

## ABSTRACT

**Background:** *Kersen leaf is one of the plants that can be used as medicinal plants and has the potential to lower triglycerides because they contain flavonoids and tannins. This study was used to determine the effect of ethanol extract of kersen leaf (Muntingia calabura L.) on reducing blood triglyceride levels in hypercholesterolemic male white rats (Rattus norvegicus).*

**Methods:** *This study was a laboratory experimental study with a pre and post test with control group design. The subjects were 30 male white rats (Rattus norvegicus), body weight  $\pm 200$  grams, aged 3-4 months, and divided into 5 groups with random sampling. The groups were negative control (K-) was given high-fat diet and PTU without any treatment, positive control (K+) was given high-fat diet and PTU with simvastatin treatment, (P1) was given high-fat diet and PTU with ethanol extract of kersen leaf dose 100 mg/kgWB, (P2) was given high-fat diet and PTU with ethanol extract of kersen leaf dose 200 mg/kgWB, and (P3) was given high-fat diet and PTU with ethanol extract of kersen leaf dose 400 mg/kgWB. Triglyceride levels were measured before and after applying treatment. This study was held for 4 weeks. Triglyceride level was measured using the GPO-PAP method. The data was analyzed using normality test with Shapiro-Wilk, homogeneity test with Levene test, triglyceride test after high fat diet and simvastatin and after high fat diet and ethanol extract of kersen leaf with Anova test.*

**Result:** *The ethanol extract of kersen leaf dose 100 mg/kgWB, 200 mg/kgWB and 400 mg/kgWB are found effective on reducing blood triglyceride levels with a mean reduction in the first treatment of 112,83 mg/dl, 98,20 mg/dl, 89,92 mg/dl and in the second treatment of 106,71 mg/dl, 93,95 mg/dl and 76,87 mg/dl. Statistical analysis using one-way ANOVA showed  $p < 0,05$ , which determines a significant difference of triglyceride levels among each group.*

**Conclusion:** *The ethanol extract of kersen leaf dose 100 mg/kgWB, 200 mg/kgWB and 400 mg/kgWB are effective on reducing blood triglyceride levels in white rats (Rattus norvegicus). Dose 400 mg/kgWB is found to be the most effective dose in triglyceride reduction.*

**Keyword:** Ethanol extract of Kersen Leaf, Triglyceride, Rattus norvegicus

## INTISARI

**Latar Belakang:** Daun kersen merupakan salah satu tanaman yang dapat dimanfaatkan sebagai tanaman obat dan berpotensi menurunkan trigliserida karena mengandung flavonoid dan tanin. Penelitian ini untuk mengetahui pengaruh pemberian ekstrak ethanol daun kersen (*Muntingia calabura* L.) terhadap kadar trigliserida pada tikus wistar jantan dengan hiperkolesterolemia.

**Metode:** Penelitian ini merupakan penelitian eksperimental laboratories dengan desain penelitian *pre-post test control group design*. Objek penelitian ini 30 ekor tikus ratus (*Rattus norvegicus*) wistar jantan, berat badan  $\pm 200$  gram yang berusia 3-4 bulan yang dibagi menjadi 5 kelompok secara acak yaitu kelompok (K-) diberi pakan tinggi lemak dan PTU tanpa diberi terapi apapun, kelompok (K+) diberi pakan tinggi lemak dan PTU serta diberi terapi simvastatin, kelompok (P1) diberi pakan tinggi lemak dan PTU serta diberi terapi ekstrak ethanol daun kersen dosis 100 mg/kgBB, kelompok (P2) diberi pakan tinggi lemak dan PTU serta diberi terapi ekstrak ethanol daun kersen dosis 200 mg/kgBB dan kelompok (P3) diberi pakan tinggi lemak dan PTU serta diberi terapi ekstrak ethanol daun kersen dosis 400 mg/kgBB. Kadar trigliserida diukur sebelum dan sesudah perlakuan. Penelitian dilakukan selama 4 minggu. Kadar trigliserida diukur menggunakan metode GPO-PAP. Data dianalisis menggunakan uji normalitas dengan Shaphiro-Wilk, uji homogenitas dengan uji Levene, uji kadar trigliserida sesudah diberi diet tinggi lemak dan pemberian simvastatin serta sesudah diberi diet tinggi lemak dan pemberian ekstrak ethanol daun kersen dengan uji ANOVA.

**Hasil:** Ekstrak ethanol daun kersen dosis 100 mg/kgBB, 200 mg/kgBB dan 400 mg/kgBB dapat menurunkan kadar trigliserida darah dengan rerata penurunan secara berturut-turut pada minggu pertama terapi 112,83 mg/dl, 98,20 mg/dl, 89,92 mg/dl dan pada minggu kedua terapi 106,71 mg/dl, 93,95 mg/dl dan 76,87 mg/dl. Pada uji statistik menggunakan *one way* ANOVA menunjukkan nilai  $p < 0,05$ , sehingga terdapat perbedaan signifikan kadar trigliserida darah tikus antar kelompok.

**Kesimpulan:** Ekstrak ethanol daun kersen dosis 100, 200 dan 400 mg/kgBB dapat menurunkan kadar trigliserida tikus. Pada dosis 400 mg/kgBB memiliki efek yang maksimal dalam menurunkan kadar trigliserida darah.

**Kata kunci:** Ekstrak Ethanol Daun Kersen, Trigliserida, *Rattus norvegicus*