ABSTRACT

THE EFFECT OF SOURSOP LEAVES (Annona muricata L.) ETHANOL EXTRACT TO GLUTATHIONE LEVELS OF RATS LIVER TISSUE (Rattus norvegicus L.) INDUCED BY 7.12 DIMETHYLBENZ(A)ANTHRACENE (DMBA)

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Cancer is an uncontrolled cell proliferation process in the body. From accounting in 2012, the mortality rate from cancer shows as much as 8.2 million people and almost 70% of them are from developing country. The tendency of antioxidants used as anticancer agents which derived from natural are increase. The content of the soursop leaves are known as antitumor and antioxidant properties that can affect the level of endogenous antioxidants. DMBA can cause cell mutations that could lead into liver parenchyma damage. This damage can be characterized by the decreased of endogenous antioxidants level such as glutathione. The research is about the effect of soursop leaves ethanol extract on rat liver tumorigenesis induced by DMBA. The research conducted on 4 groups with different treatment for 4 weeks. Group N (negative control), P (positive control DMBA induced 20 mg/kg 2x/week, P20 (DMBA induction 2x/week and soursop leaf ethanol extract of 20 mg/kg/day), P40 (DMBA induction 2x/week and extracts soursop leaf ethanol 20 mg/kg/day). The liver is removed and weighed to be making homogenates and glutathione measurement with Ellman method. The average of hepatic glutathione levels of each group: group N is 0.222±0.026 mol/g, group P decreased (0.208±0.016 mol/g), group P20 increased (0.280±0.012 mol/g) and group P40 increased higher (0.325±0.024 mol/g). Statistically showed significant differences among the groups. The results is the ethanol extract of soursop leaves can improve hepatic glutathione levels significantly.

Key word: DMBA, ethanol extract of soursop leaf, glutathione, rat liver