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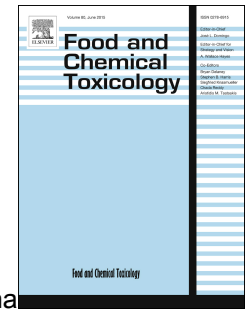

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Brazil nut improves the oxidative metabolism of superoxide-hydrogen peroxide chemically-imbalanced human fibroblasts in a nutrigenomic manner

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Abbreviations: Ala, alanine; BN, Brazil nut; BNs, Brazil nuts; BNAE, Brazil nut aqueous extract; CAT, catalase (E.C. 1.11.1.6); DCFH-DA, 2′,7′-Dichlorodihydrofluorescein diacetate; DMBA, 7,12-dimethylbenz[a]anthracene; DMEM, Dulbecco's Modified Eagle Medium; FBS, Fetal Bovine Serum; GPx, glutathione peroxidase (EC 1.11.1.9); Glutathione reduced form (GSH); Glutathione oxidized form (GSSG); HFF-1, Human Foreskin Fibroblast Cell Line; HPLC-DAD, High performance liquid chromatography – Diode-array detection; ICP-MS, Inductively Coupled Plasma – Mass Spectrometry ; MnTBAP, Manganese (III) tetrakis (4-benzoic acid) porphyrin chloride; NADPH, Nicotinamide Adenine dinucleotide phosphate reduced; NO, nitric oxide; $O_2^{\bullet-}$, superoxide radical; $OH^{\bullet}$, hydroxyl radical; Paraquat, 1,1'-Dimethyl-4,4-Bipyridinium dichloride hydrate; PBS, phosphate-buffered saline; ROS, Reactive Oxygen Species; SD, standard deviation; Se, Selenium; Sec, selenocysteine amino acid; SeMet, seleno-L-methionine; S-HP, Superoxide-hydrogen peroxide; SNP, single nucleotide polymorphism; SOD, superoxide dismutase (EC 1.15.1.1); TBARS, thiobarbituric acid reactive substances; tRNA, transfer ribonucleic acid; tRNA[Ser]Sec, selenocysteine designated tRNA; TrxR, thioredoxin reductase (EC 1.8.1.9); Val, valine; Val16Ala-SOD2, human manganese-dependent superoxide dismutase enzyme gene polymorphism.