

## ABSTRACT

### **THE EFFECTS OF XANTHONE TOWARD THE FIGURE OF LIVER CELLS HISTOPATHOLOGY IN MALE WHITE RATS (*Rattus norvegicus*) INDUCED BY CARBON TETRACHLORIDE (CCl<sub>4</sub>)**

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The purpose of this research is to study the effects of xanthone toward the figure of liver cells histopathology in male white rats (*Rattus norvegicus*) induced by carbon tetrachloride (CCl<sub>4</sub>).

This research is laboratory experiment by using the post test only control group design. For this purpose, 25 male white rats of species *Rattus norvegicus* strain Wistar were used. The male white rats were divided into 5 groups were 2 control groups and 3 treatment groups. The first control group were not given any toxin induced liver injury. The second control group were given CCl<sub>4</sub> to induced liver injury. The first until third treatment groups were given xanthone with gradually dose 35, 70 and 140 mg/KgBW/day and also given CCl<sub>4</sub> to induced liver injury. Liver samples to evaluate histopathological of steatosis and necrosis as indicators of liver injury were collected on day 22. The data were analysed by Anova, then continued with LSD test.

The result of this study indicated that administration of xanthone with dose 35 and 70 mg/KgBW/day have significant effects toward liver cells injury, that is decrease steatosis and necrosis of liver cells. Administration of xanthone with dose 140 mg/KgBW/day showed different effects toward steatosis and necrosis of liver cells, there are have significant effect to decrease necrosis but have no significant effect to decrease steatosis. The highest protective effect appeared from second treatment group with given dose 70 mg/KgBW/day of xanthone.

Conclusion of this study demonstrate that administration of xanthone dose 35, 70 and 140 mg/KgBW/day can decrease necrosis of liver cells in male white rats induced by CCl<sub>4</sub>. Administration of xanthone with dose 35 and 70 mg/KgBW/day also can decrease steatosis of liver cells, but dose 140 mg/KgBW/day of xanthone have no ability to decrease steatosis of liver cells significantly.

Keywords: xanthone, *Rattus norvegicus*, liver cells, steatosis, necrosis.