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±0.83; K2: 2.44±1.09; K3: 2.24±0.83; K4: 1.96±0.83; K5: 1.48±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.