

**THE EFFECTS OF GIVING HONEY BEE (*Apis dorsata* F.)
ON CALCIUM LEVELS OF MANDIBULAR BONE
IN OVARIOHYSTERECTOMIZED
WHITE RATS (*Rattus norvegicus*)**

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ABSTRACT

The aim of this study was to evaluate the effects of giving honey bee (*Apis dorsata* F.) on calcium levels of mandibular bone in ovariectomized rat as animal models of osteoporosis. The samples were 20 female rats which were divided into 5 treatment groups with 4 replications. SHAM was sham operated rats as negative control, OH was ovariectomized rats without treatment as positive control, whereas AD1, AD2, AD3 was ovariectomized rats with treatment *Apis dorsata* 1 g/KgBW, 2 g/KgBW, 4 g/KgBW for 84 days. After 84 days of treatment, the rats left mandibular bone were harvested, weighed and kept in 10% *Neutral Buffered Formalin* (10% NBF) until analysis. Calcium levels were calculated using proximate analysis. The data was analyzed using ANOVA and Duncan as the Post-Hoc Test. The results showed a decreased of bone calcium levels on ovariectomized rats, the highest results were in the SHAM group and the lowest results were in the AD3 group. Based on this results, it can be concluded that honey bee (*Apis dorsata*) can not maintain calcium levels of mandibular bone in ovariectomized white rats (*Rattus norvegicus*).

Key words: osteoporosis, honey *Apis dorsata*, calcium levels, bone, ovariectomy.