) (saline 0.1ml/100g body weight), Habbatus sauda (HS) (Habbatus sauda oil 6.0µl/100g body weight), Habbatus sauda Control (HSC) (corn oil 0.1ml/100g body weight), and co-treatment of Nicotine-Habbatus sauda (NHS) (nicotine 0.5mg/100g body weight; Habbatus sauda oil 6.0µl/100g body weight). Rats were treated for 100 days before being sacrificed. Blood samples were collected through cardiac puncture technique and centrifuged at 4000 rpm, 25°C for 10 minutes. The serum was analyzed using enzyme-linked immunosorbent assay (ELISA) for testosterone, luteinizing hormone (LH) and follicle stimulating hormone (FSH).

Result and Discussion: The analysis of variance found no significant differences between all treatment groups for the three different types of hormones analyzed.

Conclusion: It is found that under the protocols used in this study, both nicotine and Habbatus sauda oil did not pose any effect on levels of testosterone, FSH and LH of male rats.