شبكة المعلومات الجامعية

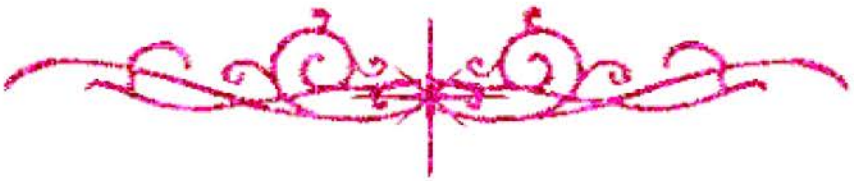
بسم الله الرحمن الرحيم

HOSSAM MAGHRABY

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم



HOSSAM MAGHRABY

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

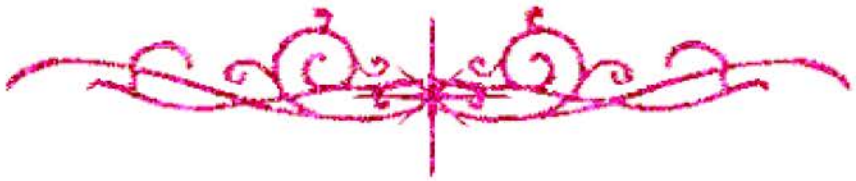
يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

HOSSAM MAGHRABY

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة



HOSSAM MAGHRABY

شبكة المعلومات الجامعية

بالرسالة صفحات

لم ترد بالأصل

HOSSAM MAGHRABY

Plasma Fibronectin in Preeclampsia and Intrauterine Growth Retardation

Thesis

Submitted for Partial Fulfillment of Master Degree

In Obstetrics and Gynaecology

By

Ahmed Hosny Ahmed.

M.B.B. Ch (Ain Shams University)

Under Supervision of

Prof. Dr. Mohamed Nagy El-Makhzangy

Prof. of Obstetrics and Gynaecology

Faculty of Medicine, Ain Shams University

and

Dr. Ahmed Mohamed Nor El Din Hashaad

Lecturer of Obstetrics and Gynaecology

Faculty of Medicine

Ain Shams University

Dr. Nahla Mohamed Zakaria

Lecturer of Clinical Pathology

Faculty of Medicine

Ain Shams University

Cairo

1995

بسم الله الرحمن الرحيم

اقرأ باسم ربك الذي خلق

خلق الإنسان من علق

اقرأ وربك الأكرم الذي علم بالقلم

علم الإنسان ما لم يعلم

العلق ١-٥

ACKNOWLEDGEMENT

I wish to express my deep thank and gratitude to **Prof.Dr. Mohamed Nagy El-Makhzangy,** *Professor of Gynecology and Obstetrics, Ain Shams University for his valuable supervision and guiddance.*

I would like to thank **Dr. Ahmed Mohamed Nor-El-Din Hashad,** *Lecturer in Gynecology and Obstetrics, Ain Shams University for his sincere help, support and encouragement throughout my work.*

I would also like to thank **Dr. Nahla Mohamed Zakaria,** *Lecturer in Clinical Pathology, Ain Shams University for her kind help and effort.*

I am also sincerely thankful to **Dr. Hassan Awad Bayoumy,** *Lecturer in Gynecology and Obstetrics, Ain Shams University for his valuable help and advice.*

My thans to **all staff members of the Gynecology and Obstetrics Department,** *Ain Shams University for their cooperative spirit and help.*

Also My deepest gratitude to my family and friends for their great assistance and moral support during the many months that I spent on this thesis.

TABLE OF CONTENTS

INTRODUCTION

INTRODUCTION

Fibronectins are large, usually dimeric glycoproteins (molecular weight approximately 450,000D), that are found both in a soluble form in plasma (plasma fibronectin) and in a larger non soluble form in the extracellular matrix (cellular fibronectin) **(Moses et al., 1980, Rouslahti et al., 1988).**

Plasma fibronectin is synthesized primarily by hepatocytes **(Tamkun et al., 1983)**, and is involved in opsonic activities with the reticuloendothelial system and in clot stablization **(Schwarzbeur et al., 1984).** Cellular fibronectin synthesized by fibroblast, endothelial cells, and astroglial cells among others, is involved in cell adhesion, migration, growth and differentiation **(Rouslati et al., 1973).** The various different fibronectins are drived from a signle fibronectin gene and are composed of multiple domains, the sequence and the presnece or absence of the various domains accounts for the different functional activities of different fibrenctins **(Moses et al., 1980).**

There are at least 12 versions of fibronectin. although the firbonectin gene itself does not vary **(Hynes et al., 1986).** Different cells types (hepatic, fibroblast, and

endothelial) may synthesize different fibronectin variants, one of these variants is a soluble plasma fibronectin containing an extra type III domain (ED I+), found predominantly in large vessel endothelial cells **(Vartio et al., 1987)**, and in very small quantities in platelets **(Paul et al., 1986)**. A growing body of evidence indicates that endothelial injury or activation is an important pathophysiologic feature of pre-eclampsia **(Friedman et al., 1991)**. The Cellular iso form of fibronectin (cFN), is present in endothelial cells and endothelial matrix in vivo **(Vartio et al., 1987)**, and is elevated in clinical situations characterized by substantial endothelial injury, such as vasculitis, sepsis and crush injury **(Rouslahti et al., 1988)**. The pathogenesis of this endothelial injury is poorly understood, but appears to be related to antecedent trophoblastic hypoperfusion **(Mosses et al., 1980)**. Impaired trophoblastic invasion of maternal spiral arteriols (which presumbly results in reduced trophoblastic perfusion), has been observed in pregnancies complicated by both preeclampsia and intrauterine growth retardation (IUGR) **(Rouslahti et al., 1973)**. Data demonstrating the presence or absence of endothelial injury in pregnancies with IUGR are limited.

AIM OF THE WORK

AIM OF THE WORK

The aim of this study, is to determine the presence and the degree of endothelial injury, by measuring plasma concentrations of fibronectin, in pregnancies complicated by preclampsia and/or intrauterine growth retardation.

REVIEW OF LITERATURE