Electronic Supplementary Material (ESI) for Nanoscale Advances.

The effect of aspect ratio on the physical cell-particle interactions flips depending on particle thickness, and is one of the reasons for the inconsistency in cytotoxicity literature

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Supplementary material

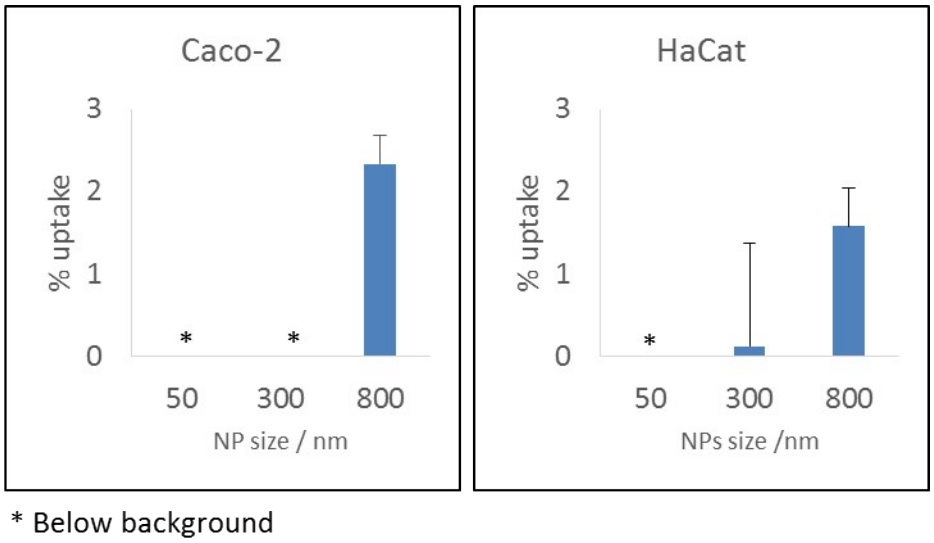

Figure S1. Polystyrene particles in a concentration of 5 µg/ml that were incubated with the cells for 24 hour, showed a similar trend as shown in Figure 1, namely that smaller NPs are expected to be less toxic.

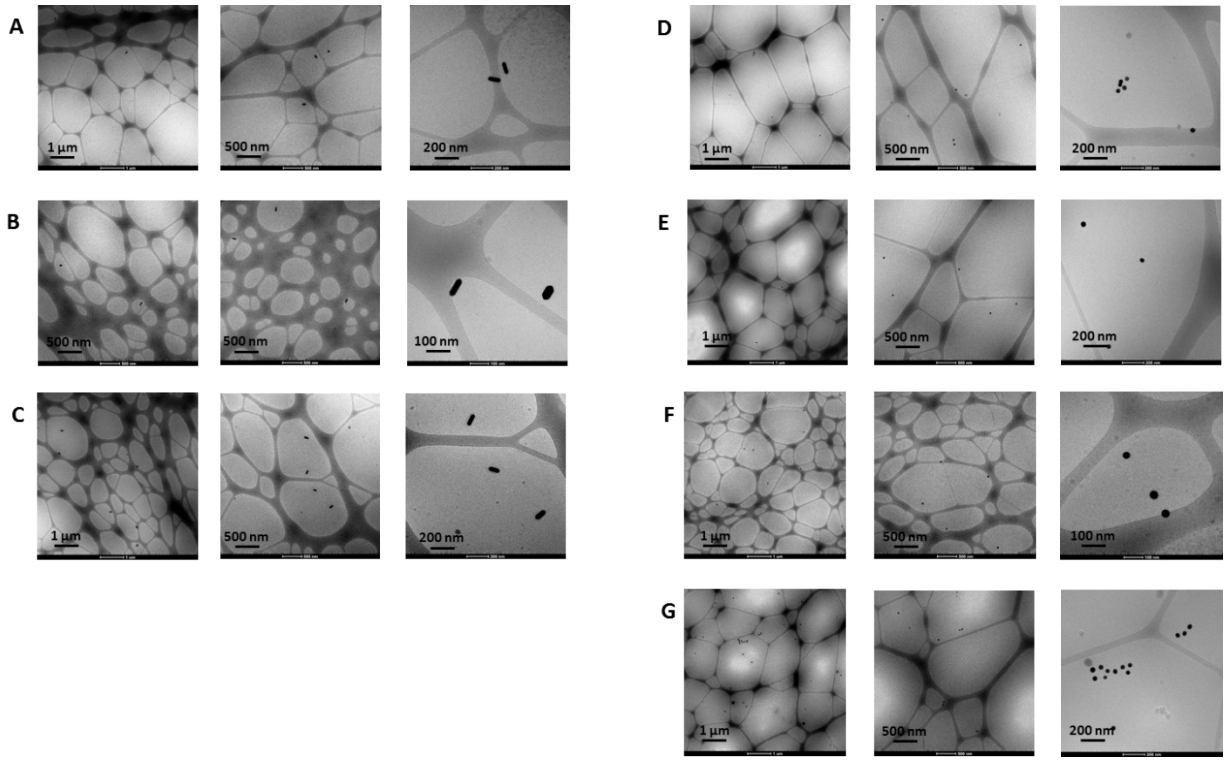

Figure S2: Selected Cryo TEM images of rod shaped (A-C) or spherical (D-G) gold nanoparticles. Shown are rod particles after (A) 4 hour incubation in fresh medium, concentration 12.5 µg/ml, (B) 1 hour in medium, 25 µg/ml (C) 4 hour in medium, 50 µg/ml; and spherical particles after (D) 4 hour in medium, 12.5 µg/ml (left) or 25 µg/ml (middle and right), (E) 1 hour in media, 25 µg/ml, (F) 1 hour in media, 50 µg/ml and (G) 4 hour in media, 50 µg/ml.

Movie S1: 3D representation of confocal images of HaCat cells after 24 hr incubation with the particles.