

EFFECT INFLAMMATORY OF LUNASIA AMARA EXTRACT ETHANOLIC ON EXPERIMENTAL CHRONIC ARTHRITIS

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The effect inflammatory of *Lunasia amara* ethanol extract (LAE) on Freund's complete adjuvant (FCA)-induced arthritis were investigated. Effect inflammatory assessment was done by measuring – paw volume (hind paw swelling), joint diameter and body weight. The oral administration of LAE (50, 100 and 200 mg/kg BW per day) for 60 days after subcutaneous immunization with FCA. The arthritis score and paw edema were markedly suppressed in the groups treated with LAE. The result suggest that the *Lunasia amara* Extract ethanolic might be beneficial in the treatment of chronic inflammatory disorder.

Keyword : *Lunasia amara* extract ethanolic, chronic inflammation, FCA-induced arthritis

MATERIAL AND METHOD

▶ Plant Material

The plant of beta-beta wood (*Lunasia amara* Blanco.) collected at Srwung, South Sulawesi province, Indonesia in March 2014.

▶ Extraction

Process extraction of the plant is done by maceration. Beta-beta wood of 1000 g was extracted by maceration at room temperature with ethanol 96% for 72 hour.

▶ Mode of feeding

The suspension extract a dose of 50 mg / kg BW, 100mg/kg body weight and 250 mg/kg BW and Sodium diclofenac dose of 2 mg/kg BW administered once daily for 60 days as per oral with a maximum volume of 1 ml/20 g.

▶ Arthritis index measurement edema volume used Pletismometer on day 0, day 7, day 14, day 21 to day 56 after the induction of Control Freund's Adjuvant (CFA).

▶ In preparation for observed histopathology and index arthritis, inflammation and joint damage.

CONCLUSION

▶ The result suggest that the *Lunasia amara* Extract ethanolic might be beneficial in the treatment of

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INTRODUCTION

Beta-beta wood is one of the plants of the genus *Lunasia* family Rutaceae. In general, Family Rutaceae containing compounds essential oils, alkaloids, amides, coumarin, flavonoids, benzoate acids, tannin substances, lignin, phenolic compounds, triterpene tetrasiklik, diterpene, tetraterpen pentacyclic saponins, carbohydrates and slime [1]. Scopoletin compound is one of the compounds contained in family Rutaceae family is known to have anti-inflammatory, a compound coumarin derivative which is a derivative of phenyl propane.

Has done research on beta-beta timber that research on antiinflammatory activity in mice Balb/c model of rheumatoid arthritis induced Complete Freund's Adjuvant (CFA) of 0.1%. In this research, it is known that there is a decrease in inflammation of 77.35% for all treatments.

RESULT

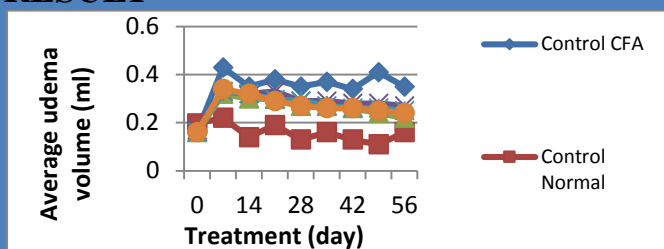


Figure 1 Average edema volume vs treatment (Control CFA the group induced CFA 0,1% without treatment, normal controls without treatment, Control sodium diclofenac 2 mg/kg, ethanolic extract dose of 50, 100 and 250 mg / kg

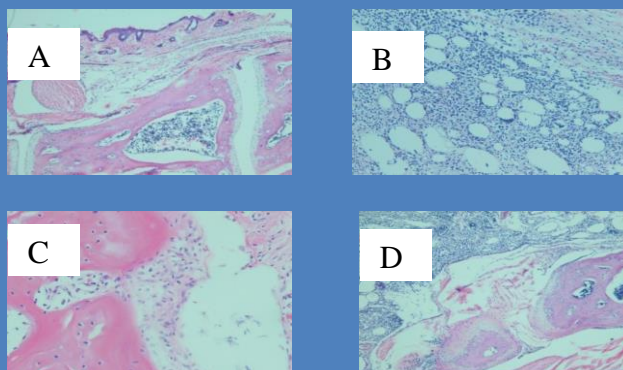


Figure 2. Histological : A. normal controls (HE); B. edema that occurs (HE); C. Perikondritis (HE); D. necrosis due to chronic inflammation

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