

**THE POTENTIAL OF HONEY BEE *Apis dorsata* AND HONEY BEE
Apis mellifera AS AN ANTI-OSTEOPOROSIS TO THE AMOUNT
OF OSTEOBLAST AND OSTEOCLAST ON
OVARIOHYSTERECTOMIZED
RAT (*Rattus norvegicus*)**

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ABSTRACT

The aim of this research are to compare the influence of *Apis dorsata* honey and *Apis mellifera* honey based on total of osteoblast and osteoclast on ovariectomy rats (*Rattus norvegicus*). The samples were 24 female rats were adapted for 7 days and be divided randomly into 8 groups, Sham operated that received aquadest (SH), Ovariectomy that received aquadest (OH), *Apis dorsata* that received 1g/kgBW honey (AD-1), *Apis dorsata* that received 2g/kgBW honey (AD-2), *Apis dorsata* that received 4g/kgBW honey (AD-3), *Apis mellifera* that received 1g/kgBW honey (AM-1), *Apis mellifera* that received 2g/kgBW honey (AM-2), and *Apis mellifera* that received 4g/kgBW honey (AM-3). SH group were non-ovariectomy and other groups were ovariectomy. Honey be diluted in 1 ml aquadest were given orally for 84 days. On the 85th day rats were euthanized and the 2nd of lumbar vertebrae was taken with necroption technique. The result of osteoblast average calculation show. There was significant difference ($p < 0.05$) on total amount of osteoblast and osteoclast cells between OH group and all of the groups. The result of the highest osteoblast and the lowest osteoclast cells count are on AD-2 group.

Keywords : Honey, Osteoblast, Osteoclast, Ovariectomy, Osteoporosis.