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The Effect of Kersen Leaf (Muntingia calabura L.) Extract to Blood Glucose Level of Rats (Rattus norvegicus) Model Diabetes Mellitus Type 1 Induced by Alloxan

Efek Ekstrak Daun Kersen (Muntingia calabur L) Terhadap Kadar Glukosa Darah Tikus (Rattus norvegicus) Model Diabetes Mellitus Tipe 1 Yang Diinduksi Aloksan

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Abstract

The experiment was conducted to determine antidiabetic effect of repeated oral administration of kersen leaf extract (Muntingia calabura L.) in alloxan induced diabetic rats (Rattus norvegicus). Alloxan was injected intraperitoneally at 120 mg/kgBW (single dose). A total of thirty male rats aged two until three months old were used this study. The rats were divided into six groups. 1) negative control group (K-) was treated by CMC Na 1 %, 2) positive control group (K+) had been inducted by alloxan and treated by metformin 12,6 mg/200gBW, 3) group (P0) had been inducted by alloxan and treated by CMC-Na%, 4) group (P1) had been inducted by alloxan and treated by extract of Muntingia calabura L. 250 mg/KgBW, 5) group (P2) had been inducted by alloxan and treated by extract of Muntingia calabura L. 500 mg/KgBW, 6) group (P3) had been inducted by alloxan and treated by extract of Muntingia calabura L. 1000 mg/KgBW. Blood specimen were collected from coccygealis vein, then analyzed using on call® glucometer. The result of this study showed that Muntingia calabura L. extract has a high antidiabetic potential that decreases the blood glucose level during 14 days post treatment. Kersen leaf extract consists of flavonoid, tannin and saponin that are able to reduce the blood glucose level. After 14 days post treatment, the average result of blood glucose level with 250 mg/kgBW (P1) dosage didn't decrease blood glucose level to the normal level and 1000 mg/KgBW (P3) dosage was proven to be the most effective dosage among all the grups experimented.

Keyword : Muntingia, calabura, L., alloxan, antidiabetic, blood, glucose, rats,

Daftar Pustaka :