

**AKTIVITAS ANTIHIPERGLIKEMIA PEMBERIAN BERSAMA
EKSTRAK ETANOL DAUN YACON (*Smallanthus sonchifolius*) DAN
DAUN PAHITAN (*Tithonia diversifolia*) PADA TIKUS JANTAN GALUR
WISTAR YANG DIINDUKSI ALOKSAN**

INTISARI

Yacon (*Smallanthus sonchifolius*) dan pahitan (*Tithonia diversifolia*) merupakan tanaman anggota keluarga *Asteraceae* yang telah terbukti memiliki aktifitas antihiperqlikemia. Beberapa penelitian terkait aktifitas antihiperqlikemia tanaman tersebut belum menunjukkan adanya penurunan kadar glukosa darah mencapai batas normal sehingga muncul sebuah gagasan penelitian eksperimental dengan melakukan pemberian bersama kedua ekstrak tanaman tersebut. Penelitian ini dilakukan untuk mengetahui aktifitas antihiperqlikemia pemberian bersama ekstrak etanol daun yacon dan daun pahitan pada tikus jantan galur Wistar yang diinduksi Aloksan 150 mg/kgBB tikus pada hari ke-0 dan 75 mg/kgBB tikus pada hari ke-3 dengan parameter kadar glukosa darah puasa (KGDP). Sebanyak 35 tikus Wistar jantan dibagi kedalam 7 kelompok (N=5). Kelompok I tidak diberi perlakuan. Kelompok II hanya diinduksi aloksan 150 dan 75 mg/kgBB tikus secara i.p. Kelompok III diinduksi aloksan 150 dan 75 mg/kgBB tikus kemudian diterapi dengan glibenklamid 0,45 mg/kgBB. Kelompok IV,V,VI,VII diinduksi aloksan kemudian diterapi dengan ekstrak etanol daun yacon 600 mg/kgBB, ekstrak etanol daun pahitan 1050 mg/kgBB, pemberian bersama ekstrak daun yacon dan daun pahitan 150 mg/kgBB dan 787,5 mg/kgBB, 450 mg/kgBB dan 262,5 mg/kgBB. Pengukuran kadar glukosa darah puasa dilakukan pada hari ke-0, hari ke-4, dan hari ke-11 dengan cara mengambil darah tikus yang sebelumnya telah dipuasakan. Hasil penelitian menunjukkan bahwa tikus Wistar jantan mengalami penurunan KGDP setelah diberi ekstrak etanol perlakuan I, perlakuan II, perlakuan III dan perlakuan IV dengan persentase penurunan masing-masing sebesar 33,31%; 57,51%; 50,81%; 48,86%. Kesimpulannya, dosis pemberian bersama lebih tidak efektif dibandingkan dosis tunggal ekstrak daun pahitan dalam menurunkan kadar glukosa darah.

Kata kunci : Daun yacon, daun pahitan, KGDP, aloksan, tikus Wistar jantan.

**ANTIHYPERGLYCEMIC ACTIVITY OF ETHANOL EXTRACT OF
YACON (*Smallanthus sonchifolius*) AND PAHITAN (*Tithonia diversifolia*)
LEAVES IN MALE WISTAR RATS INDUCED BY ALLOXAN**

ABSTRACT

Yacon (*Smallanthus sonchifolius*) and pahitan (*Tithonia diversifolia*) are plants of the Asteraceae family member that have been proven having antihyperglycemic activity. Some related research about antihyperglycemic activities of these plants did not showed a decrease in blood glucose level to normal limit. Therefore an experimental study by combining administration of the plants extract was undertaken. This study was conducted to determine the antihyperglycemic activity of combine administration of ethanol extract of yacon and pahitan leaves in male Wistar rats induced by alloxan 150 mg/kgBW on 1st day and 75 mg/kgBW on 3rd day with fasting blood glucose parameters. A number of 35 male Wistar rats were divided into 7 groups (N=5). Group I was untreated, group II was only induced by alloxan 150 mg/kgBW ip, group III was induced by alloxan 150 mg/kgBW then treated with glibenclamide 0.45 mg/kgBW, group IV and V were induced by alloxan then treated with ethanol extract of yacon leaves 600mg/kg and ethanol extract of pahitan leaves 1050 mg/kgBW, respectively, VI and VII were induced by alloxan then treated with combined administration ethanol extract extract of yacon leaves and ethanol extract of pahitan leaves 150 mg/kgBW and 787.5 mg/kgBW, and 450 mg/kgBW and 262.5 mg/kgBW, respectively. Measurement of blood glucose fasting levels was performed before alloxan was injected, on the 4th day, and on the 11th day by taking the blood of rats that had previously been fasted. The results showed that the fasting blood glucose levels of male Wistar rats were decreased 33.31%, 57.51%, 50.81%, and 48.86% after receiving treatment 1, treatment 2, treatments 3 and treatments 4, respectively. In conclusion, the dose of combine administration was less effective than a single dose of ethanol extract of pahitan leaves in decreasing blood glucose levels.

Keywords : Yacon leaves, pahitan leaves, blood glucose, alloxan, male Wistar rats