PENGARUH PEMBERIAN EKSTRAK KULIT TERUNG UNGU (*Solanum melongena* L.) TERHADAP KADAR MALONDIALDEHID (MDA) PADA MODEL TIKUS DIABETES

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Abstrak

Diabetes melitus dengan hiperglikemia kronis menyebabkan peningkatan radikal bebas yang memicu peroksidasi lipid membentuk MDA dan stress oksidatif penyebab penyakit. Terapi alternatif kulit terung ungu (*Solanum melongena* L.) yang mengandung antioksidan dapat menstabilkan radikal bebas. Penelitian ini bertujuan untuk mengetahui pengaruh ekstrak kulit terung ungu (EKTU) terhadap malondialdehid (MDA) plasma pada model tikus diabetik. Jenis penelitian eksperimental menggunakan desain *posttest only control group*. Sampel tikus Wistar jantan 30 ekor, 150-200 gram, dan usia 2-3 bulan diambil secara *simple random sampling* dari Peternakan ITB Bandung. Tikus dikelompokkan: K1 (pakan standar, akuades), K2 (pakan tinggi lemak, aloksan), K3 (pakan tinggi lemak, aloksan, metformin), dan K4, K5, K6 {pakan tinggi lemak; aloksan; ekstrak kulit terung ungu dosis 75, 150, 300 (mg/KgBB)}, dengan perlakuan 14 hari. Tikus dianestesi dengan ketamin xylazin, darah dimasukkan tabung lalu disentifugasi menghasilkan plasma, dan diperiksa malondialdehid (MDA) menggunakan spektrofotometer dengan λ 532 nm. Uji *Anova One-Way* menunjukkan pengaruh pemberian ekstrak kulit terung ungu terhadap kadar malondialdehid plasma tikus Wistar diabetik (p=0.000). Uji *Post-Hoc Bonferroni* menunjukkan pemberian EKTU dosis 300 mg/kgBB/hari seperti kontrol normal (p=1,000). Ekstrak kulit terung ungu dapat menurunkan kadar malondialdehid tikus Wistar diabetik.

Kata Kunci: Diabetes Melitus, Ekstrak kulit terung ungu, Malondialdehid, Radikal bebas

THE EFFECT OF PURPLE EGGPLANT SKIN (Solanum melongena L.*) EXTRACT ON MALONDIALDEHYDE LEVELS IN DIABETIC RAT MODEL*

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Abstract

Diabetes mellitus with chronic hyperglycemia causes elevation of free radicals level that trigger lipid peroxidation to generate MDA and disease-induced oxidative stress. Alternative therapy using purple eggplant skin (Solanum melongena L.) contains flavonoids as antioxidants can reduce free radicals. The objective of this study was to assess the effect of purple eggplant skin extract (EKTU) on malondialdehyde (MDA) in plasma of diabetic Wistar rats. Experimental research using posttest only control group design. Samples of 30 Wistar rats, males, weighing 150-200 grams, and 2-3 months were collected by simple random sampling. Samples were divided into K1 (standard diet, distilled water), K2 (high-fat diet, alloxan), K3 (high-fat diet, alloxan, metformin), and K4, K5, K6 {high-fat diet, alloxan, purple eggplant skin extract doses of 75, 150, 300 (mg/kgBB)}, with 14 days treatment. Rats were anesthetized with ketamine xylazine, blood was drawn into tubes then sentrifuged to produce plasma, and MDA was measured using a spectrophotometer with λ 532 nm*. One-Way Annova test results showed that there was an effect of purple eggplant skin extract on plasma malondialdehyde levels of diabetic Wistar rats (p=0,000). Bonferroni Post-Hoc test indicated the purple eggplant skin extract dose of 300 mg/kgBB was almost the same effect as normal (p=1,000). Purple eggplant skin extract can lower malondialdehyde (MDA) levels in diabetic Wistar rats.*

Keywords: *Diabetes mellitus, Free radicals, Malondialdehyde, Purple eggplant skin extract*