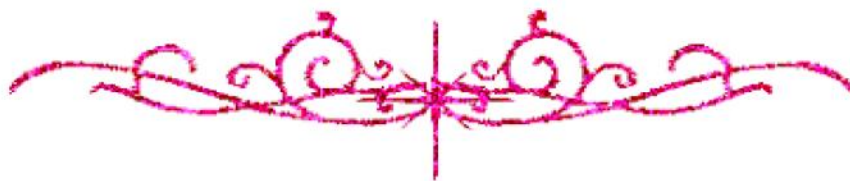


# بسم الله الرحمن الرحيم





# شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم





# 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



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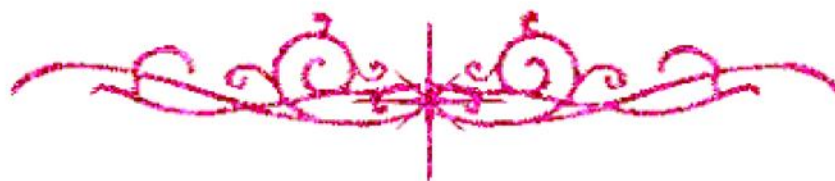
# بعض الوثائق الأصلية تالفة







بالرسالة صفحات  
لم ترد بالأصل





# **Cord Blood Ischemia-Modified Albumin Levels in Preterm Infants with Intrauterine Growth Restriction**

*Thesis*

*Submitted for Partial Fulfillment of  
Master Degree in Pediatrics*

*Presented by*

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# *List of Abbreviations*

Abb.	Meaning
AC.....	Abdominal circumference
ACB .....	Albumin- cobalt binding
ACS.....	Acute coronary syndrome
AGA.....	Appropriate for gestational age
AREDF .....	Absent or reversed end diastolic flow
ASR.....	Albumin synthesis rate
AT.....	Anti thrombin
AUC.....	Area under the curve
AV.....	Atreio-ventricular
BMI.....	Body mass index
BPD.....	Bi- parietal diameter
BUN .....	Blood urea nitrogen
CAD .....	Coronary artery disease
CBC .....	Complete blood count
CMV .....	Cytomegalovirus
DM.....	Diabetes mellitus
EFW .....	Estimated fetal weight
ELISA .....	Enzyme- linked immune sorbent assay
FDA .....	Food and Drug administration
FGR.....	Fetal growth restriction
FL.....	Femur length
GH.....	Growth hormone
GIT.....	Gastro-intestinal tract
HC.....	Head circumference



# *List of Abbreviations*

Abb.	Meaning
HIE.....	Hypoxic ischemic encephalopathy
HIV .....	Human immune deficiency virus
IMA.....	Ischemia modified albumin
IQR .....	Inter-quartile range
IUGR .....	Intra uterine growth restriction
LBW .....	Low birth weight
LMP .....	Last menstrual period
MCA .....	Middle cerebral artery
NEC .....	Necrotizing enterocolitis
NPV .....	Negative predictive value
OD.....	Optical density
OFC.....	Occipito-frontal circumference
PE.....	Preeclampsia
PI.....	Ponderal index
PLTs.....	Platelets
PPV .....	Positive predictive value
RBCs.....	Red blood cells
RF .....	Radio- frequency
ROC .....	Receiver opening characteristic curve
SGA .....	Small for gestational age
SLE .....	Systemic lupus erythromatosus
SPSS .....	Statistical Package for Social Science
WBCs.....	White blood cells
WHO.....	World health organization

# INTRODUCTION

**I**ntrauterine growth restriction (IUGR) is the term used to describe a fetus that has not reached its growth potential because of genetic or environmental factors. It is defined as an estimated birth weight <10<sup>th</sup> percentile for gestational age. The origin may be fetal, placental, or maternal, with significant overlap among these entities. These infants are at increased risk for significant morbidity and mortality compared with infants with normal in utero growth (*Mandy, 2018*).

IUGR is most commonly caused by placental insufficiency and babies affected by IUGR are likely to show signs of placental disease (*Henriksen & Clausen, 2002*), and/or poor placental function with the placenta failing to make the adaptive changes required to maximise fetal growth (*Sandovici et al., 2012*).

Preterm birth may be caused by multiple factors including inflammation and maternal stress, however, placental ischemia and other forms of placental dysfunction commonly contribute. In fact, gestational length itself is known to be at least partially regulated by factors secreted by the placenta (*Goldenberg et al., 2008*).

Ischemia modified albumin is a novel marker of ischemia generated due to hypooxygenation and increased hydroxyl free radicals in low pH. The molecule has been licenced for clinical

use as an early marker for acute coronary syndrome in cardiology (*Oran & Oran, 2017*). Since the presence of ischemia might have serious and sometimes devastating effects in perinatology, various researches have evaluated its value in different clinical perinatal and neonatal conditions (*Yarci et al., 2017*).



## **AIM OF WORK**

**T**his study aims to determine the possible association between cord blood ischemia-modified albumin (IMA) levels and intrauterine growth restriction (IUGR) in preterm infants with or without complicated gestations.