

THE RENAL PROTECTIVE EFFECT OF *Nigella sativa* EXTRACT ON MICE INDUCED BY NICOTINE

Eugenia Citta Nirmala

ABSTRACT

This research was aimed to understand the protective effect of *Nigella sativa* extract on mice kidney induced by nicotine. Twenty-five male mice were used for this research and divided into five groups C-, C+, T1, T2, and T3. C- group was given CMC-Na 1% and Tween 1% per oral and injected with aquadest intraperitoneally. C+ was given CMC-Na 1% and Tween 1% per oral and injected with nicotine 2mg/kg intraperitoneally. T1 was treated with 200mg/kg *Nigella sativa* extract per oral and injected with nicotine 2mg/kg intraperitoneally. T2 was treated with 400mg/kg *Nigella sativa* extract per oral and injected with nicotine 2mg/kg intraperitoneally. T3 was treated with 800mg/kg *Nigella sativa* extract per oral and injected with nicotine 2mg/kg intraperitoneally. *Nigella sativa* extract and CMC-Na Tween 1% were given 4 days with no nicotine injected, then 30 minutes prior before injection of nicotine for the next 28 days. Mice were euthanized at the end of the research and the right kidney were taken to be made into slides. The research result showed that *Nigella sativa* extract was able to significantly decrease the appearance of kidney damage respectively glomerular congestion, interstitial congestion, Bowman space dilatation and necrotic tubular cell. It can be concluded that *Nigella sativa* extract could protect mice kidney from damage induced by nicotine.

Keywords: nicotine, kidney, *Nigella sativa*, oxidative stress.