

TESIS

**PENGARUH PEMBERIAN EKSTRAK KULIT BUAH
MANGGIS (*Garcinia mangostanae*) PER ORAL TERHADAP
FOLIKULOGENESIS OVARIUM MENCIT (*Mus musculus*)**



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ABSTRACT

INFLUENCE GIFT OF EXTRACT MANGOSTEEN HUSK (*Garcinia mangostanae*) PER ORAL TO FOLLICULOGENESIS OF OVARY MICE (*Mus Musculus*)

Mangosteen or *Garcinia mangostanae* husk has been observed and showed that it contains flavonoid, tanin, saponin, quinon and steroid. Steroid has a role on the growth of follicle through two different ways: hypothalamus-hypofise anterior and ovarium. Hypothalamus-hypofise anterior produces gonadotropin hormone which consists of FSH (Follicle Stimulating Hormone) and LH (Luteinizing Hormone) of ovarium, while the second way through teka cell and granulose cell.

The general objective of this research is to find the effects of mangosteen in inhibiting the process of mice folliculogenesis ovarium. And the specific objective of this study is to find the effect of giving the skin of mangosteen extract on the number of primary, secondary, tersier follicle, and de Graaf follicle.

The subject of the research consists of five groups, the first group (K1) as a control group which is given CMC solution 0.2 ml/20 gr of the mice weight. The second group (K2) is given a solution drink of mangosteen extract 4.55 mg/20 gr of the mice weight. The third group (K3) is given a solution drink of mangosteen extract 9.1 mg/20 gr of weight. The forth group (K4) is given the same drink with different doses, that is 13.65 mg/20 gr of weight. And the last group (K5) is given the same solution drink 18.2 mg/20 gr of weight. The treatment of giving mangosteen extract to all of the groups previously is being dissolved in the CMC solution (Carboxy Methyl Cellulose) 0.5% with 0.2 ml/weight.

The result of the study shows that variable of the primary, secondary, and tersier follicle have normal distribution ($p > 0.05$), in order to find average of each group, an analysis by using Oneway Anova test is conducted. The result of Oneway Anova test shows that each of the p values for the three follicles is 0.453, 0.696, and 0.261 from the p values available. Ho is considered that mangosteen extract in which is given per oral on the mice do not being any inhibition to the follicle growth of the mice ovarium. To find out the differences of the number of de Graaf follicle among the groups, Kruskal-Wallis test is applied. And the result of Kruskal-Wallis test shows that there is a significant difference ($p < 0.05$) among the control and treatment group. De Graaf follicle is the last form and the biggest follicle in ovarium.

Giving the extract of mangosteen husk per oral towards the mice do not inhibit the growth of the primary, secondary, and tersier follicle in the ovarium of the mice. However, giving the extract of mangosteen husk per oral towards the mice may inhibit the growth of de Graaf follicle in the mice ovarium. There is no any significant relationship between the given of mangosteen husk extract per oral towards the mice which do not inhibit the growth of the primary, secondary, and tersier follicle in the mice ovarium. And there is a significant relationship between the given of mangosteen husk extract per oral towards the mice which inhibits the growth of de Graaf follicle.

Keywords: *Garcinia mangostanae*, *Mus musculus*, ovarium, folliculogenesis