بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

Biochemical Studies on Type 2 Diabetes Mellitus with Other Complications

THESIS

SUBMITTED FOR PARTIAL FULFILMENT OF

THE M.Sc. DEGREE IN

BIOCHEMISTRY

BY

WALEED MOHAMED SAYED IBRAHIM

B.Sc. of Biochemistry

Faculty of Science

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June 2000

APPROVAL SHEET FOR SUBMISSION

Title of the M. Sc. Thesis : Biochemical Studies on Type 2 Diabetes Mellitus with Other complications .

Name of the candidate : Waleed Mohamed Sayed Ibrahim .

This Thesis has been approved for submission by the supervisors :

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ABSTRACT

Name : Waleed Mohamed Sayed Ibrahim .

Title of the Thesis : Biochemical Studies on Type 2 Diabetes Mellitus with Other Complications .

Degree : M. Sc. of Science Thesis , Faculty of Science , Cairo University (2000) .

This work has been carried out to investigate the serum level of Malondialdehyde as free radical and the serum level of Uric acid as antioxidant in the patients of diabetes mellitus type 2 with and without complications . The relation between Malondialdehyde , Uric acid and Fasting Blood Glucose and Glycosylated Hemoglobin as markers of diabetes were discussed .

Key words : Diabetes mellitus type 2 , protein glycosylation , diabetic complications , diabetic nephropathy , diabetic retinopathy , cardiovascular disease , oxidative stress , Malondialdehyde , antioxidants and Uric acid .

Supervisors :

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Beside the work carried out in this thesis , the candidate had passed postgraduate studies for partial fulfillment of M.Sc. degree in the following topics :

Tissue Culture	Toxicology
Body Fluids	Cytology
Biological Analysis	Immunology
Enzymology	Radiation
Spectroscopy	Immuno Chemistry
Biochemistry	Applied Microbiology
Molecular Biology	Animal Physiology
Stereo Chemistry	Microbiology
Mathematics	

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The Abbreviation List

AGES	Advanced glycation end production
AST	Aspartate amino transferase
BDR	Background diabetic retinopathy
BMI	Body mass index
Comp.	Complications
CAD	Coronary artery disease
R	Correlation coefficients
CK	Creatine kinase
Cr	Creatinine
DM	Diabetes mellitus
DR	Diabetic retinopathy
DTPA	Diethylenetriamine penta acetate
EDTA	Ethylene diamine tetra acetate
FBG	Fasting blood glucose
GD	Gestational diabetes
GDM	Gestational diabetes mellitus
GBM	Glomerular basement membrane
GFR	Glomerular feltration rate
GOD	Glucose oxidase
G-6-PDH	Glucose-6-phosphate dehydrogenase
GOT	Glutamate oxalacetate transaminase
HB	Haemoglobin
HK	Hexo kinase
HDL	High density lipoprotein
IGT	Impaired glucose tolerance
IDDM	Insulin dependent diabetes mellitus
IHD	Ischaemic heart disease
ICA	Islet cell antibody
LDH	Lactate dehydrogenase
P	Level of significant
LDL	Low density lipoprotein
Macro.	Macrovascular
MDH	Malate dehydrogenase
MRDM	Malnutrition related diabetes mellitus
MDA	Malondialdehyde
MODY	Maturity onset diabetes of young
Micro.	Microvascular
MI	Myocardial infraction
- ve	Negative
Nephro.	Nephropathy
NAD^+	Nicotinamide adenine dinucleotide
$NADH^+$	Nicotinamide adenine dinucleotide + H^+
NADPH	Nicotinamide adenine dinucleotide phosphate + H^+
NIDDM	Non insulin dependent diabetes mellitus
POD	Peroxidase
+ ve	Positive
K	Potassium
PDR	Proliferative diabetic retinopathy

ROS	Reactive oxygen species
Retino.	Retinopathy
Na	Sodium
SD	Standard deviation
SOD	Superoxide dismutase
TBA	Thiobarbituric acid
TBARS	Thiobarbituric acid reactive substances
TC	Total cholesterol
TCA	Trichloroacetic acid
TG	Triglyceride
TPTZ	2 , 4 , 6 , Tripyridyls – triazine
UA	Uric acid
UAE	Urinary albumin excretion
VLDL	Very low density lipoprotein

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