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LIST OF ABBREVIATIONS AND SYMBOLS

α	=	alpha
β	=	beta
$^{\circ}\text{C}$	=	degree celsius
%	=	percent
ADP	=	adenosine diphosphate
AMP	=	adenosine monophosphate
ATP	=	adenosine triphosphate
ANOVA	=	analysis of variance
ARF	=	acute renal failure
BUN	=	blood urea nitrogen
$\text{C}_4\text{H}_4\text{N}_2\text{O}_2\text{S}$	=	2-thiobarbituric acid
$\text{C}_6\text{H}_{12}\text{O}_6$	=	D(-)-fructose and D(+)-glucose anhydrous
$\text{C}_7\text{H}_{16}\text{O}_4$	=	1,1,3,3-tetramethoxypropane
$\text{C}_8\text{H}_{18}\text{N}_2\text{O}_4\text{S}$	=	4-(2-hydroxyethyl)piperazine-1-ethanesulonic acid or HEPES
$\text{C}_9\text{H}_{10}\text{N}_2\text{O}_3$	=	para-aminohippuric acid
$\text{C}_{12}\text{H}_{16}\text{Cl}_2\text{N}_2$	=	N-(1-naphthyl)-ethylenediamine dihydrochloride
$\text{C}_{12}\text{H}_{25}\text{NaO}_4\text{S}$	=	sodium dodecyl sulfate
$\text{C}_{14}\text{H}_{10}\text{O}$	=	anthrone
C+DW	=	cisplatin 7.5 mg/kg + distilled water
C+HSE	=	cisplatin 7.5 mg/kg + <i>Hibiscus sabdariffa</i> Linn. water extract 250 mg/kg

LIST OF ABBREVIATIONS AND SYMBOLS (continued)

$\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$	=	calcium chloride dihydrate
CAT	=	catalase
CCl_3COOH	=	trichloroacetic acid
CCl_4	=	carbon tetrachloride
cGMP	=	cyclic guanosine monophosphate
$\text{CH}_3(\text{CH}_2)_3\text{OH}$	=	n-butanol
CH_3COOH	=	acetic acid
$\text{CH}_3\text{COONa} \cdot 3\text{H}_2\text{O}$	=	sodium acetate trihydrate
C_{in}	=	clearance of inulin
Cl^-	=	chloride ion
CLA	=	Cypridina luciferin analog
cm	=	centimeter
C_{PAH}	=	clearance of para-aminohippuric acid
Cu^{2+}	=	copper ion
CuSO_4	=	copper sulfate
$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$	=	copper (II) sulfate pentahydrate
C_X	=	clearance of X
DW	=	distilled water
FeCl_2	=	ferrous chloride
FE_K	=	fractional excretion of potassium
FE_{Na}	=	fractional excretion of sodium

LIST OF ABBREVIATIONS AND SYMBOLS (continued)

FE_x	=	fractional excretion of X
g	=	gram
GC/MS	=	gas chromatography/mass spectrometry
GFR	=	glomerular filtration rate
GSH	=	glutathione
GSH-Px	=	glutathione peroxidase
GST	=	glutathione-S-transferase
$H_2DCF-DA$	=	dichlorodihydrofluorescein diacetate
H_2O	=	water
H_2O_2	=	hydrogen peroxide
H_2SO_4	=	sulfuric acid
$H_6N_2O_3S$	=	ammonium sulfamate
H^+	=	hydrogen ion
HCl	=	hydrochloric acid
HCO_3^-	=	bicarbonate ion
Hct	=	hematocrit
HNE	=	4-hydroxynonenal
$HO\cdot$	=	hydroxyl radical
HOCl	=	hypochlorous acid
$HOO\cdot$	=	hydroperoxyl radical
HPLC	=	high-performance liquid chromatography

LIST OF ABBREVIATIONS AND SYMBOLS (continued)

HR	=	heart rate
hr	=	hour
HS	=	<i>Hibiscus sabdariffa</i> Linn.
HSCF	=	chloroform soluble fraction of the ethanolic extract of the dried flowers of <i>Hibiscus sabdariffa</i> Linn.
HSE	=	<i>Hibiscus sabdariffa</i> Linn. water extract
HSEA	=	ethyl acetate soluble fraction of the ethanolic extract of the dried flowers of <i>Hibiscus sabdariffa</i> Linn.
i.p.	=	intraperitoneally
i.v.	=	intravenously
K ⁺	=	potassium ion
KCl	=	potassium chloride
kg	=	kilogram
kw	=	kidney weight
l	=	liter
LDL	=	low-density lipoprotein
LLC-PK1	=	renal proximal tubular epithelial
L-NAME	=	NG-nitro-L-arginine methyl ester
µg	=	microgram
µl	=	microliter
µM	=	micromolar

LIST OF ABBREVIATIONS AND SYMBOLS (continued)

M	=	molar
MABP	=	mean arterial blood pressure
MDA	=	malondialdehyde
mg	=	milligram
MgSO ₄ ·7H ₂ O	=	magnesium sulfate heptahydrate
min	=	minute
ml	=	milliliter
mM	=	millimolar
mmHg	=	millimeter mercury
mmol	=	millimole
N	=	normal
NAG	=	N-acetyl-β-D-glucosaminidase
Na ₂ HPO ₄	=	di-sodium hydrogen phosphate
Na ⁺	=	sodium ion
NaCl	=	sodium chloride
NADPH	=	nicotinamide adenine dinucleotide phosphate
NaH ₂ PO ₄ ·2H ₂ O	=	sodium dihydrogen phosphate dihydrate
NaHCO ₃	=	sodium hydrogen carbonate; sodium bicarbonate
NaNO ₂	=	sodium nitrite
NaOH	=	sodium hydroxide
NH ₂ CH ₂ COOH	=	glycine

LIST OF ABBREVIATIONS AND SYMBOLS (continued)

NH_3	=	ammonia
$(\text{NH}_3)_2\text{Cl}_2\text{Pt}$	=	cisplatin or <i>cis</i> -diaminedichloroplatinum (II)
nl	=	nanoliter
nm	=	nanometer
nmol	=	nanomole
$\text{NO}\cdot$	=	nitric oxide radical
$^1\text{O}_2$	=	singlet oxygen
$\text{O}_2\cdot^-$	=	superoxide anion radical
O_3	=	ozone
ONOO^-	=	peroxynitrite
P	=	p-value
PAH	=	para-aminohippuric acid
PE	=	polyethylene tube
P_{in}	=	plasma concentration of inulin
P_{K}	=	plasma concentration of potassium
pmol	=	picomole
P_{Na}	=	plasma concentration of sodium
P_{PAH}	=	plasma concentration of para-aminohippuric acid
Pt	=	platinum
$[\text{P}_X]$	=	concentration of X in plasma
RBF	=	renal blood flow

LIST OF ABBREVIATIONS AND SYMBOLS (continued)

RO \cdot	=	alkoxyl radical
ROO \cdot	=	peroxyl radical
ROS	=	reactive oxygen species
RPF	=	renal plasma flow
rpm	=	round per minute
SHR	=	spontaneously hypertensive rat
S.E.M.	=	standard error of mean
SOD	=	superoxide dismutase
TBA	=	thiobarbituric acid
TBARs	=	thiobarbituric acid-reactive substances
t-BHP	=	<i>tert</i> -butylhydroperoxide
TEA	=	tetraethylammonium
TUNEL	=	terminal deoxynucleotidyl transferase biotin-dUTP nick end labeling
U	=	enzyme activity unit
USA	=	United States of America
$U_K \dot{V}$	=	potassium excretion rate
$U_{Na} \dot{V}$	=	sodium excretion rate
[U _X]	=	concentration of X in urine
\dot{V}	=	urine flow rate