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
MEIRIYAN SUSANTO

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 anesthesized and euthanized then for collection of blood by cardiac puncture. Activity of AST and ALT enzymes were analyzed by chemistry autonalyzer.

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 ± 6.245 IU/l; ALT: 33.60 ± 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.

Key word: mangosteen pericarp, AST, ALT, isoniazid