

**THE EFFECT OF CIKAL TULANG (*Cissus quadrangularis*) EXTRACT
FOR OSTEOPOROSIS PREVENTION IN OVARIECTOMYZED
RATS (*Rattus norvegicus*) BASED ON HISTOPATHOLOGY
STRUCTURE OF MANDIBULA BONE**

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ABSTRACT

The purpose of this study is to determine the effect of Cikal Tulang (*Cissus quadrangularis*) extract for osteoporosis prevention in ovariectomized rat. The measured parameter were the amount of osteoblast, osteoclast, and trabekular density of mandibula bone. Twenty female rats were divided randomly into five treatments consisting of a treatment of normal rats that are not in ovariectomy (P0); which in ovariectomy + 0,5% CMC Na (P1); rats in ovariectomy that given calcium carbonat 450 mg/rat + 0,5 CMC Na (P2); rats in ovariectomy that given *Cissus quadrangularis* extract 500 mg/kg weight + 0,5 CMC Na (P3); rats in ovariectomy that given *Cissus quadrangularis* extract 750 mg/kg weight + 0,5 CMC Na (P4). The results of statistical tests indicate that there are differences in the number of osteoblast, osteoclast, and trabekular density of mandibula bone in rats between five different treatments (ANOVA, $p < 0,05$). The conclusion of this study is that the extract of *Cissus quadrangularis* can increase the amount of osteoblast cell, and trabekular density of mandibula bone, and decrease the amount of mandibular bone osteoclast cell in ovariectomized rat (*Rattus norvegicus*).

Keywords: *Cissus quadrangularis*, osteoblast cell, osteoclast cell, trabekular density, mandibula, ovariectomy, osteoporosis