

**ANTI-OSTEOPOROTIC ACTIVITY OF *Apis dorsata* FOREST HONEY
COMPARED TO *Apis mellifera* CULTIVATED HONEY ON
OVARIOHYSTERECTOMIZED RAT (*Rattus norvegicus*)**

Abdullah Hasib

ABSTRACT

The aim of this study was to observe the efficacious of honey as anti-osteoporotic effect on ovariectomized rats and to observe the difference between honeys produced by *Apis dorsata* compared to *Apis mellifera*. Twenty four female rats were adapted for 2 weeks in experiment environment and divided into 8 groups (SH, OH, AD-1, AD-2, AD-3, AM-1, AM-2, AM-3). Ovariectomy were conducted on 15th day under surgical procedure for all groups except SH which is sham operated. Rats were treated with honey solution post ovariectomies. Honey solutions of *Apis dorsata* were given to AD-1(1g/Kg BW), AD-2(2g/Kg BW), and AD-3 (4g/Kg BW). Honey solutions of *Apis mellifera* were given to AM-1(1g/Kg BW), AM-2(2g/Kg BW), and AM-3 (4g/Kg BW). Honey that solved in 1,5 ml aquadest were given orally for 84 days. At the 85th day, rats were euthanized and os vertebrae lumbal I was dissected out to prepared Scanning Electron Microscope (SEM). The results suggest, there was a difference between SH group than OH. SEM images of *Apis dorsata* treatments were observed that AD-3 has the most minimum porosity than AD-1 and AD-2 which found several porosity at the ventral part of bone. SEM images of *Apis mellifera* treatments were found that AM-3 has the most minimum porosity than AM-1 and AM-2 groups. The comparison between honey produced by *Apis dorsata* and *Apis mellifera* suggested that *Apis mellifera* honey was better than *Apis dorsata*. Porosity distribution was found at the medial of dorsal, medial of ventral and turned to superficial.

Key words: Honey, Osteoporosis, SEM.