



## بسم الله الرحمن الرحيم

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**BIOCHEMICAL STUDIES OF LEPTIN  
CONCENTRATION IN CASES OF PREECLAMPSIA AND  
PRETERM INFANTS**

Thesis

Submitted by

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"بسم الله الرحمن الرحيم"

"سبحانك لا علم لنا إلا ما علمتنا إنك أنت العليم الحكيم"

صدق الله العظيم

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## **ABSTRACT**

**Name:** Marwa Gouda Mohamed Salh

**Title of thesis:** *Biochemical studies of leptin concentration in cases of preeclampsia and preterm infants.*

**Degree:** *M.Sc. of Science in Biochemistry, Chemistry Department, Faculty of Science, Cairo University, 2006.*

This work has been carried out to investigate the serum leptin levels in term & preterm cord infants of term & preterm preeclamptic mothers respectively comparable with serum leptin levels in term & preterm cord infants of term & preterm healthy normotensive pregnant women (as control) respectively. In addition to investigate the serum leptin levels in term & preterm preeclamptic mothers comparable with serum leptin levels in term & preterm healthy normotensive pregnant women (as control) respectively. **Results:** the mean leptin concentration of term preeclamptic mothers was significantly increased ( $P < 0.05$ ) as compared to mean leptin concentration of term healthy normotensive mothers group. Also statistical analysis revealed the mean leptin concentration of preterm preeclamptic mothers was significantly increased ( $P < 0.05$ ) as compared to mean leptin concentration of preterm healthy normotensive mothers group. There was no significant difference in term cord leptin concentration between infants in term groups either in term healthy normotensive group or term preeclampsia group, however there was a very highly significant increase  $P < 0.0001$  in preterm fetal cord leptin concentration of preeclamptic mothers as compared to preterm fetal cord leptin concentration of normotensive pregnant women. **Conclusion:** maternal serum leptin concentration is significantly elevated in preeclampsia patients as compared to normal pregnant women, and this can have a role in understanding preeclampsia pathogenesis, predication of preeclampsia and placental ischemia. Increased cord leptin concentration in preterm infants of preeclamptic mothers may reflect a physiological adaptation to fetal stress such as hypoxia.

**Key words:** Leptin, Term preeclampsia, Preterm preeclampsia, Preterm Infants, Preterm birth, Neonate, Cord leptin, Placenta, Pregnancy, Hypoxia.

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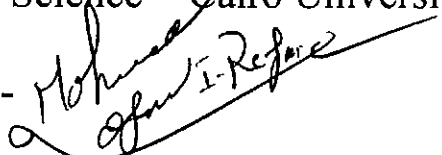
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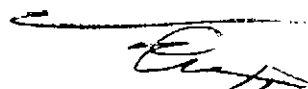
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## *To My Family*

*I dedicate this thesis to my beloved family, words stand short when coming to express my deepest thanks, especial appreciation and gratitude to my beloved mother for her moral support, cherish and blessing me, to the soul of my father, for his had been learning the interesting of the science and my brother. Also many thanks for my beloved husband for his concern, cherish, patience and understanding which encouraged me through this study, my daughter Sara and my sons Omar & Kareem for enriching my life.*

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