بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%.

بعض الوثائـــــق الاصليـــة تالفـــة

بالرسالة صفحات لم ترد بالاصل

Serum concentrations of growth hormone, insulin like growth factor-I, procollagen-I and prolactin in healthy infants and children and in children with growth disorders

THESIS

Submitted for partial Fulfillment of MD degree
In pediatrics

By

Mohamed Abd El-Maboud Mohamed
(M.B.B.Ch., M.Sc.)
Faculty of medicine, El-Minia University

Under supervision of

Prof. Dr. Hassan Fathy Nageeb
Professor and Head of pediatric department,
Faculty of medicine, Cairo University
Beni-Sueef Branch

Prof. Dr. Salem Ahmed Sallam
Professor and Head of pediatric department,
Faculty of medicine, El-Minia University

Dr. Nabil Gamel Mohamed
Assistant professor of pediatrics
Faculty of medicine, El-Minia University

Dr. Mahmoud El-Rehany
Assistant professor of Biochemistry
Faculty of medicine, El-Minia University

Faculty of medicine
El-Minia University
2000

TO
MY PARENTS,
MY WIFE
&
MY SON (ZIAD)

CONTENTS

PAGE

LIST OF ABBREVIATIONS

ACTH	: Adrenocorticotrophic hormone
ALS	:Acid labile aubaunit
Arg-Gly-Asp	:Arginine glycine aspargine
BUN	:Blood urea nitrogen
CAMP	:Cyclic adenosine monophosphate
CBC	:Complete blood count
CDGM	: Constitutional delay of growth and maturation
CDNA	:Complementary deoxyribonucleic acid
COL1AI	:Collagen 1 AI
DNA	:Deoxyribonucleic acid
EGF	:Epidermal growth factor
EGF-TGF-α	:Epidermal growth factor-Transforming growth factor-α
ESR	:Erythrocyte sedementation rate
ESRD	:End stage renal disease
GH	:Growth hormone
GHBP	:Growth hormone binding protein
GHRH	:Growth hormone releasing hormone
GnRH	:Gonadotropin releasing hormone
H.C.	:Head circumference
HER	:Human epidermal growth factor receptor
HGH-V	:Human growth hormone variant
HPL	:Human placental lactogen
I^{125}	:Iodine 125
IDDM	:Insuli dependant diabetes mellitus
IGFBP	:Insulin like growth factor binding protein
IGF-I	:Insulin like growth factor-I
IGF-II	:Insulin like growth factor-II

IRMA	:Immunoradiometric assay
IUGR	:Intrauterine growth retardation
JAK/STAT	:Janus kinases/Signal transduction activating transcription
Kb	:Kilo bite
Kd	:Kilo dalton
LH	:Lueteinizing hormone
MRNA	:Messenger ribonucleic acid
NHANES-III	National health and nutritional examination survey
NHCS	National centre for health statistics
NSB	Non specific binding
NSILA	Non suppressible insulin like activity
PACAP	Pituitary adenylate cyclase activating polypeptide
PHM-27	A peptide with structural homology to vaso active intestinal peptides
PIF	Prolctin inhibitory factor
PINP	Propeptide of type I procollagen
Pit-1	Pituitary 1 gene
PRF	Prolactin releasing factor
PRL	Prolactin
RIA	:Radioimmunoassay
SD	:Standard deviation
SM-A	:Somatomedin-A
SM-C	:Somatomedin-C
TGF-α	:Transforming growth factor-α
TRH	:Thyroid stimulating hormone
Mg/L	:Microgram/Litre

LIST OF FIGURES

INTRODUCTION AND AIM OF THE WORK

The most fundamental characteristic of childhood is that it is a time of growth. Children normally grow in a predictable manner. Deviation from a normal pattern of growth can be the manifestation of a wide variety of disease processes that include both endocrine and non endocrine disorders and can involve any organ system of the body. Growth disorders have been subdivided into primary growth abnormalities, in which the defect appears to be intrinsic to the growth plate, secondary growth disorders which are growth failure resulting from chronic disease or endocrine disorders and [illegible] which include genetic abnormalities [illegible] (CDGM) [illegible] maturation but also bone turnover and mineral deposition, so alterations of GH secretion may induce disturbances in skeletal growth and mineral metabolism (Giorgio, 1991).

Insulin like growth factor-I (IGF-I) has metabolic, mitogenic and differentiating effects on a wide variety of cell types. During fasting or chronic food restriction, the concentration of circulating IGF-I is reduced and correlates with growth rate in humans, indicating an important role for IGF-I in the regulation of growth. The expression of IGF-I is considered to be controlled by several hormones but mainly by GH (Ketelslegers et al., 1995).