

**EFEK LAMA WAKTU PEMBERIAN EKSTRAK ETANOL SELEDRI
(*Apium graveolens L.*) TERHADAP KADAR UREUM KREATININ TIKUS
PUTIH (*Sprague Dawley*) MODEL *ISCHEMIA REPERFUSION INJURY***

ABSTRAK

Latar Belakang: *Ischemia Reperfusion Injury* (IRI) merupakan suatu kerusakan jaringan akibat kembalinya aliran darah yang sempat hilang ketempat yang mengalami iskemik atau kekurangan oksigen untuk beberapa saat. Seledri (*Apium graveolens L.*) sebagai antioksidan dan antiinflamasi berpotensi mencegah terjadinya peningkatan kadar ureum kreatinin sebagai salah satu tanda kerusakan pada ginjal.

Tujuan: Penelitian ini bertujuan untuk mengetahui efek lama waktu pemberian seledri (*Apium graveolens L.*) dalam mencegah peningkatan kadar ureum kreatinin tikus putih (*Sprague dawley*) model IRI.

Desain Penelitian: Metode penelitian adalah eksperimental dengan *post test only with control group design*. 25 ekor tikus putih dibagi dalam 5 kelompok. Kelompok A: kontrol sehat, kelompok B: kontrol sakit, kelompok C, D, E: kelompok perlakuan dengan pemberian 1000 mg/kgBB selama 7, 14, 28 hari. Pada hari ke-8, ke-15 dan ke-29 setelah pemberian ekstrak, kelompok C, D, E dibuat model IRI.

Hasil: Rerata kadar Ureum berurutan 27, 156,2, 127,2, 102,4, dan 74 mg/dl. Rerata kadar Kreatinin berurutan 0,75, 1,51, 1,13, 1,06, dan 1,02 mg/dl. Hasil uji *One Way ANOVA* ureum menunjukkan nilai $p=0,000$ ($p<0,05$) dan uji *post hoc* LSD menunjukkan hasil perbedaan rerata yang signifikan antara kelompok A dengan semua kelompok data, dan antara kelompok B dengan A, D, dan E ($p<0,05$). Uji *Kruskal-Wallis* kreatinin sebagai uji alternatif menunjukkan nilai $p=0,000$ ($p<0,05$) dan uji *post hoc* *Mann-Whitney* menunjukkan hasil perbedaan rerata yang signifikan antara kelompok A dengan B, C dan E, dan antara kelompok B dengan A dan E ($p<0,05$).

Kesimpulan: Pemberian ekstrak etanol seledri (*Apium graveolens L.*) selama 28 hari efektif mencegah peningkatan kadar Ureum Kreatinin tikus model IRI.

Kata kunci: Seledri, *Apium graveolens L.*, kadar ureum, kadar kreatinin, *ischemia reperfusion injury*

**THE DURATION'S EFFECTS OF GIVING ETHANOL CELERY'S
(*Apium graveolens L.*) EXTRACT TO UREUM CREATININ'S LEVEL IN
Sprague dawley-ISCHEMIA REPERFUSION INJURY MODELS**

ABSTRACT

Background: Ischemia Reperfusion Injury (IRI) is the tissue damage caused when blood supply returns to tissue after an ischemia or lack of oxygen for a period of time. Celery (*Apium graveolens L.*) acts as an antioxidant and anti-inflammatory that potentially prevents the increase of creatinine urea levels, a sign that the kidneys has suffered some damages.

Objective: The aim of this research is to measure the optimal duration celeries are used on rats in preventing the increase of ureum creatinine levels in IRI-affected rats (Sprague dawley).

Design: The research method used is an experimental study with post test only with control group design. 25 white rats were randomly assigned to 5 groups. Group A consisted of healthy rats, group B consisted of IRI-affected rats, Group C, D, E are treatment-groups with dose of 1000 mg/kgBB of celery extract for 7, 14, and 28 days, respectively. On the 8th, 15th, and 29th day after giving the extracts, group C, D and E were dissected and IRI model were made.

Results: The mean level of ureum of these three groups are 27, 156,2, 127,2, 102,4, and 74 mg/dl. The mean level of creatinin of these three groups are 0,75, 1,51, 1,13, 1,06, and 1,02 mg/dl. One Way ANOVA test of ureum returns the value $p=0,000$ ($p<0,05$). Post hoc LSD test of ureum returns a significant mean difference between group B with group A, D and E ($p<0,05$). Kruskal-Wallis test, another alternative test, returns the value of $p=0,000$ ($p<0,05$). Post hoc Mann-Whitney returns a significant mean difference between group A with group B, C and E, and between group A with group A and E ($p<0,05$).

Conclusion: The administration of ethanol celery's extracts for 28 days is effective to prevent the increase of ureum creatinine level of IRI-affected rats.

Keywords: Celery, *Apium graveolens L.*, ureum, creatinin, ischemia reperfusion injury