

Study of the Role of Nitric Oxide in Cardiac Performance during Experimental Ischemic Cardiac Arrest and Reperfusion

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Dedication

*There are special people in our lives who never
leave us even after they are gone.*

Prof. MAHMOUD HANI AYOBE

*Our father in physiology, who left fingerprints of
grace on our lives, for his kindness and devotion,
and for his endless support when he was here.*

His selflessness will always be remembered.

He won't be forgotten.

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List of Abbreviations

Akt	Protein Kinase
AMI	Acute Myocardial infarction
ATP	Adenosine Tri phosphate
BH4	Tetrahydrobiopterin
CABG	Coronary Artery Bypass Grafting
cAMP	Cyclic Adenosine mono phosphate
cGMP	Cyclic Guanyl mono phosphate
COX	Cyclo-oxygenase
EDTA	Ethylene diamine tetra-acetic acid
eNOS	Endothelial cells nitric oxide synthase
FAD	Flavin adenine dinucleotide
FMN	Flavin mononucleotide
GSK-3β	Glycogen synthase kinase-3 beta
H₂O₂	Hydrogen Peroxide
HR	Heart Rate
HRT	Half-relaxation Time
iNOS	Inducible nitric oxide synthase
IPC	Ischemic Preconditioning
I-R	Ischemia Reperfusion
L-NAME	N_ω-Nitro-L-arginine methyl ester hydrochloride.
MDA	Malondialdehyde
MFR	Myocardial Flow Rate
mK_{ATP}	Mitochondrial Potassium ATP channel.

mPTP	Mitochondrial Permeability Transition Pore.
NAD	Nicotineamide adeninedinucleotid
nNOS	Neuronal cells nitric oxide synthase
NO	Nitric Oxide
NOS	Nitric Oxide synthase
ONOO⁻	Peroxynitrite
PDT	Peak Developed Tension
PI3K	Phosphoinositide-3 kinase
PKG	Protein Kinase G
POC	Ischemic Post conditioning
RIP	Remote Preconditioning
RISK	Reperfusion Injury Salvage Kinase
RNS	Reactive Nitrogen Species
ROS	Reactive Oxygen Species
SAFE	Survivor Activating Factor Enhancement
TNFα	Tumor necrosis factor α
TPT	Time to Peak Tension
UPR	Unfolded Protein Response
β-NADPH	β-nicotineamide adeninedinucleotid phosphate

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