Title: Selenite activates the ATM kinase-dependent DNA repair pathway in human osteosarcoma cells with mitochondrial dysfunction

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Selenite activates the ATM kinase-dependent DNA repair pathway in human osteosarcoma cells with mitochondrial dysfunction

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List of Abbreviations

ATM, ataxia teleangiectasia mutated kinase; **BRCA1**, breast cancer 1; **DAF-FM**, 4-Amino-5-methylamino- 2′, 7′-difluorofluorescein; **DAPI**, 4',6-diamidino-2-phenylindole; **DBS**, double strand break; **GPx**, glutathione peroxidase; **γH2AX**, histone H2AX phosphorylated at *Ser* 139; **4-HNE**, 4-hydroxynonenal; **IF**, immunofluorescence; **mtDNA**, mitochondrial DNA; **NARP**, neurogenic muscle weakness, ataxia and retinis pigmentosa syndrome; **NO**, nitric oxide; **3-NT**, 3-nitrotyrosin; $\mathbf{O_2^{\bullet -}}$, superoxide; $\mathbf{ONOO^-}$, peroxynitrite; **OXPHOS**, oxidative phosphorylation; **pATM[S1981]**, ATM kinase phosphorylated at *Ser* 1981; **Rho0,** cell line lacking mtDNA; **ROS**, reactive oxygen species; **WB**, western blot; **WT**, wild type

Key words: mitochondrial dysfunction, selenite, DNA repair, ATM kinase, oxidative damage