



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



شبكة المعلومات الجامعية
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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

Study of Protective Roles of Some Techniques in Ischemia Reperfusion Injury in the Liver of Male Rats

Thesis

*Submitted for Partial Fulfillment of MD Degree
in Physiology*

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Ain Shams University
2020**



Acknowledgement

*First of all, I thank **ALLAH** for blessing this work as a part of his generous help throughout my life.*

*I would like to acknowledge my sincere gratitude, and appreciation to **Prof. Dr. Bataa Mohamed Ali elKafoury**, Professor of Physiology, Faculty of Medicine, Ain Shams University, for suggesting and planning this study, and for her supervision and scientific support throughout this study. It was an honor to work under her supervision.*

*I would like to thank **Dr. Mohamed Hassan ElSayed**, Assistant Professor of Physiology, Faculty of Medicine, Ain Shams University, for his kind support, encouragement and his keen supervision.*

*I would like to display my indebtedness to **Dr. Doaa Mohamed Abdel Wahed Mohamed**, Lecturer of Physiology, Faculty of Medicine, Ain Shams University, for her aid and meticulous supervision throughout the practical experiments.*

*I would like to thank **Dr. Eman Kamal Mohammed Habib**, Assistant Professor of Anatomy, Faculty of Medicine, Ain Shams University, for support and for performing the histological assessment.*

Finally, I would like to offer my thanks to my family and all my colleagues in Physiology Department Faculty of Medicine, Ain Shams University.

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List of Abbreviations

Abb.	Description
ADP	Adenosine diphosphate
AKT	Protein kinase B
ALP	Alkaline phosphatase
ALT	Alanine transaminase
AMP	Adenosine monophosphate
AMPK	AMP-dependent kinase
ANOVA	Analysis of variance
AST	Aspartate transaminase
ATP	Adenosine triphosphate
BAK	BCL-2 antagonist/killer
BAX	BCL-2-associated X protein
BCL-2	B-cell lymphoma 2
BH4	Tetrahydrobiopterin
Cdna	Complementary DNA
c-GPX	Cellular glutathione peroxidase
CK	Cytotoxic killer
Cyt c	Cytochrome c
DEPC	Diethyl pyrocarbonate
DIPC	Delayed ischemic preconditioning
DMSO	Dimethyl sulfoxide
DNPH	2,4- dinitrophenylhydrazine
Dntp	Deoxyribonucleotide triphosphate

 List of Abbreviations

Abb.	Description
DRP1	Dynamine related protein
DTT	1, 4 Dithio DL-threitol.
Duox	Dual oxidase
EDTA	Ethylene diamine tetra-acetic acid
eNOS	Endothelial nitric oxide synthase
FAD	Flavin Adenine Dinucleotide
Fis1	Fission 1
FOXO3a	Forkhead box protein O 3a
GC	Guanylate cyclase
GPX	Glutathione peroxidase
GR	Glutathione reductase
GSH	Glutathione
GSK-3β	Glycogen Synthase Kinase 3
GSSG	Oxidized glutathione
H₂O₂	Hydrogen peroxide
Hb	Haemoglobin
HEPES	N-2 Hydroxyethyl piperzine N-2 ethan sulfonic acid
H&E	Hematoxyline and eosine
HIF1α	Hypoxia iducible factor1 α
HO-1	Heme oxygenas1
HREs	Hypoxia response elements
HRP	Horse Radish Peroxidase
IL	Interleukin

 List of Abbreviations

Abb.	Description
INF	Interferone
iNOS	Inducible nitric oxide synthase
IPC	Ischemic preconditioning
IPOST	Ischemic postconditioning
IR	Ischemia reperfusion
KATP	ATP-sensitive K ⁺ channel
LDH	Lactate dehydrogenase
LSD	Least significant difference
Mdv1	Mitochondrial division 1
MEK1/2	Mitogen-activated protein kinase kinase-1/2
MitoQ	Mitoquinone
MMLV-RT	Moloney Murine Leukemia Virus-Reverse Transcriptase
MPM	Matrix metalloproteinases
MPT	Mitochondrial permeability transition
mPTP	Mitochondrial permeability transition pore
mtDNA	Mitochondrial DNA
mtROS	Mitochondrial reactive oxygen species
NADPH	Nicotineamide adenine dinucleotide phosphate
NaOH	Sodium hydroxide
nNOS	Neuronal nitric oxide synthase
NO	Nitric oxide

 List of Abbreviations

Abb.	Description
NOS	Nitric oxide synthase
Nox	NADPH-oxidase
NQO1	NAD(P)H Quinone Dehydrogenase 1
OD	Optic density
OMM	Outer mitochondrial membrane
Opa1	Optic atrophy 1
OXPHOS	Oxidative phosphorylation
P70S6K	Phosphoprotein 70 ribosomal protein S6 kinase
PBS	Phosphate buffered saline
PCR	Polymerase chain reaction
PI3K	Phosphoinositide-3 kinase
PINK1	PTEN-induced putative kinase protein 1
PKA	Protein kinase A
PKC	Protein kinase C
PMSF	Phenyl methane sulfonyl fluoride
PTEN	Phosphatase and tensin homolog
PO2	Oxygen pressure
qPCR	quantitative PCR
RIPC	Remote ischemic preconditioning
RISK	Reperfusion injury salvage kinases
RNA	RiboNucleic Acid
RNase	Ribonuclease
RNS	Reactive nitrogen species

 List of Abbreviations

Abb.	Description
RONs	Reactive oxygen nitrogen species
ROS	Reactive oxygen species
RQ	Relative quantification
RT-PCR	Real time polymerase chain reaction
SABC	HRP-Streptavidin conjugate
SEC	Sinusoidal endothelial cell
SOD	Superoxide dismutase
TBA	Thiobarbituric acid
TH	Topical hypothermia
TMB	3,3',5,5'-tetramethylbenzidine membrane
TMMP	Transition of mitochondrial membrane pore
TNFα	Tumor necrosis factor
TPP+	Triphenylphosphonium
TRX2	Thioredoxin

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