

ABSTRACT

THE EFFECT OF ETHANOL EXTRACT OF MANGROVE BARK (*Rhizophora apiculata*) ON SERUM LEVELS GAMMA-GT ENZYME WHITE MALE RATS (*Rattus norvegicus*) *Sprague-Dawley* STRAIN WITH PARACETAMOL INDUCED

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Background : *Rhizophora apiculata* has many antioxidant compounds tannins, flavonoids, terpenoids, and saponins. The antioxidant content in *Rhizophora apiculata* has a hepatoprotective effect on rats induced by paracetamol.

Method : The study used a post-test only control group design on 30 rats divided into six groups. The normal group (KN) was only given standard feed. The other group were induced by paracetamol 500 mg/kgBW for 16 days, K- was only given paracetamol, K+ was given *Curcuma xanthorrhiza* syrup, group P1 was given *Rhizophora apiculata* extract at a dose of 14 mg/kg, group P2 was given *Rhizophora apiculata* extract at a dose of 28 mg/kgBW, the P3 group was given *Rhizophora apiculata* extract at a dose of 56 mg/kgBW. Then the rats were terminated on day 17 and blood samples were taken to check the Gamma-GT enzyme. Data were analyzed using Saphiro Wilk normality test, followed by the Kruskal Wallis non-parametric test and the Post Hoc Mann-Whitney test.

Results: The mean levels of the Gamma-GT enzyme in the normal KN group (3.2 U/L), K+ positive group (3.6 U/L), K- negative group (5.4 U/L), P1 group (4.2 U/L), group P2 (4.4 U/L), group P3 (2.4 U/L). The results of the Saphiro Wilk normality and Levene homogeneity tests were not normally distributed. In the Kruskal Wallis test, the p-value = 0.003.

Conclusion : Giving ethanol extract of mangrove bark *Rhizophora apiculata* can prevent the increase in levels of the enzyme Gamma-GT rats induced by paracetamol at a dose of 56 mg/kg BW.

Keywords : Antioxidant, Hepatoprotective, *Rhizophora apiculata*.

ABSTRAK

PENGARUH PEMBERIAN EKSTRAK ETANOL KULIT BATANG BAKAU (*Rhizophora apiculata*) TERHADAP KADAR SERUM ENZIM GAMMA-GT TIKUS PUTIH JANTAN (*Rattus norvegicus*) GALUR *Sprague-Dawley* YANG DIINDUKSI PARASETAMOL

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Latar Belakang : *Rhizophora apiculata* memiliki banyak senyawa antioksidan tanin, flavonoid, terpenoid, saponin. Kandungan antioksidan yang terkandung dalam *Rhizophora apiculata* memiliki efek hepatoprotektif pada tikus yang diinduksi parasetamol.

Metode : Penelitian menggunakan *post test only control group design* pada 30 tikus yang terbagi menjadi 6 kelompok. Kelompok normal (KN) hanya diberikan pakan standar. Kelompok lainnya diberikan induksi parasetamol 500 mg/kgBB selama 16 hari, K- hanya diberi induksi parasetamol, K+ diberikan sirup *Curcuma xanthorrhiza*, kelompok P1 diberikan ekstrak *Rhizophora apiculata* dosis 14 mg/kgBB, kelompok P2 diberikan ekstrak *Rhizophora apiculata* dosis 28 mg/kgBB, kelompok P3 diberikan ekstrak *Rhizophora apiculata* dosis 56 mg/kgBB. Tikus kemudian di terminasi pada hari ke 17 kemudian dilakukan pengambilan sampel darah dan pemeriksaan enzim Gamma-GT. Data di analisis menggunakan uji normalitas *Saphiro Wilk* dilanjutkan uji non parametrik *Kruskal Wallis* dan uji *Post Hoc Mann Whitney*.

Hasil : Rerata kadar enzim Gamma-GT pada kelompok normal KN (3,2 U/L), kelompok positif K+ (3,6 U/L), kelompok negatif K- (5,4 U/L), Kelompok P1 (4,2 U/L), kelompok P2 (4,4 U/L), kelompok P3 (2,4 U/L). Hasil uji normalitas *Saphiro Wilk* dan homogenitas *Levene* data tidak terdistribusi normal. Pada uji *Kruskal Wallis* menunjukkan nilai $p = 0,003$.

Kesimpulan : Pemberian ekstrak etanol kulit batang bakau *Rhizophora apiculata* dapat mencegah peningkatan kadar enzim Gamma-GT tikus yang diinduksi parasetamol pada dosis 56 mg/kgBB.

Kata Kunci : Antioksidan, Hepatoprotektif, *Rhizophora apiculata*.