

## ABSTRACT

### **Effect of Ethanol Extract of *Averrhoa Bilimbi Linn* as Antioxidants on SGPT (Serum Glutamic Pyruvate Transaminase) and SGOT (Serum Glutamic Oxaloacetic Transaminase) Levels of Rats *Sprague Dawley* Induced by Paracetamol**

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**Background.** Paracetamol is an antipyretic drug and with a dose of more than 4 grams per day can cause hepatotoxicity. SGPT (*Serum Glutamic Pyruvate Transaminase*) and SGOT (*Serum Glutamic Oxaloacetic Transaminase*) is an enzyme of liver that can be referred to the damaged of the liver cells. *Averrhoa Bilimbi L* has antioxidant compounds that act as hepatoprotector from liver cell damage. The purpose of this research is to determine the effect of ethanol extract of *Averrhoa Bilimbi L* application as an antioxidant on the levels of SGPT and SGOT of blood in rats induced by paracetamol, and to determine the effect of increasing dose of *Averrhoa Bilimbi L* ethanol extract to the levels of SGPT and SGOT of blood in rats induced by parasetamol.

**Methods.** This study was a laboratory experimental study with a *posttest only control group design* using 30 *Sprague dawley* white rats divided into 5 groups, 2 control groups and 3 treatment groups, and treated for 14 days giving *Averrhoa Bilimbi L* extract in different dose, and 7 days of toxic dose of 1.8 gr paracetamol administration starting from the 8th day.

**Results.** The extracts of *Averrhoa Bilimbi L* doses of 0.8 g/kgBB and 1.6 g/kgBB could reduce SGOT levels with a mean score of 271.2 and 206.2. The *Averrhoa Bilimbi L* extract at a dose of 1.6 g/kgBB can also reduce SGPT levels with a mean score of 62.8.

**Conclusion.** There was an effect of giving ethanol extract of *Averrhoa Bilimbi L* to SGOT and SGPT levels of blood of *Sprague dawley* rats which were induced by paracetamol, and there was an effect of different dose of ethanol extract of *Averrhoa Bilimbi L* application to just the SGOT levels, not the SGPT levels of blood of *Sprague dawley* induced by parasetamol.

Keywords: *Averrhoa Bilimbi L*, paracetamol, SGOT, SGPT.

## ABSTRAK

### PENGARUH EKSTRAK ETANOL BELIMBING WULUH (*Averrhoa bilimbi* Linn.) SEBAGAI ANTIOKSIDAN TERHADAP KADAR SGPT (*Serum Glutamic Pyruvate Transaminase*) SERTA SGOT (*Serum Glutamic Oxaloacetic Transaminase*) TIKUS GALUR *Sprague dawley* YANG DIINDUKSI PARASETAMOL

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**Latar Belakang.** Parasetamol merupakan obat antipiretik yang bila digunakan dengan dosis lebih dari 4 g/hari dapat menyebabkan hepatotoksisitas. SGPT (*Serum Glutamic Pyruvate Transaminase*) dan SGOT (*Serum Glutamic Oxaloacetic Transaminase*) adalah enzim hepar pada darah yang dapat dijadikan acuan kerusakan sel-sel hepar. Buah belimbing wuluh (*Averrhoa Bilimbi L.*) memiliki senyawa antioksidan yang bersifat hepatoprotektif terhadap kerusakan sel hepar. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian ekstrak etanol belimbing wuluh terhadap kadar SGPT serta SGOT darah tikus yang diinduksi parasetamol, serta pengaruh peningkatan dosis ekstrak etanol belimbing wuluh terhadap kadar SGOT dan SGPT darah tikus yang diinduksi parasetamol.

**Metode Penelitian.** Jenis penelitian ini adalah eksperimental laboratorik dengan desain *posttest only control group design*, menggunakan 30 ekor tikus galur *Sprague dawley* yang terbagi menjadi 5 kelompok, 2 kelompok kontrol dan 3 kelompok perlakuan, kelompok tersebut diberi perlakuan selama 14 hari pemberian ekstrak belimbing wuluh berbeda dosis, dan 7 hari pemberian parasetamol dosis toksik 1,8gr dimulai dari hari ke-8.

**Hasil penelitian.** Ekstrak belimbing wuluh dosis 0,8 g/kgBB dan 1,6 g/kgBB dapat menurunkan kadar SGOT dengan rerata skor 271,2 dan 206,2. Ekstrak belimbing wuluh dengan dosis 1,6g/kgBB juga dapat menurunkan kadar SGPT dengan rerata skor 62,8.

**Simpulan.** Terdapat pengaruh pemberian ekstrak etanol belimbing wuluh terhadap kadar SGOT dan SGPT darah tikus yang diinduksi parasetamol, dan terdapat pengaruh perbedaan dosis dari ekstrak belimbing wuluh hanya kepada kadar SGOT dan tidak pada kadar SGPT tikus yang diinduksi parasetamol.

Kata Kunci: Belimbing Wuluh, parasetamol, SGOT, SGPT.