

## ABSTRACT

THE EFFECT OF MANGOSTEEN (*Garcinia mangostana* L.) PERICARP THAT EXTRACTED BY ETHANOL 40% TO AST AND ALT ACTIVITIES IN MALE WHITE RATS (*Rattus norvegicus*) VARIANTS SPRAGUE DAWLEY DUE INDUCED BY ISONIAZID

By

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Hepatology research has focused on developing traditional therapies as pharmacological medicines to treat hepatotoxicity. The aim of this research was to know the effect of mangosteen (*Garcinia mangostana* L.) pericarp that extracted by ethanol 40% to AST and ALT activity in male white rats (*Rattus norvegicus*) variants Sprague Dawley due induced by isoniazid.

This study was laboratoric experimental using *experimental randomized control group post test only design*. A total of 25 rats were divided into five groups. Normal control group with standard diet, positive control group were induced by isoniazid, and handling groups were induced by isoniazid + mangosteen (*Garcinia mangostana* L.) pericarp ethanolic extract at dosages of 20; 40; and 80 mg/100gBB/day. After 15 days, rats were *anesthetized* and *euthanized* then for collection of blood by cardiac puncture. Activity of AST and ALT enzymes were analyzed by *chemistry autanalyzer*.

From the results of one-way ANOVA it was concluded that there was significant difference among five groups ( $p = 0,000$ ). *Post Hoc LSD Test* showed that extract ethanolic 40% of mangosteen (*Garcinia mangostana* L.) have effect to AST and ALT activity significantly starting at 20 mg/100gBB (AST:  $p = 0,000$ ; ALT:  $p = 0,000$ ) and the best result at 80 mg/100gBB where its AST and ALT means nearly to value of normal control (AST:  $101,00 \pm 6,245$  IU/l; ALT:  $33,60 \pm 6,580$  IU/l).

The progression of hepar cell injury could be inhibited by antioxidant and anti-inflammatory activities of mangosteen (*Garcinia mangostana* L.) pericarp ethanolic extract.

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Key | word: mangosteen pericarp, AST, ALT, isoniazid