

INTISARI

Faloak (*Sterculia quadrifida* R.Br) merupakan tumbuhan yang banyak ditemukan di Nusa Tenggara Timur dan secara empiris digunakan untuk mengobati gangguan fungsi hati. Faloak mengandung flavonoid dan skopoletin yang bersifat sebagai antioksidan dan berkorelasi terhadap aktivitas hepatoprotektor. Penelitian ini bertujuan untuk mengevaluasi aktivitas hepatoprotektor terhadap parameter berat badan, berat hati, indeks hati, SGOT, SGPT, albumin, kadar MDA, dan gambaran histopatologi hati pada tikus yang diinduksi G-GaIN/LPS.

Serbuk simplisia kulit batang faloak yang diambil dari ketinggian ≤ 300 mdpl dan berdiameter antara $> 15-30$ cm dimaserasi dengan etanol 96%. Karakterisasi ekstrak kental meliputi penetapan susut pengeringan secara gravimetri, penetapan kadar flavonoid total dengan spektrofotometer dan penetapan kadar skopoletin dengan KLT-densitometer. Penelitian secara *in vivo* menggunakan 30 ekor tikus yang dibagi menjadi 6 kelompok dimana kelompok I (kontrol normal) dan kelompok II (kontrol negatif) hanya diberi suspensi CMC-Na 0,25%. Kelompok III (kontrol positif) diberi silimaritin dosis 100 mg/kgBB dalam suspensi CMC-Na 0,25%. Kelompok IV, V, dan VI sebagai kelompok perlakuan diberi ekstrak etanol KBF terstandar sebesar 500 mg/kgBB, 1000 mg/kgBB, dan 2000 mg/kgBB dalam suspensi CMC-Na 0,25% sekali sehari selama 14 hari. Pemberian D-GaIN dosis 400 mg/kgBB dan LPS dosis 30 μ g/kgBB dilakukan pada hari ke-14 secara ip kemudian tikus diambil sampel darahnya dan dinekropsi setelah 18 jam. Data yang diperoleh dianalisis dengan one way ANOVA dan Kruskal-Wallis pada taraf kepercayaan 95%.

Rendemen ekstrak etanol KBF yang diperoleh sebesar 5,96%, susut pengeringan sebesar $49,24 \pm 0,86\%$ b/b, kadar flavonoid total sebesar $0,52 \pm 0,00\%$ EK dan kadar skopoletin sebesar $0,23 \pm 0,00\%$. Ekstrak etanol KBF tidak mempengaruhi berat badan tikus dan belum mampu menurunkan berat hati dan indeks hati. Ekstrak etanol KBF juga tidak menunjukkan perbaikan kondisi hepar. Nilai SGOT dan SGPT tidak dapat terbaca karena serum mengalami ikterik. Ekstrak etanol KBF memiliki kecenderungan sebagai hepatoprotektor dengan menurunkan kadar MDA dan meningkatkan kadar albumin dibandingkan kelompok kontrol negatif.

Kata Kunci : *Sterculia quadrifida*, ekstrak terstandar, D-Galaktosamin/ lipopolisakarida, hepatoprotektor

ABSTRACT

Faloak (*Sterculia quadrifida* R.Br) is a plant that is commonly found in East Nusa Tenggara and is empirically used to treat liver function disorders. Faloak contains flavonoids and scopoletin which act as antioxidants and correlate with hepatoprotector activity. This study aimed to evaluate hepatoprotector activity on parameters of body weight, liver weight, liver index, SGOT, SGPT, albumin, MDA levels, and liver histopathological features in G-GaIN/LPS-induced rats.

Faloak bark simplicia powder taken from an altitude of 300 masl and > 15-30 cm in diameter was macerated with 96% ethanolic. Characterization of thick extract included determination of drying shrinkage by gravimetric method, determination of total flavonoid content by spectrophotometer and determination of scopoletin content by TLC-densitometer. The in vivo study used 30 rats which were divided into 6 groups where group I (normal control) and group II (negative control) were only given 0.25% CMC-Na solution. Group III (positive control) was given silymarin at a dose of 100 mg/kgBW in 0.25% CMC-Na suspension. Groups IV, V, and VI as treatment groups were given standardized KBF ethanolic extract of 500 mg/kgBW, 1000 mg/kgBW, and 2000 mg/kgBW in 0.25% CMC-Na suspension once a day for 14 days. The administration of D-GaIN at a dose of 400 mg/kgBW and LPS at a dose of 30 μ g/kgBW was administered on the 14th day by i.p. then the rats were taken blood samples and necropsied after 18 hours. The data obtained were analyzed by one way ANOVA and Kruskal-Wallis at the 95% confidence level.

The yield of KBF ethanolic extract obtained was 5.96%, drying loss was $49.24 \pm 0.86\%$ w/w, total flavonoid content was $0.52 \pm 0.00\%$ QE and scopoletin content was $0.23 \pm 0.00\%$. KBF ethanolic extract didn't affect the body weight of rats and has not been able to reduce liver weight and liver index. KBF ethanolic extract also didn't show improvement in liver conditions. The AST and ALT values can't be detected because the serum was icteric. The ethanolic extract of KBF has a tendency as a hepatoprotector by lowering MDA levels and increasing albumin levels compared to the negative control group.

Keywords : *Sterculia quadrifida*, standardized extract, D-Galactosamine/lipopolysaccharide, hepatoprotector