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TISTOPATHOLOGICAL AND BIOCHEMICAL STUDIES ON THE EFFECT OF ANTIOMIDANTS ON DIABETES

A THESIS

Submitted to the Faculty of Science, El-Minia University for The award of Ph.D. Degree in Zoology (Histopathology and Histochemistry)

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List of Abbreviations

ACE Angiotensin-converting enzyme
AGE Advanced glycation end product

A group only Azathioprine group only

ARB Angiotensin receptor blocking agents

CD4 Cluster of differentiation 4
CML Carboxymethyl lysine

COX-2 Cyclooxygenase

Cr Creatinine

CSAD Cysteine sulfinic acid decarboxylase

DCCT Diabetes control and complication trial

DN Diabetic neuropathyDR Diabetic retinopathyECM Extracellular matrix

EPR Electron paramagnetic resonance

ESRD End-stage renal disease

F-1,6-Bpase Fructose-1, 6-bisphosphatase

F-6-P Fructose-6-phosphate
FBPase-2 Fructose bisphosphatase 2

GBM Glomerular basement membrane
GDM Gestational diabetes mellitus
GFR Glomerular filtration rate
HbA1c Glycosylated hemoglobin

HD Hemodialysis

HDL High density lipoprotein
HLA Human lymphocytic antigen
HPL Human placental lactogen

ICA Islet cell antibodies

IDDM Insulin dependent diabetes mellitus

IFN Interferon

IGT Impaired glucose tolerance

IL Proinflammatory cytokines interleukin

MDA Malondialdehyde

MGN Membranous glomerulonephritis
MHC Major histocompatibility complex

NASH
NCV
Nerve conduction velocity
NDDG
National diabetes data group

NF-[kappa]B Necrosis factor-[kappa]B

NIDDM NON Insulin dependent diabetes mellitus

NOD Non-obese diabetic mouse
P5P Pyridoxal-5'-phosphate
PBN Phenyl-N-tert-butylnitrone

PEPCK Phosphoenol-pyruvate carboxykinase

PFK2 Phosphofructokinase 2

PKC Protein kinase C

PTH Parathyroid hormone

Q of L Quality of life

QAFT Quantitative autonomic function tests

QST Quantitative sensory tests
ROS Reactive oxygen species
SOD Superoxide dismutase

STZ Streptozotocin

TBM Tubular basement membrane

TNF Tumor necrosis factor
T-S group Taurine-selenium group

T-S&A Taurine-selenium and azathioprine group

UAE UKPDS

UKPDS United Kingdom Prospective Diabetes Study

USRDS US Renal Data System

VEGF Vascular endothelial growth factor

WHO World health organization

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