

ABSTRACT

Rini, Khafid Presti Mustika. 2013. **The Effect of Leaf Extract Soursop Against Primary Cell Cultures Hamster Baby Liver DMBA-induced (7.12 Dimethylbenz (α) anthracene) In In Vitro**. Thesis Department of Biology, Faculty of Science and Technology, State Islamic University (UIN) Maulana Malik Ibrahim Malang. Biology Supervisor: Dr. drh. Bayyinatul Muchtaromah M, Si. Supervisor Religion: Muchammad Imamudin, M.A.

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Liver cancer is one of a deadly disease. The Techniques Treatment of the disease is often using high cost and give side effects for the body. So the use of medicinal plants to be one effective option in the treatment of cancer. Extract of leaves of the soursop (*Annonamuricata* Linn) has a compound called acetogenin strongly suspected as anti cancer in previous studies. Soursop leaves extract are able to reduce excess cell proliferation by inhibiting the production of excess energy in the mitochondria. One of carcinogen that can cause cancer cells are DMBA (7.12 Dimethylbenz (α) Anthracene). This study aims to determine the effect of soursop leaves extract to cultured primary liver cells DMBA-induced hamster baby.

Type of research is experimental research using completely randomized design with 7 treatments that negative controls, positive controls, soursop leaves extract treatments concentration of 10 $\mu\text{g/mL}$, 20 $\mu\text{g/mL}$, 40 $\mu\text{g/mL}$, 80 $\mu\text{g/mL}$, and 160 $\mu\text{g/mL}$. For primary liver cell cultures that had been induced DMBA 0.1 $\mu\text{g/mL}$ for 48 hours. The samples in this study were aged hamster fetal liver cells were cultured 2 days in 10% FBS DMEM medium DMBA + 0,1 $\mu\text{g/mL}$ for the positive control and treatments, then incubated in 5% CO_2 incubator at 37°C for 48 hours. Further samples were soursop leaves extract treatments with different concentrations for 24 hours. After completion of soursop leaf extract for 24 hours, primary cultures fetal hamster liver cells observed confluency, viability and cytotoxicity soursop leaves extract to the cells.

The results showed that the leaves extract ethanol of soursop (*Annonamuricata* Linn) influence on confluency, viability and cytotoxicity liver cells DMBA-induced hamster 0.1 $\mu\text{g/mL}$ for 48 hours. The results showed using probit analysis, that soursop leaves extract had LC_{50} values 22.3818 $\mu\text{g/mL}$ so that can be included active cytotoxic.