

## **ABSTRACT**

**Background:** Inflammation is the body's positive response to damage by destroying, reducing or localizing destructive agents and damaged cell. Temu Ireng has the potential for flavonoids which is potentially anti-inflammatory. The purpose of this study is to determine the effect of Temu Ireng extract on the thickness of the feet of male white mice that has inflammation with induction of carragein 1%.

**Methods:** Experimental research with a time series design using 25 male mice's divide by 5 groups. Group I negative control, group II positive control and group III giving of Temu Ireng extract with a dose of 25mg/200gBB (P1), group IV giving of Temu Ireng extract with a dose of 50mg/200gBB (P2) and group V giving of Temu Ireng extract with a dose of 100mg/200gBB (P3). AUC data is processing used the SPSS computer program with One Way Anova and Post Hoc LSD.

**Results:** The average AUC results are negative control  $18,72 \pm 1,73$ ; positive control  $15,70 \pm 2,87$ ; P1  $18,31 \pm 1,72$ ; P2  $15,78 \pm 2,74$ ; P3  $15,40 \pm 2,74$ . One Way Anova test results obtained P value 0,031 ( $p < 0,05$ ) indicating there were at least two groups have significant mean difference in AUC. Post Hoc LSD test results P3 group were significantly higher than negative control and positive control showed that the effect of Temu Ireng extract a dose of 100mg/200gBB to reduce foot thickness.

**Conclusions:** The conclusion of this study is the addition of Temu Ireng extract had an anti-inflammatory effect so that it is able to reduce the foot thickness of the wistar male rats which were induced by 1% carragein

**Keywords:** Anti Inflammatory Power, Area Under Curve, Anti-Inflammatory, Temu Ireng

## ABSTRAK

**Latar Belakang :** Inflamasi adalah respon protektif tubuh terhadap kerusakan dengan menghancurkan, mengurangi, atau melokalisasi agen perusak maupun jaringan yang rusak. Temu ireng (*Curcuma aeruginosa* Roxb.) mempunyai kandungan flavonoid kemungkinan berpotensi antiinflamasi. Tujuan penelitian ini adalah untuk mengetahui pengaruh pemberian ekstrak temu ireng terhadap tebal telapak kaki tikus putih jantan galur wistar yang mengalami inflamasi dengan induksi karagenin 1%.

**Metode :** Penelitian eksperimental dengan desain time series menggunakan 25 ekor tikus jantan Rattus wistar dibagi lima kelompok. Kelompok I kontrol negatif, kelompok II kontrol positif, dan kelompok III pemberian ekstrak temu ireng dosis 25 mg/200gBB (P1), Kelompok IV pemberian ekstrak temu ireng 50 mg/200gBB (P2), dan kelompok V pemberian ekstrak temu ireng dosis 100 mg/200gBB (P3). Data AUC (Area Under Curve) diolah menggunakan program komputer SPSS dengan uji One Way Anova dan Pos Hoc LSD (Least Significant Different).

**Hasil :** Hasil rerata luas AUC yaitu kontrol negatif  $18,72 \pm 1,73$ ; kontrol positif  $15,70 \pm 2,87$ ; P1  $18,31 \pm 1,72$ ; P2  $15,78 \pm 2,74$ ; P3  $15,40 \pm 2,74$ . Hasil uji One Way Anova diperoleh nilai  $p = 0,031 (p < 0,05)$  menunjukkan terdapat minimal dua kelompok mempunyai perbedaan rerata luas AUC secara bermakna. Hasil uji Post Hoc LSD yaitu kelompok P3 bermakna lebih tinggi dari kontrol negatif dan kontrol positif menunjukkan bahwa pengaruh ekstrak temu ireng dosis 100 mg/200gBB untuk mengurangi tebal telapak kaki.

**Kesimpulan :** Penelitian ini bahwa pemberian ekstrak temu ireng mempunyai efek antiinflamasi sehingga mampu mengurangi tebal telapak kaki tikus putih jantan galur wistar yang diinduksi karagenin 1%.

**Kata kunci :** Daya Anti Inflamasi, Area Under Curve, Antiinflamasi, Temu Ireng