EFFECT OF *INSULIN-LIKE GROWTH FACTOR-I* (IGF-I) DERIVED FROM PREGNANT *CROSSBREED* MARE SERUM IN MICE (*Mus musculus*) FOLLICULOGENESIS

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ABSTRACT

The purpose of the research was to know the effect of *Insulin-Like Growth Factor-I* (IGF-I) derived from pregnant *crossbreed* mare serum (PMS) in mice (*Mus musculus*) folliculogenesis. The subject of this research were 35 female mice. The research was arranged by Completely Randomized Design (CRD) with seven treatment and five replications. The treatment were K0 = 10 ng/ml of physiological NaCl, $P1_1$ = 10 ng/ml of IGF-I PMS, $P1_2$ = 20 ng/ml of IGF-I PMS, $P1_3$ = 40 ng/ml of IGF-I PMS, $P2_1$ = 10 ng/ml of IGF-I recombinant mouse, $P2_2$ = 20 ng/ml of IGF-I recombinant mouse, and $P2_3$ = 40 ng/ml of IGF-I recombinant mouse. Observed variables are number of primary, secondary, tertiary and de Graff follicles. During the treatment the estrus cycle was also observed. The data of follicles number were analyzed by Analysis of Variance (ANOVA), followed by HSD (Honestly Significant Difference) test. The data was also be analyzed using General Linear Model Univarieted to see the comparison between IGF-I PMS and recombinant mouse. The result showed that the addition of IGF-I PMS significantly affect ($p<0,05$) on increasing of the primary and secondary follicles number. The addition of IGF-I PMS 20 ng/ml and 40 ng/ml can increase the primary and secondary follicle significantly ($p<0,05$). The result also showed that IGF-I PMS and recombinant mouse could hasten estruos cycle and extend the estrus phase on mice estrous cycle. It showed that did not significantly difference ($p>0,05$) between the effect of IGF-I PMS and IGF-I recombinant mouse against the mice folliculogensis.

Key words: IGF-I, IGF-I pregnant crossbreed mare serum, Folliculogenesis, *Mus musculus*