

ABSTRAK

PCOS was a frequent problem of reproductive endocrinology. Women with PCOS have an increased risk of a number of gynecological neoplasms including endometrial cancer. It was expected that extract leaf Moringa oleifera can decrease the expression of IGF-1, Expression of Androgen receptors and endometrial thickness. The aim of this study was to prove the effect of extract leaf Moringa oleifera in various doses on expression of IGF-1, expression of androgen receptors and endometrial thickness in model PCOS with insulin resistance.

*This research method used sample 40 female *Rattus norvegicus* strains with age 3 months with weight 100-130 gram. Then divided into 5 groups consisting of normal control group, PCOS control group, Metformin group, leaf extract Moringa oleifera group 250 mg/ KgBW and 500 mg/ KgBW. Measurements of IGF-1 expression and expression of androgen receptors with immunohistochemistry (IHC) and endometrial thickness with hematoxylin eosin (HE).*

The results showed that the metformin group and extract leaf Moringa oleifera 250 mg/ KgBW decreased IGF-1 expression significantly ($p < 0.05$) compared with PCOS control group, metformin group and leaf extract Moringa oleifera 250 mg/ KgBW showed significantly decreased expression of androgen receptor ($p < 0.05$) compared with PCOS control group and leaf extract group of Moringa oleifera 250 mg/ KgBW significantly decreased the thickness of endometrium ($p < 0.05$) compared with PCOS control group, with significant dose in leaf extract Moringa oleifera 250 mg/ KgBW.

The conclusion of this study was leaf extract Moringa oleifera can decrease the expression of IGF-1, and expression of androgen receptor so that it can also decrease the thickness of endometrium in model PCOS.