

**The Possible Role of Hypoxia Inducible
Factor in understanding the Protective
Mechanism of Remote Ischemia Pre-
conditioning against Ischemia Reperfusion
Injury in Isolated
Hearts of Rats**

A thesis

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وَقُلْ اَعْمَلُوا فَسَيَرَى اللّٰهُ
عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ

صَلَّى
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List of Abbreviations

ATP	: Adenosine triphosphate
ANS	: Autonomic nervous system
β1 , β2	: Beta 1,Beta 2
BW	: Body weight
Ca²⁺	: Calcium
cGPx	: Cellular glutathione peroxidase
CABG	: Coronary artery bypass grafting
CHD	: Coronary heart disease
Q-Tc	: corrected Q-T interval
CRP	: C-reactive protein
DNA	: Deoxyribonucleic acid
ECG	: Electrocardiogram
ELIZA	: Enzyme linked immunosorbant assay
GLUTs	: Glucose transporters
GPx	: Glutathione peroxidase
GR	: Glutathione reductase
HRT	: Half relaxation time
HR	: Heart rate

List of Abberrations

HIF-1α	: Hypoxia inducible factor 1 alpha
HIF-1β	: Hypoxia inducible factor 1 beta
HIF-2α	: Hypoxia inducible factor 2 alpha
HREs	: Hypoxia response elements
IU	: International units
IPC	: Ischemia-pre-conditioning
IR	: Ischemia-reperfusion
IRI	: Ischemia-reperfusion injury
Kg	: Kilogram
KHB	: Krebs-Henseleit Bicarbonate
LDH	: Lactate dehydrogenase
LSD	: Least Significant Difference
LV	: Left ventricle
LV/BW	: left ventricle/body weight
LDL-C	: Low density lipoprotein cholesterol
MDA	: Malondialdehyde
m	: Mean
mRNA	: Messenger ribonucleic acid
mg	: Milligram
ml	: Milliliter

List of Aberrations

mmHg	: Millimeter mercury
msec	: Millisecond
min	: Minute
mPTP	: Mitochondrial permeability transition pore
MFR	: Myocardial flow rate
MFR/LV	: Myocardial flow rate per LV weight
MI	: Myocardial infarction
NAD⁺	: Nicotinamide adenine dinucleotide
NADP⁺	: Nicotinamide adenine dinucleotide phosphate
n	: Number
OD	: Optical density
Q-To	: Original Q-T interval
GSSG	: Oxidized glutathione
Ox-LDL	: Oxidized low density lipoprotein
O₂	: Oxygen
PT	: Peak developed tension
PT/LV	: Peak developed tension per left ventricular weight
PCI	: Percutaneous coronary intervention
PMI	: Perioperative Myocardial Injury

List of Aberrations

ROS	: Reactive oxygen species
NADH	: Reduced nicotinamide adenine dinucleotide
NADPH	: Reduced nicotinamide adenine dinucleotide phosphate
RIC	: Remote ischemic conditioning
RIPC	: Remote ischemic pre-conditioning
rpm	: Revolutions per minute
SFBC	: Societé Français de Biologie Clinique
SD	: Standard Deviation
SEM	: Standard Error of the Mean
SPSS	: Statistical Program for Social Science
TBA	: Thiobarbituric Acid
TBARS	: Thiobarbituric acid reactive substances
TPT	: Time to peak tension
TCA	: Trichloroacetic acid
UV	: Ultraviolet
VEGF	: Vascular endothelial growth factor
WH	: Whole heart
WH/BW	: Whole heart/body weight

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