Supplementary Materials

Influence of the modifiers in polyol method on magnetically induced hyperthermia and biocompatibility of ultrafine magnetite nanoparticles

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Table S1. Comparison of the values of aggregates diameter measured using the DLS technique (D_{DLS}) and zeta potential values (ζ potential) determined for the 3 mg/ml water dispersions

Sample	D_{DLS} (nm)	ζ potential (mV)
Fe_3O_4 - URO	120.17±0.34	7.57±0.35
Fe_3O_4 - NH_4HCO_3	272.87±5.77	4.32±1.70
Fe_3O_4 - PEG	395.57±12.60	8.86±1.26
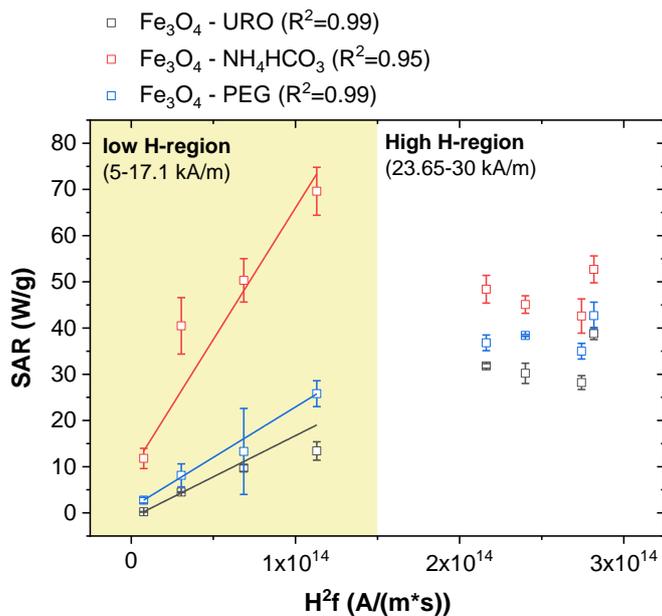
Figure S1. Relationship between SAR and H^2f determined for Fe_3O_4-URO, Fe_3O_4- NH_4HCO_3 and Fe_3O_4-PEG NPs with linear relationship determined for low H-region according to the LRT
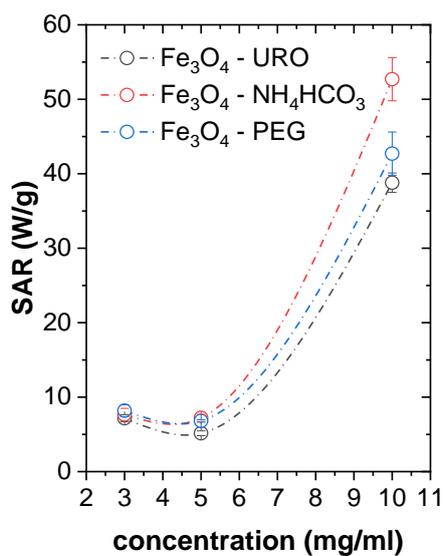
Figure S2. Relationship between SAR and colloids concentrations measured for Fe_3O_4-URO, Fe_3O_4-NH_4HCO_3 and Fe_3O_4-PEG NPs
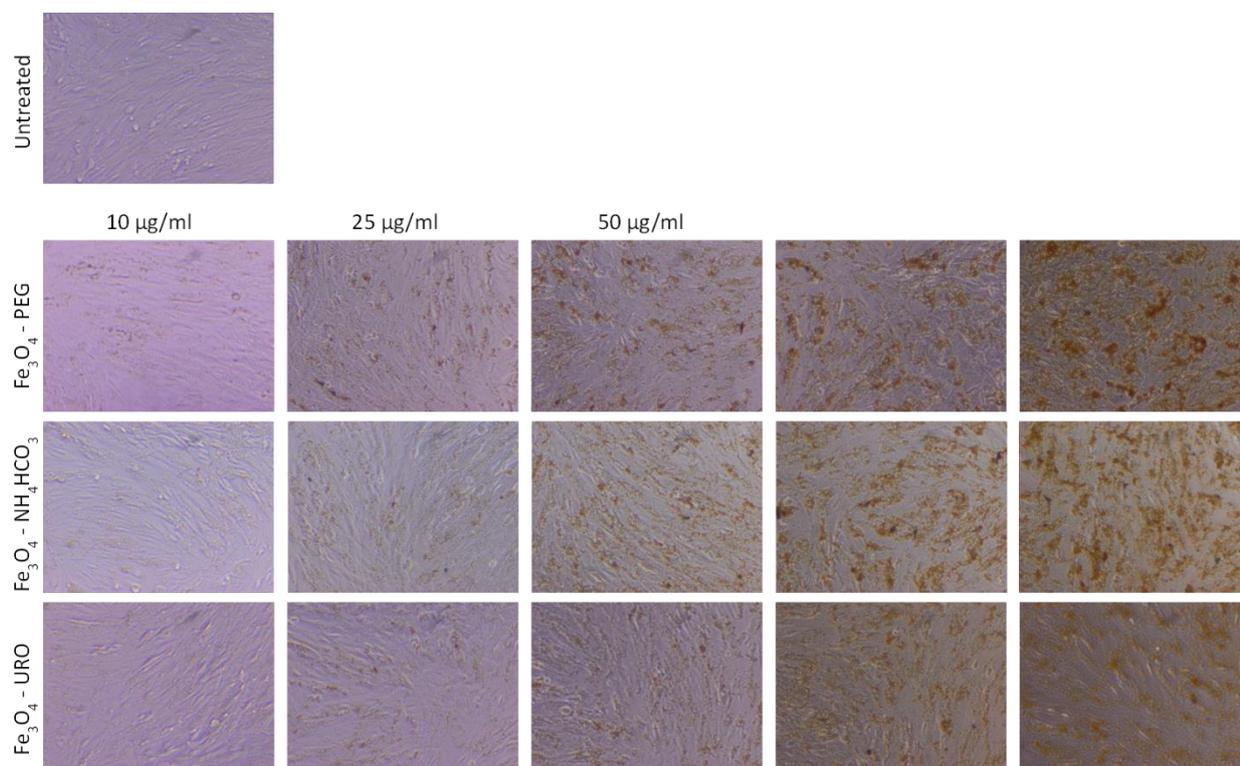
**Figure S3.** Picture of cells culture from the light microscope. Nanoparticles settled down on the cells layer.
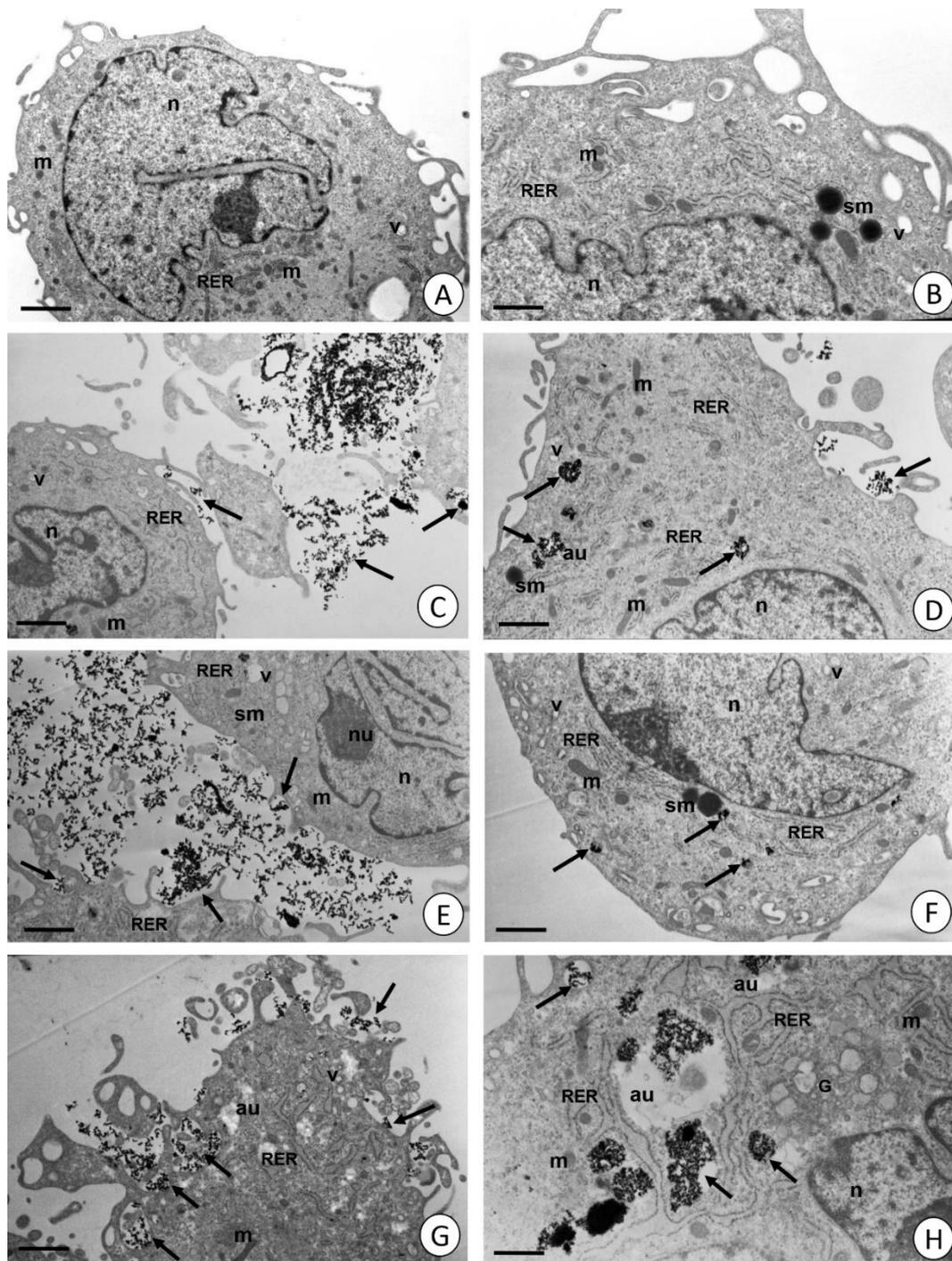
Figure S4. Fibroblasts visible in TEM. **(A-B)** 0 – 24h control group. **(C-D)** Fe_3O_4 - PEG – 24h experimental group. **(E-F)** Fe_3O_4 - NH_4HCO_3 – 24h experimental group. **(G-H)** Fe_3O_4 - URO – 24h experimental group. Nuclei (n), nucleolus (nu), mitochondria (m), cisterns of RER (RER), storage material (sm), Golgi complexes (G), vacuoles (v), autophagosomes (au), electron-dense granules (arrows). **(A)** Scale bar = 1.74 μm. **(B)** Scale bar = 0.87 μm. **(C)** Scale bar = 1.71 μm. **(D)** Scale bar = 1.44 μm. **(E)** Scale bar = 1.66 μm. **(F)** Scale bar = 1.14 μm. **(G)** Scale bar = 1.82 μm. **(H)** Scale bar = 1.04 μm.
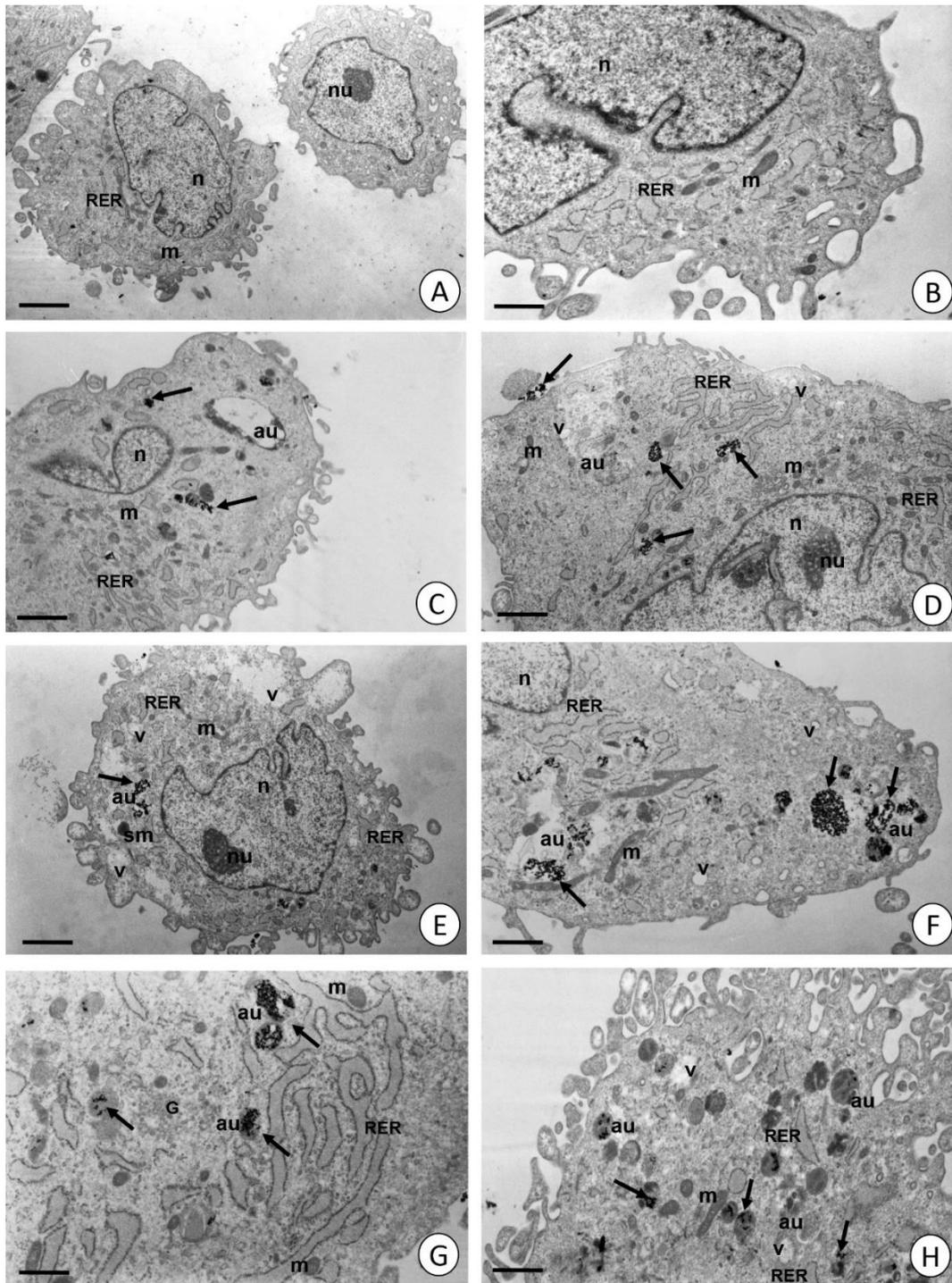
Figure S5. Fibroblasts visible in TEM. **(A-B)** 0 – 48h control group. **(C-D)** Fe_3O_4 - PEG – 48h experimental group. **(E-F)** Fe_3O_4 - NH_4HCO_3 – 48h experimental group. **(G-H)** Fe_3O_4 - URO – 48h experimental group. Nuclei (n), nucleolus (nu), mitochondria (m), cisterns of RER (RER), Golgi complexes (G), storage material (sm), vacuoles (v), autophagosomes (au), electron-dense granules (arrows). **(A)** Scale bar = 2.28 μm. **(B)** Scale bar = 1.10 μm. **(C)** Scale bar = 1.84 μm. **(D)** Scale bar = 1.82 μm. **(E)** Scale bar = 2.28 μm. **(F)** Scale bar = 1.42 μm. **(G)** Scale bar = 1.22 μm. **(H)** Scale bar = 0.88 μm.