SUPPLEMENTARY DATA

TITLE

Impact of gold nanoparticle size and coating on radiosensitization and generation of reactive oxygen species in cancer therapy

AUTHORS

E. Loscertales^{a,b}, R. López-Méndez^c, J. Mateo^d, L. M. Fraile^{a,e}, J. M. Udias^{a,e}, A. Espinosa^{f,c}, S. España^{a,b,d}

^a Grupo de Física Nuclear, EMFTEL & IPARCOS, Universidad Complutense de Madrid, Pl. de las Ciencias, 1, Moncloa-Aravaca, Madrid, Spain

^b Instituto de Tecnologías Físicas y de la Información "Leonardo Torres Quevedo" (ITEFI-CSIC),

C/Serrano, 144, Madrid, Spain

^cIMDEA Nanociencia, C. Faraday, 9, Fuencarral-El Pardo, Madrid, Spain

^d Centro Nacional de Investigaciones Cardiovasculares (CNIC), C. de Melchor Fernández Almagro, 3, Fuencarral-El Pardo, Madrid, Spain

^e Instituto de Investigación del Hospital Clínico San Carlos (IdISSC), C. del Prof Martín lagos, S/N, Moncloa-Aravaca, Madrid, Spain

^f Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC), Campus de Cantoblanco, C. Sor Juana Iés de la Cruz, 3, Fuencarral-El Pardo, Madrid, Spain

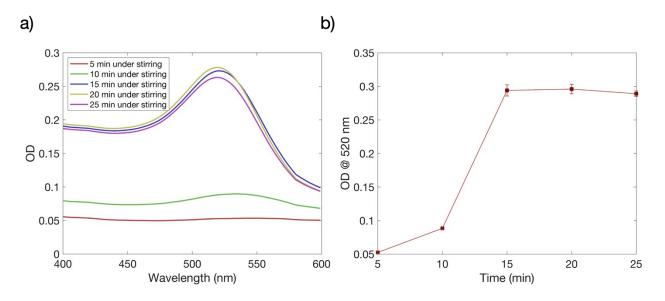


Figure S1. The growth of G20 citrate AuNPs was monitored by recording their optical density at different reaction times. Panel (a) shows the UV-vis spectra and panel (b) shows the increase of the OD@520nm with the reaction time.

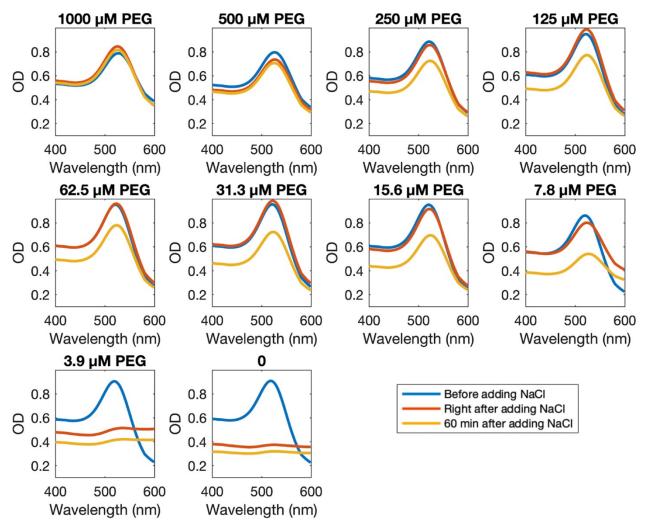


Figure S2. G20 Citrate AuNPs incubated with PEG at different concentrations before, right after and 60 minutes after adding NaCl (250 μ M).

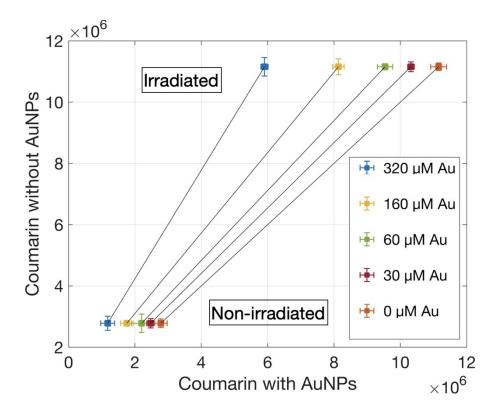


Figure S3. Calibration curves obtained for the attenuation of coumarin fluorescence by G20 Citrate AuNPs at different concentrations (30 - 320 μ M Au). Fluorescent values of irradiated and non-irradiated coumarin are compared for samples with and without AuNPs.

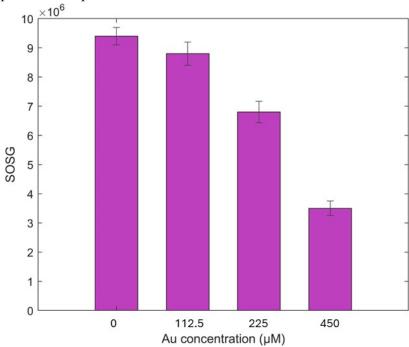


Figure S4. SOSG fluorescence was measured at the supernatant after mixing it with different concentrations of G20 Citrate AuNPs during 1 hour and centrifuge the mixture for 45 minutes. Values drop for higher Au concentration due to adsorption of SOSG to citrate capped AuNPs.

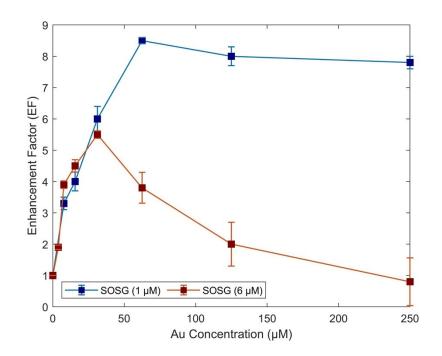


Figure S5. EF of ${}^{1}O_{2}$ for G20 PEG AuNPs under γ photon irradiation as a function of Au concentration when SOSG concentration was 1 or 6 μ M.

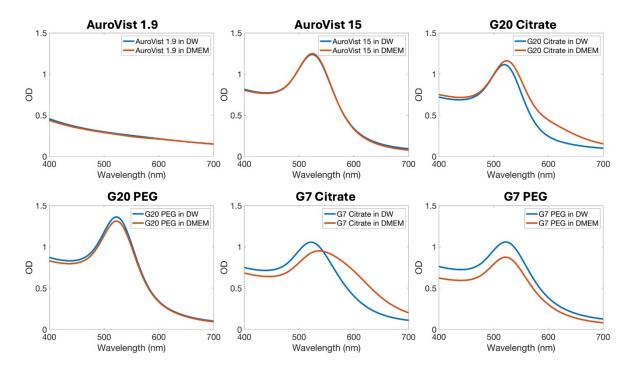


Figure S6. UV-Vis spectroscopy measurements of AuNPs after 24 h of incubation dispersed either in water or in DMEM supplemented with 10% FBS to check their stability.