

## INTISARI

Telah dilakukan penelitian efek hepatoprotektif air rebusan serbuk simplisia kulit batang Faloak (*Sterculia urceolata* Smith.) pada mencit jantan terinduksi karbon tetraklorida ( $\text{CCl}_4$ ). Dikerjakan untuk memperoleh informasi efek hepatoprotektif dan besarnya kisaran dosis efektif hepatoprotektif air rebusan serbuk simplisia kulit batang Faloak akibat perlakuan hepatotoksin karbon tetraklorida.

Penelitian ini adalah penelitian eksperimental murni dikerjakan mengikuti rancangan acak lengkap pola satu arah. Sejumlah tiga puluh lima ekor mencit jantan dibagi ke dalam tujuh kelompok sama banyak. Kelompok I-III adalah kelompok kontrol. Kelompok I (kontrol positif) diberi larutan  $\text{CCl}_4$  dosis 3,92 ml/KgBB dalam parafin 10% per oral. Kelompok II (kontrol negatif) diberi aquades. Kelompok III diberi air rebusan serbuk simplisia kulit batang Faloak peringkat dosis tertinggi 18,20 g/KgBB sekali sehari selama enam hari. Kelompok IV-VII merupakan kelompok perlakuan, berturut-turut diberi air rebusan serbuk simplisia kulit batang Faloak dosis 5,392; 8,088; 12,133; dan 18,20 g/KgBB per oral sekali sehari selama enam hari. Kemudian pada hari ke-7 diberi  $\text{CCl}_4$  dosis 3,92 ml/KgBB per oral. Selanjutnya kelompok I-VII diambil darahnya pada rentang waktu 48 jam dengan melukai sinus orbitalis mata untuk ditetapkan aktivitas GPT-serum dengan metode kinetik GPT-ALAT. Mencit dikorbankan dan diambil hatinya untuk dibuat preparat histopatologi, kemudian diberi skoring menurut derajat kerusakannya. Data GPT-serum diolah dengan uji statistik non parametrik Kruskal – Wallis dan Mann Whitney dengan taraf kepercayaan 95%. Data skoring histopatologi dianalisis dengan uji non parametrik Kruskal – Wallis dan uji Mann Whitney dengan taraf kepercayaan 95%. Kemudian dihitung dosis efektif tengah ( $\text{ED}_{50}$ ) dengan analisis probit.

Hasil penelitian menunjukkan bahwa air rebusan serbuk simplisia kulit batang Faloak dosis 5,392; 8,088; 12,133; dan 18,20 g/KgBB yang diberikan secara oral mampu menurunkan secara bermakna ( $p < 0,05$ ) aktivitas GPT-serum berturut-turut 47,854%; 76,299%; 84,618%; dan 92,971% terhadap kontrol positif. Analisis skoring menunjukkan kelompok III dan VII secara histopatologi tidak berbeda bermakna ( $p > 0,05$ ), sementara di satu sisi kelompok IV-VII menunjukkan perbedaan bermakna ( $p < 0,05$ ) secara histopatologi terhadap kelompok kontrol karbon tetraklorida. Nilai pendekatan  $\text{ED}_{50}$  (95% *confidence interval*) hepatoprotektif air rebusan serbuk simplisia kulit batang Faloak adalah 5235,657 (4172,734 – 6070,736) mg/KgBB mencit.

### **ABSTRACT**

An experimental research on hepatoprotective effect of boiled water of Faloak (*Sterculia urceolata* Smith.) has been done on male mice induced by CCl<sub>4</sub>. The research is improved to gain factual information and the estimated quantity of hepatoprotective effective dose of the boiled water of Faloak as a result of CCl<sub>4</sub> hepatotoxine treatment.

A pure experimental research was done following the direct sampling design. Thirty five male mice were divided into seven groups at the same number. First group (positive control group) was given CCl<sub>4</sub> solution dose 3.92 ml/KgBW in 10% parafine orally. Second group (negative control group) was given aquadest. The third group was given the highest rank dose 18.20 g/KgBW of Faloak once a day for six days. The fourth to seventh groups were treatment groups, which were given the Faloak with the doses of 5.392; 8.088; 12.133; and 18.20 g/KgBW respectively orally once for six days. Then, on the seventh day, they were given CCl<sub>4</sub> dose 3.92 ml/KgBW. After wards, the first to seventh group's blood was sampled at the *sinus orbitalis* of eyes to measure the activity GPT-serum level used a kinetic method of GPT-ALAT. The mice were sacrificed and their livers were taken for histopathology observation, then scored by looked the stage of hepatic destruction. SGPT activity data were evaluated using Kruskal-Wallis and Mann-Whitney nonparametric statistic at 95% confidence level. The histopathology scoring observation were evaluated using Kruskal-Wallis and Mann-Whitney nonparametric statistic at 95% confidence level. Later, probit statistic was done to estimate the median effective dose (ED<sub>50</sub>)

The result of research pointed that the boiled water of Faloak with the doses of respectively 5.392; 8.088; 12.133; 18.20 g/KgBW which were given orally could decrease SGPT activity level to respectively 47.854%; 76.299%; 84.618%; 92.971% towards the positive control group. Histopathology scoring observation gave proof that there was insignificant difference ( $p > 0.05$ ) between the third and seventh groups, whereas fourth to seventh groups demonstrated significant differences ( $p < 0.05$ ) toward the carbon tetrachloride control group. The almost value of ED<sub>50</sub> (95% confidence interval) of boiled water of Faloak was 5235.657 (4172.734 – 6070.736) mg/KgBW.