

## ABSTRACT

### THE EFFECT OF SOURSOP LEAVES (*Annona muricata L.*) EXTRACT TO CATALASE ENZYME ACTIVITY OF SPRAGUE DAWLEY WHITE RAT (*Rattus norvegicus*) LIVER INDUCED BY 7,12 Dimethylbenz(*a*)anthracene (DMBA)

By

TAUFIQURROHMAN

Liver cancer is the second leading cause of cancer deaths worldwide. The body has antioxidant defenses against cancer as the catalase enzyme. But in cancer, antioxidants in the body out of balance so needed exogenous antioxidants. Soursop is an alternative cancer treatment, because it has antioxidants in leaves. This study aimed to determine the effect of soursop leaves extract to catalase enzyme activity in the liver of Sprague Dawley rat induced by DMBA . This study was an experimental study using 20 female rats were divided into 4 groups and treated for 4 weeks. Group K (given distilled water 1 mL/day), A (DMBA induced compound 20 mg/kg.w 2x/week and were given distilled water 1 mL/day), B (given DMBA 20 mg/kg.w 2x/week and soursop leaf extract 20 mg/kg/day), C (DMBA was given 20 mg/kg.w 2x/week and soursop leaf extract 40 mg/kg/day). Rat terminated then taken liver and catalase activity test. The results showed a mean activity of catalase group K is 0.00033 U/mg, A is 0.00014 U/mg, B is 0.00019 U/mg, and C is 0.00036 U/mg. Statistically significant difference in one way Anova test ( $p < 0.05$ ) and the Post-hoc LSD test ( $p < 0.05$ ). The test results showed that the group C dose of 40 mg/kg has antioxidant and anticancer effects that is the most well.

Key word: Catalase, DMBA, Liver, Soursop leaves