The Effect of β-Carotene, Tocopherols and Ascorbic acid as Anti-oxidant Molecules on Human and Animal in vitro/in vivo Studies: a Review of Research Design and Analytical Techniques Used

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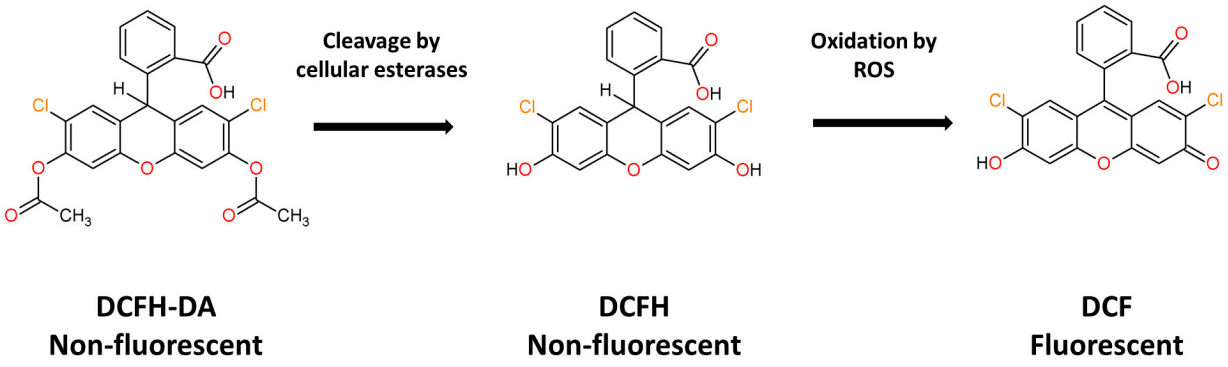


Figure S1. The mechanism of DCFH-DA conversion to DCFH and DCF.

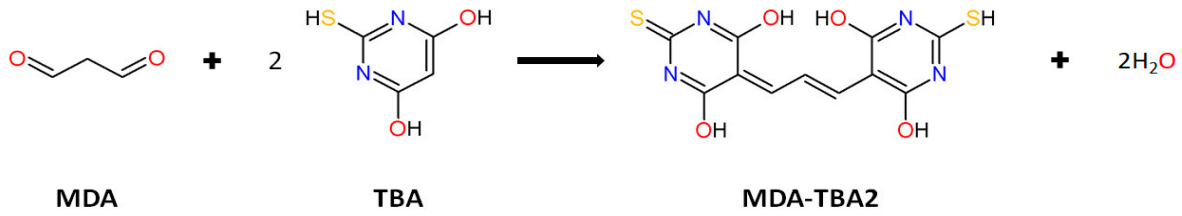


Figure S2. The mechanism of reaction between MDA and TBA to form MDA-TBA2.

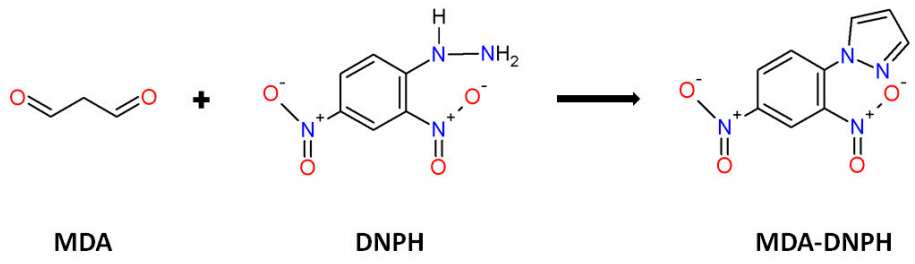


Figure S3. The mechanism of reaction between MDA and DNPH to form MDA-DNPH.

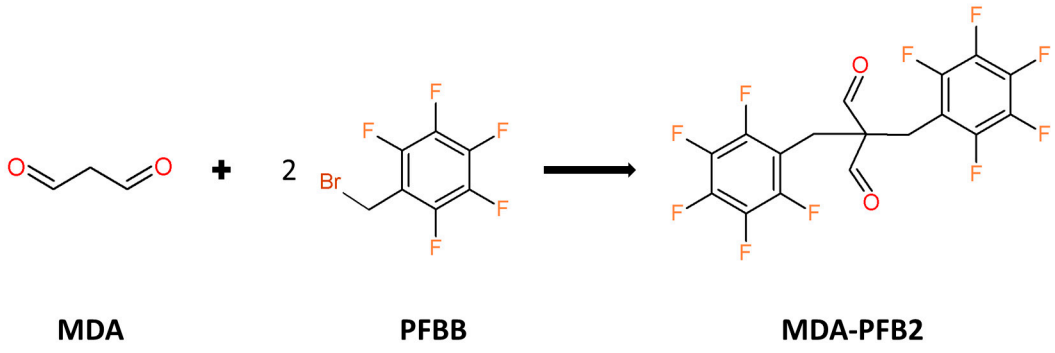


Figure S4. The mechanism of reaction between MDA and PFBB to form MDA-PFB2.

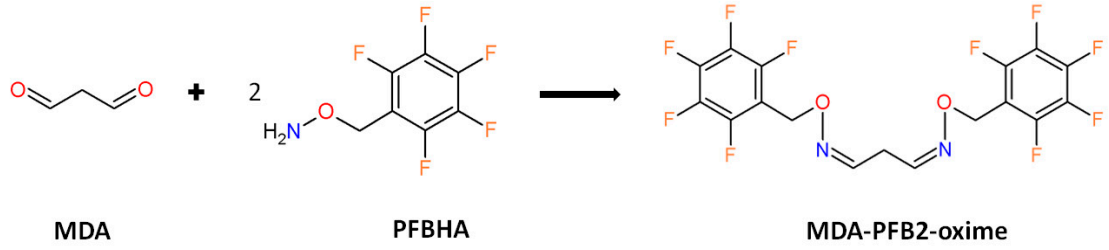


Figure S5. The mechanism of reaction between MDA and PFBHA to form MDA-PFB2-oxime.

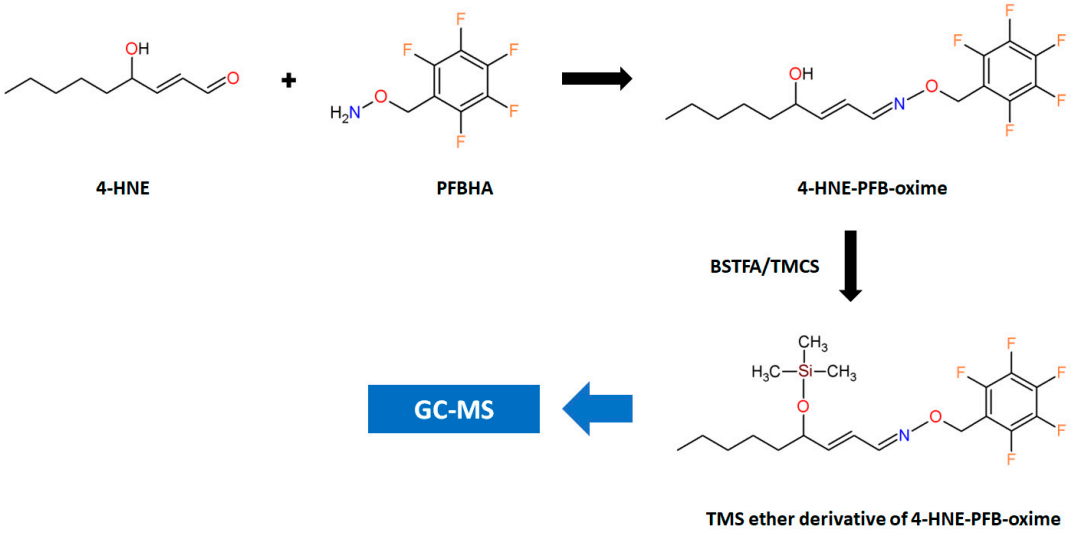


Figure S6. The mechanism of 4-HNE-PFB-oxime-TMS formation and analysis. PFBHA: pentafluorobenzyl hydroxylamine; BSTFA: N,O-bis(trimethylsilyl)trifluoroacetamide; TMCS: trimethylchlorosilane; TMS: trimethylsilyl.

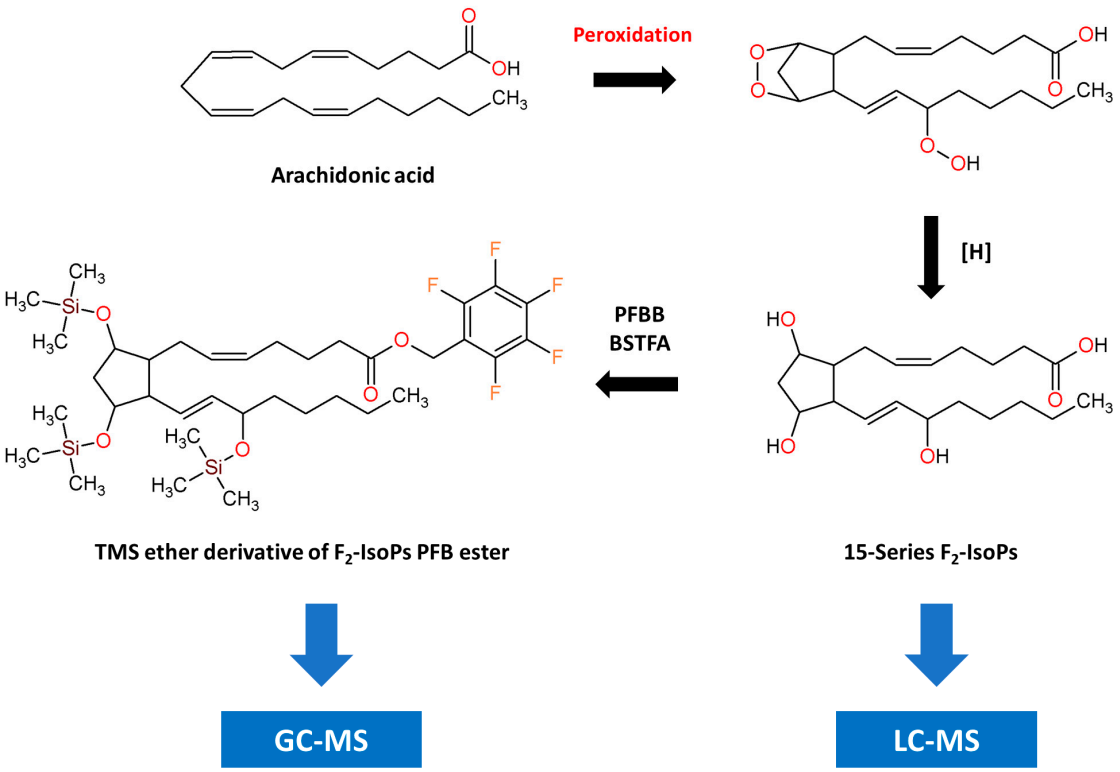


Figure S7. The mechanism of F_2-isoprostane (F_2-IsoPs) formation and analysis. PFBB: pentafluorobenzyl bromide; BSTFA: N,O-bis(trimethylsilyl)trifluoroacetamide; TMS: trimethylsilyl.

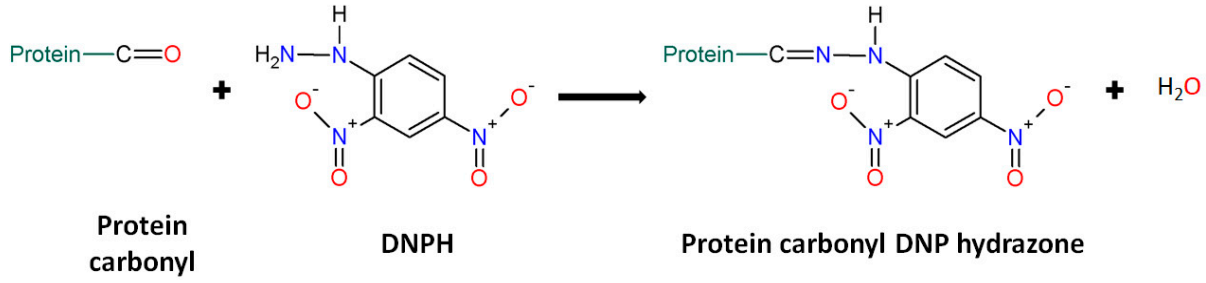


Figure S8. The mechanism of protein carbonyl reaction with dinitrophenylhydrazine (DNPH).

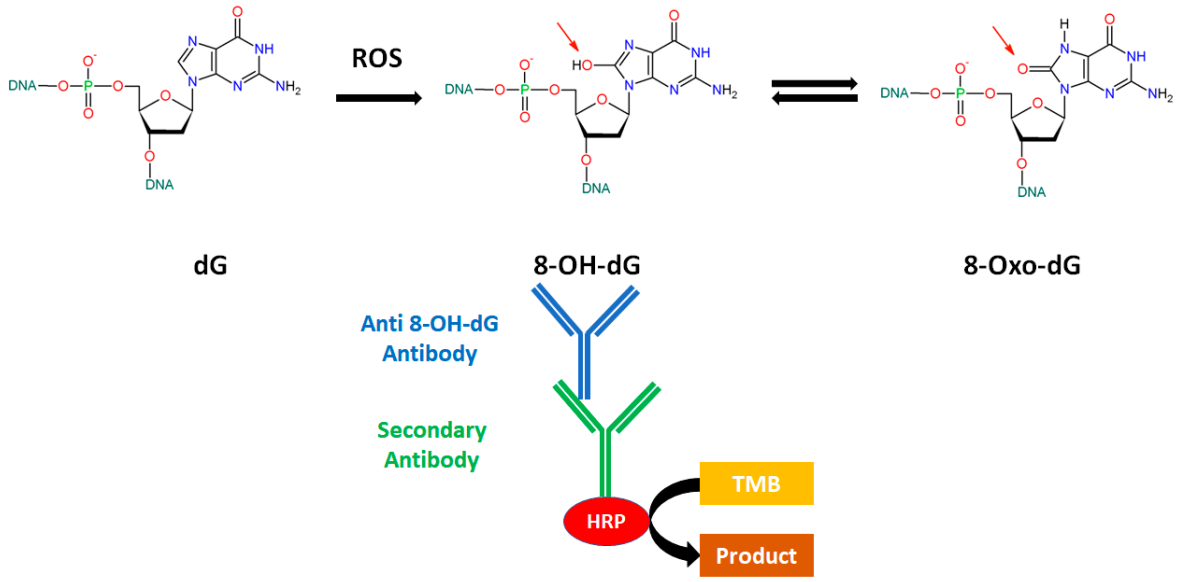


Figure S9. The mechanism of deoxyguanosine (dG) oxidation into 8-hydroxydeoxyguanosine (8-OHdG) and 8-oxodeoxyguanosine (8-OxodG), and the mechanism of 8-OHdG measurement with ELISA.