

Abbreviations

As (III): Arsenite; **As** (V): Arsenate; **As^{III}**: Sodium arsenite; **ATP**: Adenosine triphosphate; **AKT**: Protein Kinase B; **ACTH**: Adrenocorticotropic hormone; **BAL**: British Anti Lewisite; **BW**: Body weight; **BSA**: Bovine serum albumin; **CPCSEA**: Committee for the purpose of control and supervision of experiments on animals; **cm**: centimetre; **Cur**: Curcumin; **CD**: Conjugated Dienes; **CCPS**: Pectic polysaccharide; **cDNA**: Complementary DNA; **DMPS**: 2, 3, dimercaptopropane sulfonate; **DHEA**: Dehydroepiandrosterone; **DNA**: Deoxyribonucleic acid; **DTNB**: 5-5' dithiobis-2-nitrobenzoic acid; **DMSA**: Meso 2, 3-dimercapto-succinic acid; **DMPS**: 2, 3- dimercaptopropane sulfonic acid; **DHEA**: Dehydroepiandrosterone; **D₂O**: Deuterium oxide; **DMA**: Dimethylarsinic acid; **EDTA**: Ethylenediamine tetra acetic acid; **ECNPs**: Encapsulated curcumin chitosan nanoparticles; **Esr-1**: Estradiol receptor alpha; **eTHF**: Ethyltetrahydrofolate; **EthBR**; ethidium bromide; **ELISA**: Enzyme-linked immune sorbent assay; **FSH**: Follicle-stimulating hormone; **FA**: Folic acid; **FTIR**: Fourier transform infrared; **g**: Gravitational force; **GnRH**: Gonadotrophin releasing hormone; **GPx**: Glutathione peroxidase; **GAPDH**: Glyceraldehydes 3-phosphate dehydrogenase; **GSH**: Reduced glutathione; **GIT**: Gastrointestinal tract; **GSSG**: Oxidized glutathione; **Hcy**: Homocysteine; **H₂O₂**: Hydrogen peroxide; **HPLC**: High-performance liquid chromatography; **HRP**: Horse radish peroxidase; **HSD**: Hydroxysteroid dehydrogenase; **hr**: Hour; **HDL**: High-density lipoproteins; **Hcl**: Hydrochloric acid; **IL-6**: Interleukin-6; **Kg**: Kilogram; **KBr**: Potassium bromide; **LDL**: Low-density lipoproteins; **LDH**: Lactate dehydrogenase; **LH**: Luteinizing hormone; **MDA**: Malondialdehyde; **MPA**: Metaphosphoric acid; **mg**: Microgram; **Min**: Minute; **ml**: Millilitre; **mA**: Miliampere; **MT-1**: Metallothionein-1; **MMA**:

Monomethylarsonic acid; **mmole**: Milli molar; **N**: Normal; **nm**: Nanometre; **NAD**: Nicotinamide adenosine dinucleotide; **NADP**: Nicotinamide adenine dinucleotide phosphate; **NPSH**: Non protein soluble thiol; **NMR**: Nuclear magnetic resonance; **NF- κ B**: Nuclear factor kappa-light-chain-enhancer of activated B cells; **OD**: Optical density; **PVDF**: Polyvinylidene difluoride; **Px**: Peroxidase; **PBST**: Phosphate buffered saline with 0.1% Tween 20; **PARP**: Poly ADP ribose polymerase; **P**: Probability; **pM**: Pico molar; **ppm**: Parts per million; **PCNA**: Proliferating cell nuclear antigen; **PCR**: Polymerase chain reaction; **PBS**: Phosphate buffer saline; **ROS**: Reactive oxygen species; **RNA**: Ribonucleic acid; **rpm**: Revolution per minute; **SGOT**: Serum glutamic oxaloacetic transaminase; **SGPT**: Serum glutamic pyruvic transaminase; **SOD**: Superoxide dismutase; **STZ**: Streptozotocin; **SAM**: S-Adenosyl methionine; **SD**: Standard deviation; **SE**: Standard error; **SEM**: Scanning electron microscope; **SDFCL**: S-D Fine Chem. Ltd; **SDS PAGE**: Sodium dodecyl sulphate-polyacrylamide; **TEM**: Transmission electron microscope; **TG**: Triglyceride; **TNF- α** : Tumour necrosis factor alpha; **TMB**: 3,3',5,5'- Tetramethylbenzidine; **TBA**: Thiobarbituric acid; **TBARS**: Thiobarbituric acid reactive substances; **TCA**: Tri-chloro acetic acid; **UV-vis**: Ultraviolet-visible **V**: Volt; **W/V**: Weight/Volume; **XRD**: X-ray diffraction; **μ l**: Micro litre; **μ M**: Micro molar; **μ g**: Micro gram; **$[(\text{CH}_3)_2\text{AsOO}^\bullet]$** : Dimethylarsinic peroxy radicals; **ROO^\bullet** : Peroxy radical; **NO^\bullet** : Nitric oxide; **O_2** : Singlet oxygen;