

ABSTRACT

Suriani, Lilik. 2014. Inflammatory potentials of Stem Pineapple Powder (*Ananas comosus*) Compared with Aspirin on the Soles of Rats (*Rattus norvegicus*) which were Induced Inflammation with Carrageen. Final Assignment, Medical Program, Faculty of Medicine, Brawijaya University. Supervisors: (1) Dr. dr. Setyawati Soeharto, M.Kes. (2) Drs. Bambang Sidharta, MS, Apt.

Inflammation is a normal protective response to the tissue lesion that caused by physical trauma, chemical, microbe infection of necrotic tissues and immunology reaction. These stimuli trigger the release of certain substances called pain mediators, such as prostaglandin. The active component of pineapple stem powder (*Ananas comosus*) is bromelain which can decrease levels of prostaglandin (PGE2) and thromboxane B2. PGE2 and thromboxane B2 are inflammatory mediators that have important roles in producing inflammation (oedema/tumor). The research was done to know the potential of pineapple stem powder (*Ananas comosus*) as the anti-inflammatory compared with aspirin at the oedema level of the sole of rat foot with inflammatory induced model of carrageen. The experiment was done with pre and post test with control group method by dipping the rat foot up to malleolus lateral into the measuring glass contained water then be observed and measured the volume difference each 15 minutes for 1 hour. At 30 female rats (*Rattus novergicus*) divided into 5 group. Group I is a group of rats were given only carrageen (positive control). Group II were given carrageen and pineapple stem powder dosage 10mg/kgBB. Group III were given carrageen and pineapple stem powder dosage 20mg/kgBB. Group IV were given carrageen and pineapple stem powder dosage 40mg/kgBB. Group V were given carrageen and aspirin dosage 200mg/kgBB. The data analysis using non parametric kruskall-wallis and mann whitney, showed that pineapple stem powder has anti-inflammatory effect and its potentials similar at the dose of 10 and 20mg/kgBB, and dose of 40mg/kgBB better than aspirin for the rat of inflammatory model induced by carrageen was proven.

Keywords: bromelain, *Ananas comosus*, inflammation, oedema, carrageen, aspirin.

