Electronic supplementary information (ESI) for

Comparative analysis of the cellular entry of polystyrene and gold nanoparticles using the freeze concentration method

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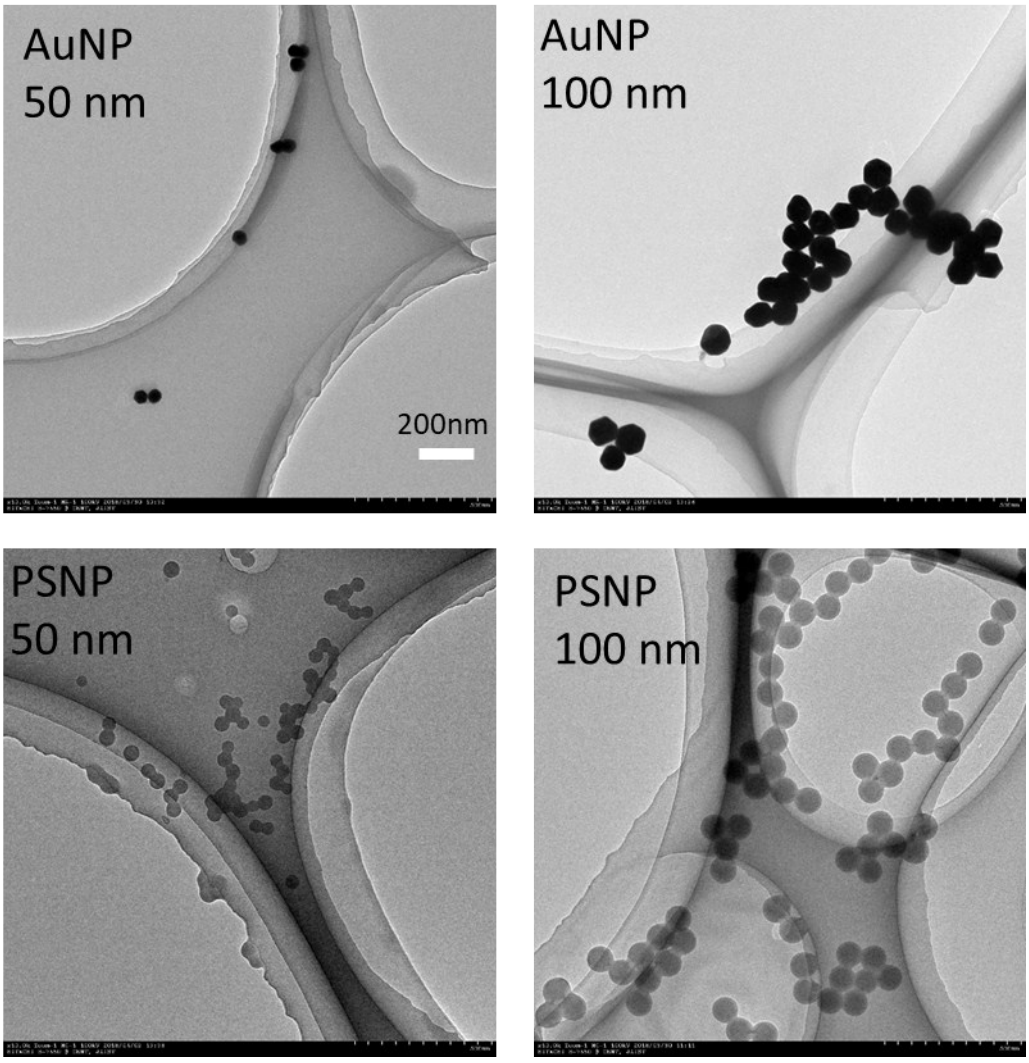


Figure S1 TEM images of Au and PS nanoparticles.

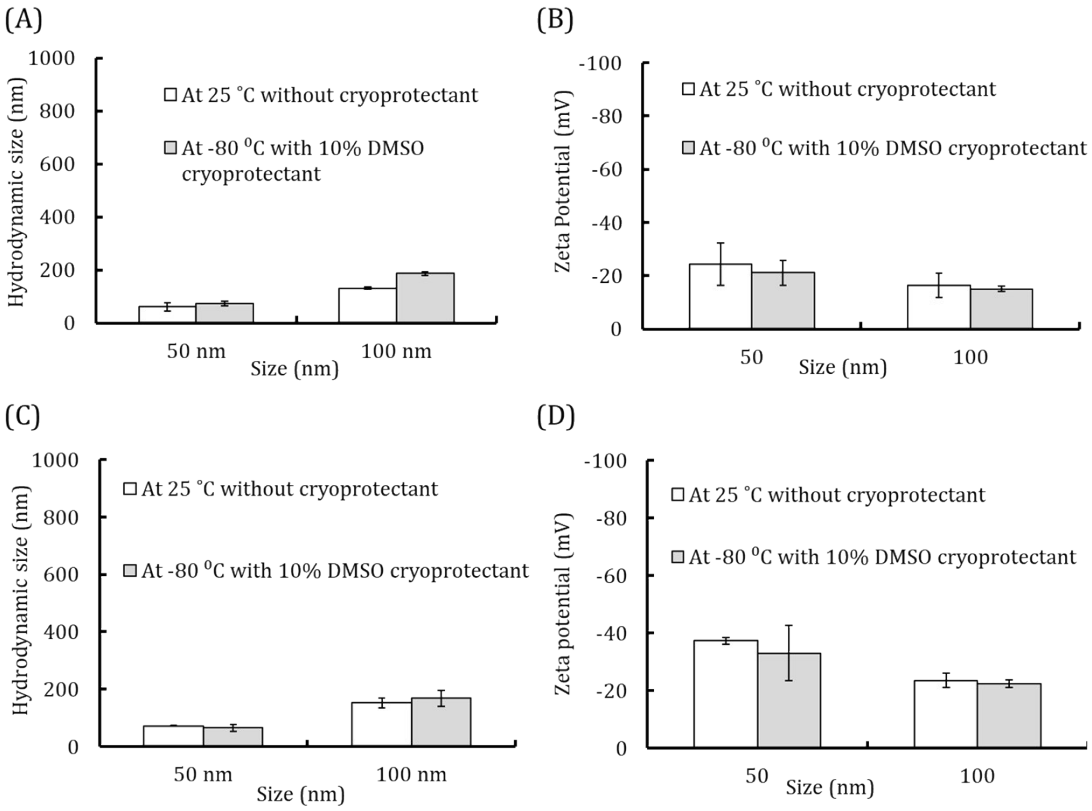


Figure S2 Hydrodynamic diameter and Zeta potential of nanoparticles at room temperature (25°C) with no cryoprotectant (White bars) and after freezing with 10% DMSO as a cryoprotectant at -80°C (Grey bars). Au nanoparticle (A) hydrodynamic diameter and (B) Zeta potential. PS nanoparticle (C) hydrodynamic diameter and (D) Zeta potential.

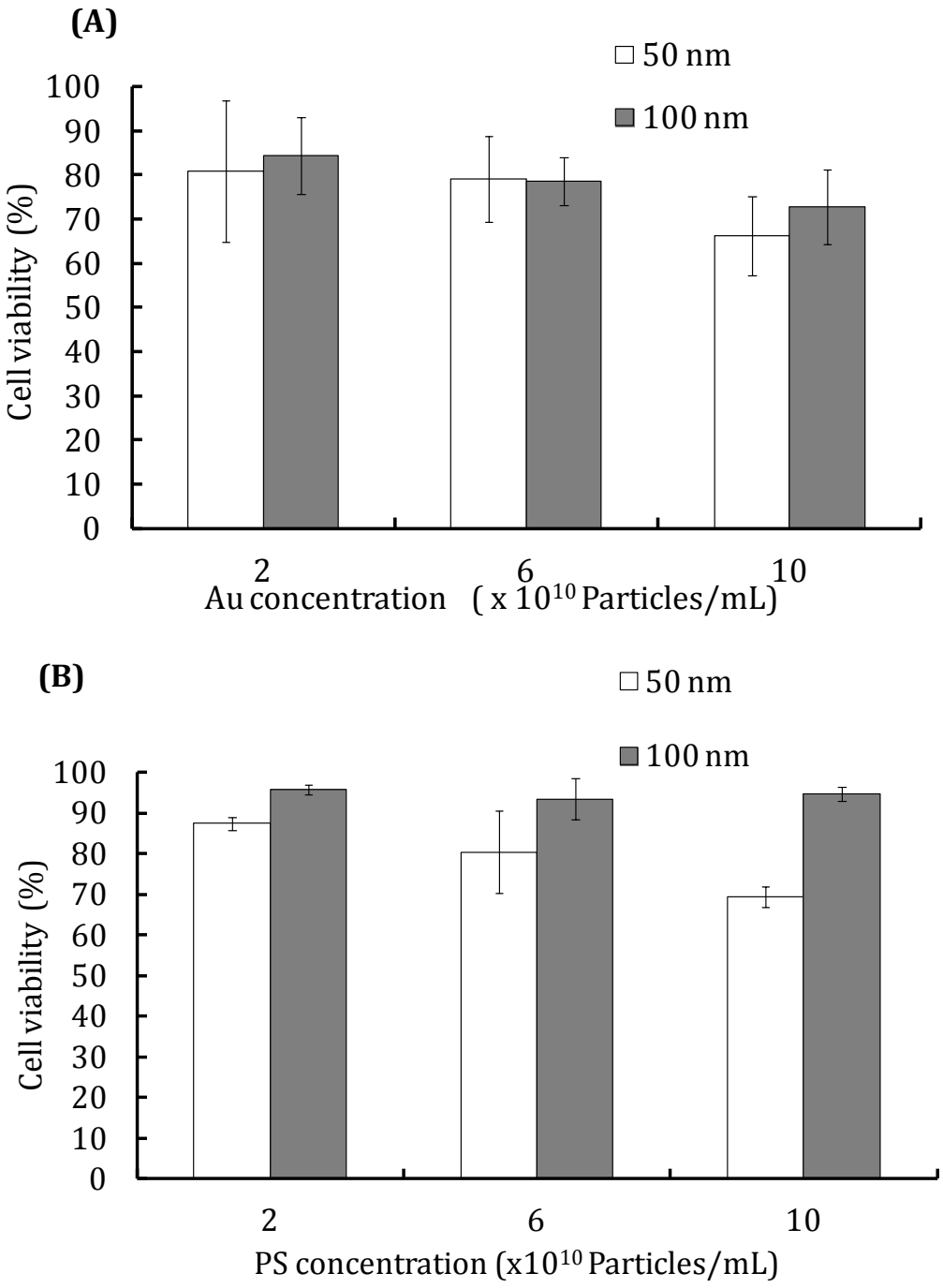
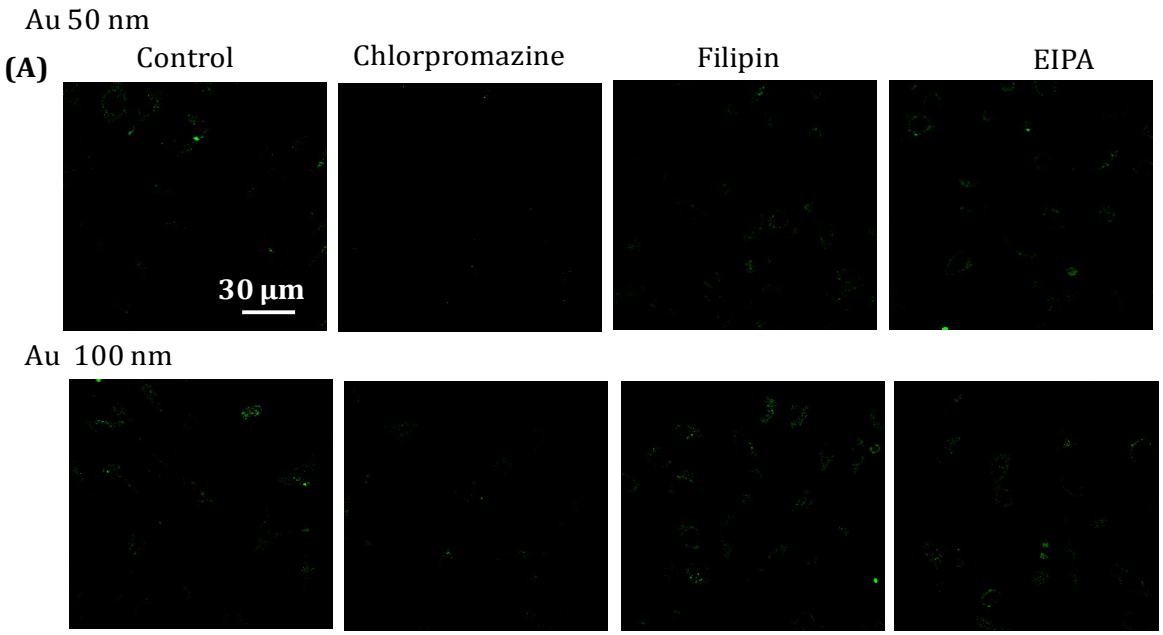
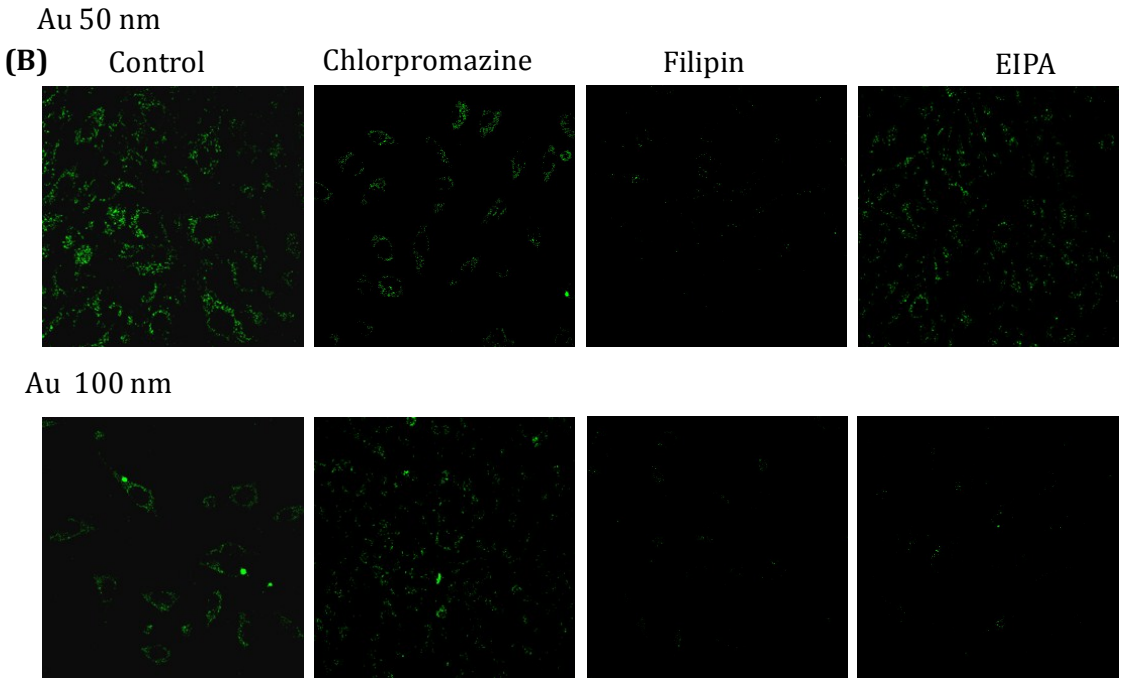


Figure S3 Cell viability using nanoparticles at various concentrations after freezing with 10% DMSO as a cryoprotectant, as determined by trypan blue exclusion assays, for (A) Au and (B) PS.

Non-Frozen



Frozen



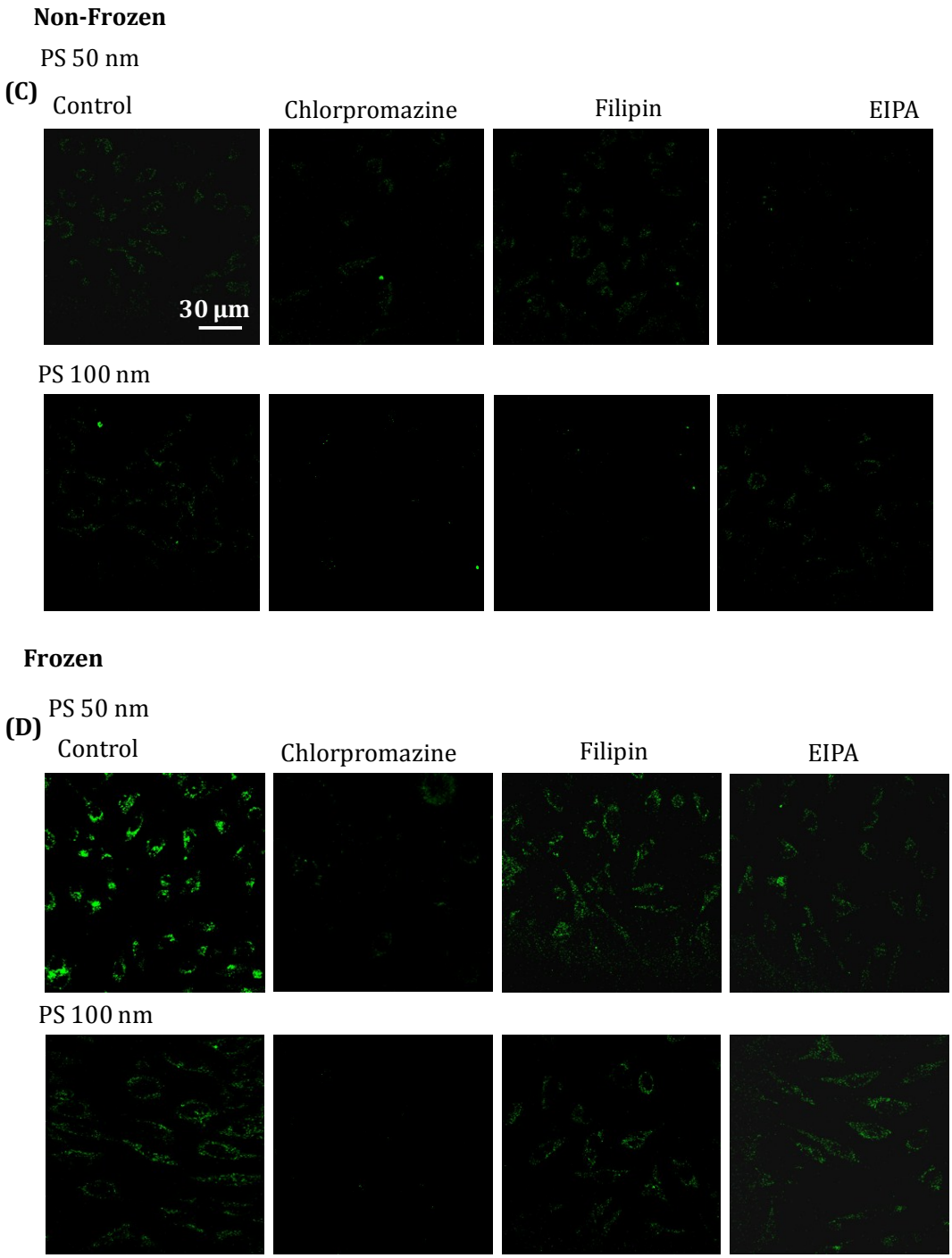


Figure S4 Confocal images of non-frozen and frozen endocytic uptake of 50- and 100-nm gold nanoparticles (A, B) or 50- and 100-nm polystyrene beads (C, D). For freezing, the samples were pre-incubated with inhibitors in the presence of 10% DMSO as a cryoprotectant. After thawing, the cells were seeded and incubated for at least 10 h. Scale bar: 30 µm.