

**THE PROTECTIVE EFFECT OF *Nigella sativa* EXTRACT TO MICE (*Mus Musculus*) LIVER INDUCED WITH NICOTINE**

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**ABSTRACT**

Nicotine is pharmacologically an active ingredient of the cigarettes that adversely affect to all organ in the body, included liver. Nicotine administration in this research was found affect to congestion in the liver, inflammation, and hepatocytes degenerative changes. The aim in this research is to find out *Nigella sativa* (*N. sativa*) extract ability to protect liver tissue of mice induced with nicotine. This research used 25 male mice which divided into 5 groups with 5 repetition each group. For C(-), the negative control only administrated with suspension of CMC Na and Tween 80 orally and injected with aquadest. C(+), for control positive was administrated with suspension of CMC Na and Tween 80 orally and injected intraperitoneal with nicotine 0.1% solution. For T(1), T(2), and T(3) were administrated with *Nigella sativa* extract with CMC Na 1%, and Tween 80 as a suspensator with doses of 200, 400, 800 mg/kg BW orally as a pretreatment 30 minutes before injected with nicotine 0.1 % solution. The observations showed significantly different ( $p < 0.05$ ) in all treatment groups. The result with Kruskal Wallis with post hoc test by Mann-Whitney U test showed a significant difference in congestion in the liver, inflammation, and hepatocytes degenerative changes between C(-) and C(+) and there showed a decreases damage degree with pretreatment groups from T(1) to T(2) and T(2) to T(3). The conclusion of this research showed that *Nigella sativa* extract could protect liver from nicotine administration, with 400 mg/kg BW as an effective dose.

**Keywords:** *Nigella sativa*, nicotine, liver, oxidative stress, liver damage.