

**ACTIVITY OF ANTI-RHEUMATOID ARTHRITIS
INSOLUBLE FRACTION HEXANE DICHLOROMEANA
EXTRACT OF DAUN SENDOK (*Plantago major L.*) AGAINST
The expression OF *INTERLEUKIN-6* AND the NUMBER OF
OSTEOBLAST in the FEMALE *WISTAR* RAT**

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ABSTRACT

Rheumatoid arthritis is a chronic inflammatory disorder characterized by inflammation of the joints due to autoimmune reactions in the synovial tissue. Daun Sendok (*Plantago major L.*) is known to have ursolic acid content that has an anti-rheumatoid arthritis effect. The purpose of the study was to determine the activity of anti-rheumatoid arthritis in the insoluble fraction of the dichlorometana extract daun sendok (*Plantago major L.*) on the parameters of *Interleukin-6* and the amount of *osteoblast* in female *Wistar* rats. A total of 36 female *Wistar* rats were divided into 6 groups. Normal control group, negative control group, positive control group (*sodium diclofenac*), and 3 groups of treatment of fractionated Daun sendok extract at a dose of 280 mg/kgBB, 420 mg/kgBB, 560 mg/kgBB. All test animals are in induction with *Complete Freund Adjuvant Subplantar* on Day 0, and the treatment begins on day 16-46. Day 46 The rats were destroyed and then taken from the foot organ for histopathology and immunohistochemical preparations. Data on the number of *osteoblasts* and *interleukin-6* expression were analyzed qualitatively and using the *Saphiro-Wilk* test and *One Way Anova*. The results of a qualitative histopathological examination on inflammatory cells showed a decrease in the number of *osteoclasts* and the formation of *osteoblasts* occurred in the treatment group, as well as immunohistochemical results obtained indicating that anti-rheumatoid arthritis activity works well especially at a dose of 280 mg / kgBB and a dose of 420 mg / kg BB in significantly reducing the expression of *Interleukin-6* ($p < 0,05$).

Keywords: Rheumatoid arthritis, daun sendok (*Plantago major L.*), *Interleukin-6*