UJI EFEKTIVITAS EKSTRAK DAUN SIRSAK (*Annona muricata*) TERHADAP KADAR MALONDIALDEHID HEPAR TIKUS DIABETIK SETELAH DIINDUKSI ALOKSAN

LINA ADILLA

Abstrak

Komplikasi diabetes melitus (DM) terjadi melalui proses stres oksidatif akibat produksi ROS yang dipicu hiperglikemia. Stres oksidatif dapat menyebabkan peroksidasi lipid yang dapat dinilai melalui kadar malondialdehid (MDA). Ekstrak daun sirsak (*Annona muricata*) berpotensi menurunkan kadar MDA. Penelitian ini bertujuan untuk mengetahui efek pemberian ekstrak daun sirsak terhadap kadar MDA hepar tikus diabetik. Sebanyak 30 ekor tikus putih jantan galur wistar, dikelompokkan menjadi lima kelompok dengan perlakuan berbeda yaitu: (1) pakan standar dan aquades (Kontrol Negatif/K1), (2) pakan tinggi lemak dan vitamin E α-tokoferol 150 IU/kgBB/hari (Kontrol Positif/K2), (3) pakan tinggi lemak dan ekstrak daun sirsak 75 mg/kgBB/hari (Perlakuan 1/K3), pakan tinggi lemak dan ekstrak daun sirsak 150 mg/kgBB/hari (Perlakuan 2/K4), (3) pakan tinggi lemak dan ekstrak daun sirsak 300 mg/kgBB/hari (Perlakuan 3/K5). Ekstrak daun sirsak diberikan selama 21 hari setelah diinduksi aloksan dan pakan tinggi lemak. Analisis data menggunakan uji *One Way* ANOVA dan dilanjutkan dengan uji *Post Hoc* LSD. Pada kelompok K4 terdapat penurunan kadar MDA mencapai 223.4 nm/mL yang lebih rendah dibandingkan kelompok kontrol. Pada kelompok K3 dan K5 tidak terdapat penurunan kadar MDA yang signifikan jika dibandingkan dengan kontrol. Kesimpulannya, ekstrak daun sirsak yang mampu menurunkan kadar MDA adalah dosis 150 mg/kgBB/hari.

Kata Kunci : *Annona muricata*, ekstrak daun sirsak, malondialdehid

EFFECTIVENESS TEST OF SOURSOP LEAF EXTRACT (*Annona muricata)* ON LIVER MALONDYALDEHYDE LEVELS IN ALLOXAN-INDUCED DIABETIC RATS

LINA ADILLA

Abstract

Complications of diabetes mellitus (DM) can occur through oxidative stress due the production of ROS triggered by hyperglycemia. Oxidative stress can cause lipid peroxidation which can be assessed with malondialdehyde (MDA) levels. Soursop leaf extract (Annona muricata) has the potential to reduce MDA levels. This research aims to know the effect of soursop leaf extract to MDA levels in diabetic rat. Total of 30 males rats were divided randomly into five treatments: (1) standard feed and aquades (Negative Control/K1), (2) high-fat feed and vitamin E α-tokoferol 150 IU/kgBW/day (Positive Control/K2), (3) high-fat feed, soursop leaf extract 75 mg/kgBW/day (Treatment 1/K3), (4) high-fat feed, soursop leaf extract 150 mg/kgBW/day (Treatment 2/K4), (3) high-fat feed, soursop leaf extract 300 mg/kgBW/day (Treatment 3/K5). Soursop leaf extract was given for 21 days after administration of alloxan and high-fat feed. The result was analyzed with One Way ANOVA test and Post Hoc LSD test. In K4 group there was a decrease in MDA levels reaching 223.4 nm/mL which lower than controls. In K3 and K5 group there was no significant decrease in MDA levels when compared with controls. In conclusion, the most significant soursop leaf extract to reduce MDA levels is dose of 150 mg/kgBW/day.

Keywords: *Annona muricata,* malondyaldehyde, soursop leaf extract