

**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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# TABLE OF CONTENTS

	<b>Page</b>
<b>CONFIRMATION BY PANEL OF EXAMINERS</b>	<b>ii</b>
<b>AUTHOR'S DECLARATION</b>	<b>iii</b>
<b>ABSTRACT</b>	<b>iv</b>
<b>ACKNOWLEDGEMENTS</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vi</b>
<b>LIST OF TABLES</b>	<b>x</b>
<b>LIST OF FIGURES</b>	<b>xii</b>
<b>LIST OF SYMBOLS</b>	<b>xiv</b>
<b>LIST OF ABBREVIATIONS</b>	<b>xv</b>
<b>LIST OF NOMENCLATURES</b>	<b>xvi</b>
<b>CHAPTER ONE: INTRODUCTION</b>	<b>1</b>
1.1 Background of the Study	1
1.2 Significance of the Study	3
1.3 Research Objectives	3
1.4 Research Hypotheses	4
1.5 Scopes and Limitations	4
1.6 Organization of the Thesis	5
<b>CHAPTER TWO: LITERATURE REVIEW</b>	<b>6</b>
2.1 Infertility and Female Contributing Factors	6
2.2 Polycystic Ovarian Syndrome (PCOS): Definition, Diagnosis and Aetiology	6
2.3 Features of PCOS	10
2.3.1 Hyperandrogenism	11
2.3.2 Hyperinsulinemia and Insulin Resistance	13
2.3.3 Female Reproductive Hormones	15
2.3.3.1 <i>Gonadotropins</i>	15

2.3.3.2	<i>Progesterone and Oestrogen</i>	16
2.3.4	Disrupted Ovarian Steroidogenesis	17
2.3.5	Ovarian Characteristics	18
2.3.5.1	<i>Abnormal Follicular Development</i>	19
2.3.6	Menstrual Dysfunction	20
2.3.7	Weight Gain and Obesity	21
2.3.8	Other PCOS Related Health Risks: Acanthosis Nigricans, Acrochordons, and Obstructive Sleep Apnea	22
2.4	Treatment Modes for PCOS	24
2.4.1	Lifestyle Modifications	24
2.4.2	Anti-Oestrogens	25
2.4.3	Laparoscopic Ovarian Drilling (LOD)	25
2.4.4	Hormonal Treatment	26
2.4.5	Anti-Androgens	26
2.4.6	Insulin Sensitizers	27
2.5	Various PCOS Induction Methods in Animals	28
2.6	Botanicals in Remedial Treatment of PCOS	30
2.7	<i>Ficus deltoidea</i>	35
2.7.1	Geographical Distribution	35
2.7.2	Botanical Description	36
2.7.3	Phytochemical Constituents	38
2.7.4	Pharmacological Activities	39
2.8	Oestrous Cycle	40
<b>CHAPTER THREE: RESEARCH METHODOLOGY</b>		<b>43</b>
3.1	Introduction	43
3.2	Experimental Design	45
3.3	Materials	46
3.3.1	Raw Materials	46
3.3.2	Chemicals	46
3.3.3	Apparatus	46
3.4	Methods	47