ABSTRAK

Siklus Krebs terdapat enzim yang berperan aktif salah satunya yaitu Isositrat dehidrogenase (IDH) bertanggung jawab untuk transportasi elektron dari substrat ke penerima elektron. Selain itu, IDH terlibat dalam berbagai proses seluler, termasuk lipogenesis, yang merupakan bagian dari metabolisme lipid. Studi ini bertujuan untuk mengetahui hubungan antara kadar Isositrat dehidrogenase dengan kadar malondialdehida (MDA) dan kadar trigliserida (TG) pada tikus kelelahan yang diinduksi ekstrak etanol daun kelor (*Moringa* oliefera). Sampel dalam penelitian ini adalah 20 tikus putih yang dibagi menjadi 5 kelompok perawatan, yaitu tikus Kontrol Negatif (K-) dengan kondisi normal, Kontrol Positif (K+) tikus dengan kondisi lelah, Kelompok Standar (STD) tikus dengan induksi obat kreatinin, Perlakuan 1 (T1) tikus diberi 250 mg/kgBB dosis ekstrak daun Moringa oliefera, Perlakuan 2 (T2) tikus diberi 500 mg / kgBB dosis ekstrak daun Moringa Oliefera. Hasil analisis statistik dari uji *kruskal-wallis* pada kadar IDH nilai *p-value* (0,254 >0,05), kadar MDA nilai *p-value* (0,047 <0,05), dan kadar TG nilai *p-value* (0,507 >0,05), untuk mengetahui hubungan dilakukan uji korelasi *spearmen* dengan nilai *p-value* (0,499 >0,05) pada kadar IDH dan MDA, dan nilai *p-value* (0.147 >0.05) pada kadar IDH dan TG. Hasil uji spss didapatkan tidak terdapat perbedaan pemberian ekstrak etanol daun kelor pada kadar IDH dan TG. Namun terdapat perbedaan pemberian ekstrak etanol daun kelor pada kadat MDA. Pada uji kolerasi disimpulkan bahwa tidak ada hubungan antara kadar IDH dengan kadar MDA dan kadar TG.

Kata Kunci : Isositrat dehidrogenase, Malondialdehida, Trigliserida, Latihan beban tinggi

ABSTRACT

The Krebs cycle contains enzymes that play an active role, one of which is Isocitrate dehydrogenase (IDH), which is responsible for transporting electrons from the substrate to the electron acceptor. In addition, IDH is involved in various cellular processes, including lipogenesis, which is part of lipid metabolism. This study aims to determine the relationship between isocitrate dehydrogenase levels and malondialdehyde (MDA) levels and triglyceride (TG) levels in fatigue rats induced by ethanol extract of Moringa oliefera leaves. The samples in this study were 20 white mice which were divided into 5 treatment groups, namely Negative Control (K-) mice with normal conditions, Positive Control (K+) mice with tired conditions, Standard Group (STD) mice with creatinine drug induction, Treatment 1 (T1) mice were given a 250 mg/kgBB dose of Moringa oliefera leaf extract, Treatment 2 (T2) mice were given a 500 mg/kgBB dose of Moringa oliefera leaf extract. The results of statistical analysis from the Kruskal-Wallis test on IDH levels were p-value (0.254 > 0.05), MDA levels were p-value (0.047 <0.05), and TG levels were p-value (0.507 > 0.05), to determine the relationship, a Spearmen's correlation test was carried out with a p-value (0.499 > 0.05) on IDH and MDA levels, and a p-value (0.147 > 0.05) on IDH and TG levels. The spss test results showed that there was no difference in the administration of Moringa leaf ethanol extract on IDH and TG levels. However, there is a difference in the administration of Moringa leaf ethanol extract to MDA cadats. In the correlation test, it was concluded that there was no relationship between IDH levels and MDA levels and TG levels.

Keywords: *Isocitrate dehydrogenase, Malondialdehyde, Triglycerides, High load training*