UNIVERSITI TEKNOLOGI MARA

ANTI-INFERTILITY ASSESSMENTS OF *Ficus deltoidea* var. *kunstleri* ETHANOLIC LEAVES EXTRACT IN LETROZOLE-INDUCED POLYCYSTIC OVARIAN SYNDROME RATS

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ABSTRACT

The global prevalence of polycystic ovarian syndrome (PCOS) has reached epidemic proportion contributing to female infertility. Meanwhile, numerous pharmacological properties of *Ficus deltoidea* (*Mas Cotek*) have been continuously reported. However, there is limited knowledge pertaining to its effect on PCOS subject. In the study, *F. deltoidea* var. *kunstleri* ethanolic leaves extract was evaluated in-vivo to elucidate its effects on oestrous cyclicity, several hormones and histology of reproductive organs among letrozole-induced PCOS female Sprague Dawley. Rats (N=36) were divided into six groups (n=6). Five groups were induced into PCOS, while sixth group was non-PCOS normal control (NC). PCOS induced rats were grouped and treated with: group 1, saline (PC); group 2 (10 mg clomiphene citrate, PCC); and groups 3 (PFD25), 4 (PFD125), 5 (PFD250) with 25, 125 and 250 mg/kg of plant extract respectively, for 42 days. Post treatment with *F. deltoidea* var. *kunstleri,* PCOS rats showed significantly reduced testosterone and insulin levels ($p<0.05$), with increased occurrences of oestrus phase and reduced the ovarian weights. The ability of the leaves extract to induce ovulation was evidenced by increasing number of corpus luteum and reducing cystic follicle number observed in ovaries. Meanwhile, uterine thickness and its relative weight were significantly increased. Overall, it was shown that *F. deltoidea* var. *kunstleri* leaves exert anti-infertility activities by improving ovulation, rectifying endocrine imbalance and remodelling of ovarian and uterine tissues among letrozole-induced PCOS model.

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