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بالرسالة صفحات

لم ترد بالأصل

**A Study on
The Effect of Sildenafil Citrate on Acute Renal
Ischemic-Reperfusion Injury in male Rats**

Thesis
*Submitted in partial fulfillment for the Master Degree in
Physiology*
(Basic Medical Sciences)

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Abstract

The present study was designed to investigate if sildenafil citrate has a protective role in renal I/R injury and to study its possible mechanisms of action with the aim of establishing a mechanism that may aid in treatment.

Key word: Sildenafil , I/R , Ischemic-Reperfusion , *Physiology*

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List of Abbreviations

A20	anti-apoptotic and anti-inflammatory gene; inhibits cytokine-induced apoptosis
ADMA	The asymmetrical dimethylarginine
Akt	Protein kinase B
AMP	adenosine monophosphate
AP	activating protein
ATP	Adenosine triphosphate
b-arrestin	the first non-visual arrestin cloned; a protein important for regulating signal transduction
bcl-2	an anti-apoptotic gene that confers the ability to block neuronal cell death after transient ischemia
BP	Blood pressure
BUN	Blood urea nitrogen
C5	complement component 5
Ca	Calcium
CaM	calmodulin (calcium modulated protein)
cAMP	cyclic adenosine monophosphate
CCD	cortical collecting duct
cGMP	Cyclic guanosine monophosphate
CYP2C19	Cytochrome P450 2C19
CYP2C9	Cytochrome P450 2C9
CYP2D6	Cytochrome P450 2D6
DDAH	dimethylarginine dimethylaminohydrolase
DNA	Deoxyribonucleic acid
ED	erectile dysfunction
EDTA	Ethylenediaminetetraacetic acid
ENA	epithelial- derived NAP (neutrophil-activating peptide)
ENaC	the amiloride sensitive sodium channel

eNOS	Endothelial Nitric Oxide Synthase
ETB	Endothelin receptor B
FSAD	Female sexual arousal disorder
FSD	female sexual dysfunction
GFR	glomerular filtration rate
GMP	non-cyclic guanosine monophosphate
GTP	a guanine nucleotide triphosphate
H ⁺	hydrogen ion
HIF	hypoxia inducible factor
HLA	human leukocyte antigens
HO-1	hemoxygenase-1
I/R	Ischemia- reperfusion
IC ₅₀	The half maximal inhibitory concentration
ICAM	intercellular adhesion molecule
IFN	interferon
IgG1	immunoglobulin G
IKK	I κB kinase
IL	interleukin
IMCD	inner medullary collecting duct
iNOS	Inducible Endothelial Nitric Oxide Synthase
IVF	in vitro fertilization
IκB	inhibitor of κB
K	potassium
LFA	leukocyte function associated antigen
l-NAME	Nω-nitro-l-arginine methyl ester
LPS	lipopolysaccharide
macNOS	the murine macrophage form of iNOS
MAPK	mitogen activated kinase
MCP-1	monocyte chemotactic protein-1
Met-RANTES	a blocking RANTES antibody; the RANTES receptor antagonist
MHC	Major Histocompatibility Complex

MIP	macrophage inflammatory protein
MMPs	matrix metalloproteinases
MPO	myeloperoxidase
mRNA	messenger Ribonucleic acid
mTOR	mammalian target of rapamycin
Na	sodium
NaCl	sodium chloride
NAION	Nonarteritic anterior ischemic optic neuropathy
NaOH	Sodium hydroxide
NF	nuclear factor
NF- κ B	NF kappa B; a protein produced by the body's immune system when it is under attack
NKCC2	The sodium potassium chloride co-transporter ; a protein that aids in the active transport of sodium, potassium, and chloride into and out of cells
NLA	the l-arginine analogues nitro-l-arginine
nNOS	neuronal Nitric Oxide Synthase
NO	nitric oxide
NO ₂ -	nitrite
NO ₃ -	nitrate
NOS	nitric oxide synthase
O	superoxide
ONOO-	peroxynitrite
PBS	phosphate buffered saline.
PCR	polymerase chain reaction
PDE	phosphodiesterases
PDE5	phosphodiesterase type 5
pGC	particulate guanylyl cyclases
PI3-kinase	phosphatidylinositol 3-OH kinase
PIN	protein inhibitor of nNOS
PKG	protein kinase G
PS519	proteasome inhibitor PS519

PSD-93	post-synaptic density protein-93
Ptn	Protein
RA	receptor antagonist
RANTES	Regulated upon Activation, Normal T-cell Expressed, and Secreted
Rpm	round per minute
RSBP	rat tail systolic BP
SBP	systolic blood pressure
SC	sildenafil citrate
SD	Standard deviation
sGC	soluble guanylyl cyclases
SGK1	serum and glucocorticoid-inducible protein kinase 1
SSRIs	Selective serotonin reuptake inhibitors or serotonin-specific reuptake inhibitor; a class of compounds typically used as antidepressants in the treatment of depression, anxiety disorders, and some personality disorders
STD	Standard
TAL	the thick ascending limb of Henle's loop
TGF	tubuloglomerular feedback
TGF- β 1	transforming growth factor beta
THAL	the thick ascending limb of loop of henle
TIA	transient ischemic attack
TLR	Toll like receptor
TNF	tumour necrotic factor
VEGF	vascular endothelial growth factor
Vs	versus
vsmNOS	the vascular smooth muscle form of iNOS
ZnSO ₄	Zinc sulfate