

ABSTRACT

THE EFFECTS OF SOURSOP (*Annona muricata linn*) LEAF ETHANOL EXTRACT ON RENAL HISTOPATHOLOGICAL ANALYSIS OF DMBA INDUCED *Sprague dawley* RATS (*Rattus norvegicus*)

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The soursop (*Annona muricata Linn*) are widely used in traditional medicine. The findings of active compounds of soursop leaf are antioxidants and anti-inflammatory. This study suggest that soursop leaf extract (*Annona muricata Linn*) has a protective effect against renal histopathologic damage and determine the relationship of increasing the doses of soursop leaf extract with renal damage in rats (*Rattus norvegicus*).

This study used a randomized controlled design, the 25 rats used were broadly divided into 5 groups and treated for 8 weeks. K1 (aquades), K2 (DMBA 75 mg/kg body weight), K3, K4 and K5 given the same dose of DMBA (75mg/Kg body weight) and soursop leaf extract with different doses (100, 200 and 400 mg /kg body weight).

The results showed a mean score of renal damage in K1: $0,16\pm 0,83$; K2: $2,44\pm 1,09$; K3: $2,24\pm 0,83$; K4: $1,96\pm 0,83$; K5: $1,48\pm 0,54$. The results of *Kruskal Wallis* test obtained p value=0.000. This findings indicates that there is a relation on the treatment's effect of rat's renal damage significantly in all groups. Post hoc *Mann-Whitney* test showed $P<0.05$ means that there are significant differences between the rat's renal damage normal control group (K1) with other groups. Results $P>0.05$ on Pathological Control (K2) with K3, this suggest that there is no significant difference in the group.

These results indicate that the ethanol extract of leaves of the soursop has a protective effect against renal damage of DMBA-induced *Sprague dawley* rats (*Rattus norvegicus*). Increasing doses of ethanol extract of leaves of soursop with a dose of 100, 200 and 400 mg/Kg body wight has a protective effect against rat's renal damage.

Key words: Antioxidant, anti-inflammatory, soursop leaf (*Annona muricata Linn*), renal histopathological analysis.