UJI EFEKTIVITAS NEFROPROTEKTOR FRAKSI ETIL ASETAT DAN *n*-BUTANOL RIMPANG KENCUR (*Kaempferia galanga* L.) PADA TIKUS PUTIH JANTAN YANG DIINDUKSI GENTAMSIN

ABSTRAK

Penyakit ginjal terjadi akibat kerusakan ginjal yang ditandai dengan menurunnya fungsi ginjal disebabkan oleh berbagai faktor, seperti penyakit metabolik, obat-obatan, infeksi, dan lain sebagainya. Penelitian ini dilakukan untuk mengetahui efektivitas nefroprotektor fraksi etil asetat dan *n*-butanol rimpang kencur (*Kaempferia galanga* L.) pada tikus putih jantan yang diinduksi gentamisin. Dosis gentamisin yang diberikan untuk penginduksian pada tikus adalah 80mg/kgBB. Semua tikus dibagi menjadi 7 kelompok masing-masing terdiri dari 5 ekor tikus yaitu kontrol negatif tanpa perlakuan, kontrol positif diinduksi gentamisin secara intraperitoneal (i.p), pembanding diberikan vitamin C 200mg/kgBB peroral dan 2 jam setelahnya diberikan injeksi i.p gentamisin dan kelompok fraksi uji masing-masing dengan dosis 15mg/kgBB dan 30mg/kgBB peroral dan 2 jam setelahnya diberikan injeksi i.p gentamisin. Perlakuan diberikan selama 14 hari dengan parameter yang diamati yaitu volume urine 24 jam, kreatinin urine, kreatinin serum, bersihan kreatinin, dan rasio organ ginjal tikus. Data hasil penelitian dianalisis menggunakan Anova Satu Arah dan dilanjutkan dengan uji *Duncan post hoc test* dengan taraf kepercayaan 95%. Pemberian fraksi uji berpengaruh signifikan ($p<0,05$) terhadap efektivitas nefroprotektor pada tikus putih jantan yang diinduksi gentamisin 80mg/kgBB. Hasil penelitian menunjukkan fraksi etil asetat dan *n*-butanol rimpang kencur (*Kaempferia galanga* L.) memiliki efektivitas nefroprotektor dengan dosis paling efektif pada fraksi etil asetat 15mg/kgBB yang ditunjukkan dengan peningkatan volume urine 24 jam, kadar kreatinin urine, dan nilai bersihan kreatinin serta penurunan kadar kreatinin serum dan rasio organ ginjal.

Kata kunci: *Kaempferia galanga* L., nefroprotektor, kreatinin, vitamin C, gentamisin.

NEPHROPROTECTIVE EFFECTIVENESS TEST OF ETHYL ACETATE FRACTION AND n-BUTANOL OF KENCUR RHIZOME (*Kaempferia galanga* L.) ON MALE WHITE RATS INDUCED BY GENTAMICIN

ABSCTRACT

Kidney disease occurs due to kidney damage which is characterized by decreased kidney function caused by various factors, such as metabolic diseases, drugs, infections, and so on. This study was conducted to determine the effectiveness of nefroprotectors of ethyl acetate fraction and *n*-butanol of kencur rhizome (*Kaempferia galanga* L.) in male white rats induced by gentamicin. The dose of gentamicin given for induction in rats was 80mg/kgBB. All mice were divided into 7 groups, each consisting of 5 mice, namely negative control without treatment, positive control induced gentamicin intraperitoneally (i.p), comparators were given vitamin C 200mg/kgBB orally and 2 hours after were given i.p gentamicin injection and the test fraction group was given i.p gentamicin injection with a dose of 15mg/kgBB and 30mg/kgBB orally and 2 hours after was given i.p gentamicin injection. The treatment was given for 14 days with the observed parameters, namely 24-hour urine volume, urine creatinine, serum creatinine, creatinine clearance, and rat kidney organ ratio. The data from the study were analyzed using One-Way Anova and continued with the Duncan post hoc test with a confidence level of 95%. The administration of the test fraction had a significant effect ($p<0.05$) on the effectiveness of nephroprotectors in male white rats induced with gentamicin 80mg/kgBB. The results showed that the ethyl acetate fraction and *n*-butanol of kencur rhizome (*Kaempferia galanga* L.) had the most effective nephroprotector effectiveness at the ethyl acetate fraction of 15mg/kgBB which was shown by an increase in 24-hour urine volume, urine creatinine levels, and creatinine clearance value as well as a decrease in serum creatinine levels and renal organ ratio.

Key words: *Kaempferia galanga* L., nephroprotector, creatinine, vitamin C, gentamicin.