Figure legends(Supplemental Data):

Fig 1. **Formation of the DMPO/dAdo radical adduct from the reaction of dAdo with Fe(II)-H_2O_2 in the presence of DMPO. All components of the reaction must be present for the adduct formation** (A). Typically nucleosides (300μM) were reacted with $FeSO_4$(300μM), H_2O_2 (100μM) and DMPO (100mM) and spectra recorded immediately on mixing. Instrumental conditions: modulation amplitude1.0G; time constant, 327ms; receiver gain, 2 $x10^4$; and microwave power, 20mW. DMPO-dAdo radical were detected in consistence with the Cu(II)-H_2O_2 system.

Fig 2. **MS data obtained from the reaction of calf thymus DNA with Fe(II)-H_2O_2 in the presence of DMPO** -EIC of m/z 252.1 (unmodified deoxyadenosine) and of m/z 363.2 (DMPO-deoxyadenosine) Panels 1 and 2 show the EIC obtained from the LC/MS of the control DNA (no DMPO present). Note the absence of the adduct ion. Panels 3 and 4 show the EIC's obtained from the dAdo subjected to oxidation in the presence of DMPO. Note the presence of the adduct ion. Adduct formation was absent in the control without the oxidants. A trace amount of the adduct was formed when DMPO and one of the reactant was present in the system.

Fig 3**. MS data obtained from the reaction of RAW 264.7 cells treated with $CuCl_2$/H_2O_2 in the presence of DMPO** - MS/MS of the ion of m/z 252.09 and m/z 363.16 are consistent with the Cu(II)- H_2O_2 datas.