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Modulation of doxorubicin induced neurotoxicity by astaxanthin in experimental rat model

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List of abbreviations

- 6-OHDA:** 6-hydroxydopamine
- AAP:** 4-aminoantipyrine
- Ac-DEVD-pNA:** Acetyl-Asp-Glu-Val-Asp-p-nitroanilide
- AChE:** Acetylcholinesterase
- AKI:** Acute kidney injury
- ALP:** Alkaline phosphatase
- ANOVA:** Analysis of variance
- Apo-A1:** Apolipoprotein A1
- ARE:** Antioxidant response element
- AST:** Astaxanthin
- ATCh:** Acetylthiocholine
- BAD:** Bcl-2-associated death promoter
- Bax:** Bcl-2-associated X protein
- BBB:** Blood brain barrier
- Bcl-2:** B-cell lymphoma 2
- Bcl-xl:** B-cell lymphoma-extra large
- BDNF:** Brain derived neurotrophic factor
- BSA:** Bovine serum albumin
- COX-2:** Cyclooxygenase-2
- CNS:** Central nervous system
- DAB:** Diaminobenzidine
- DDA:** Disodium disuccinate astaxanthin
- DHA-OOH:** Docosahexaenoic acid hydroperoxide

List of abbreviations

DHBS: 3,5-dichloro-2-hydroxy-benzenesulfonic acid

DOX: Doxorubicin

DOXol: Doxorubicinol

DMSO: Dimethyl sulfoxide

DTNB: Dithiobisnitrobenzoic acid

FDA: Food and drug administration

FSGS: Focal segmental glomerulosclerosis

GFAP: Glial fibrillary acidic protein

GPx: Glutathione peroxidase

GSH: Reduced glutathione

GST- α 1: Glutathione-S-transferase- α 1

HO-1: Heme oxygenase-1

HRP: Horse radish peroxidase

HSC: Hepatic stellate cells

H&E: Hematoxylin and eosin

IAP: Inhibitor of apoptosis

I κ B: Inhibitor of kappa B

I κ KB: Inhibitor kappa B kinase

IL: Interleukin

iNOS: Inducible nitric oxide synthase

IRP: Iron regulatory protein

JNK1: Janus kinase 1

LA: Locomotor activity

MDA: Malondialdehyde

MnSOD: Manganese superoxide dismutase

List of abbreviations

MPP⁺:	1-methyl-4-phenylpyridinium
MPTP:	1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine
mRNA:	Messenger RNA
NADP:	Nicotinamide adenine dinucleotide phosphate
NCI:	National Cancer Institute
NF-κB:	Nuclear factor kappa B
NLRP3:	Nucleotide binding oligomerization domain-like receptor protein 3
NO:	Nitric oxide
Nrf-2:	Nuclear erythroid 2-related factor 2
OD:	Optical density
PBS:	Phosphate buffer saline
PA:	Passive avoidance
PCCI:	Post-chemotherapy induced cognitive impairment
PGE-2:	Prostaglandin E-2
PI3K/AKT:	Phosphatidyl inositol 3 kinase/protein kinase B
pNA:	p-Nitroaniline
ROS:	Reactive oxygen species
RNS:	Reactive nitrogen species
SH:	Sulfhydryl group
SP Conjugate:	Streptavidin-peroxidase conjugate
STAT3:	Signal transducer and activator of transcription 3
TBA:	Thiobarbituric acid
TBARS:	Thiobarbituric acid reactive species
TCA:	Trichloroacetic acid
TERT:	Telomerase reverse transcriptase

List of abbreviations

TGF- β 1: Transforming growth factor-beta1

Th: T-helper

TNB: Thionitrobenzoate

SGPT: Serum glutamic-pyruvic transaminase

SGOT: Serum glutamic oxaloacetic transaminase

SOD: Superoxide dismutase

TBS: Tris-buffered saline

WHO: World Health Organization

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