Electronic Supplementary Material (ESI) for Biomaterials Science

Behaviour of silica nanoparticles in dermis-like cellularized collagen hydrogels

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Electronic Supplementary Information

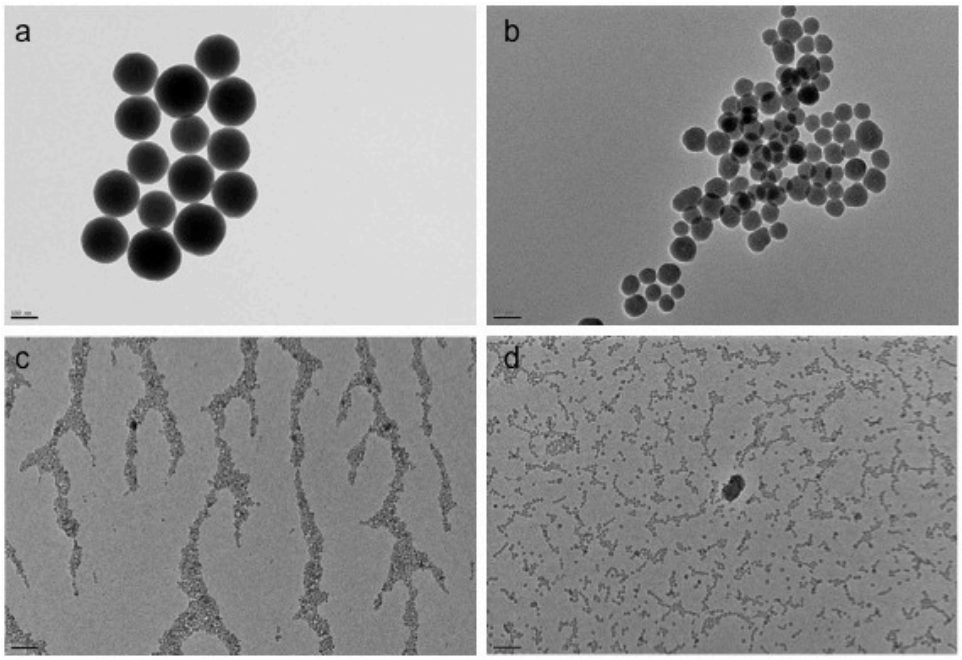
ESI-1. TEM images of (a) Si+200, (b) Si+60, (c) Si+10 and (d) Si-10

ESI-2 : Evolution of fluorescence intensity of nanoparticles (a) and of soluble forms (b) in the reservoir for particles in 3 $mg.mL^{-1}$ cellularized collagen hydrogels

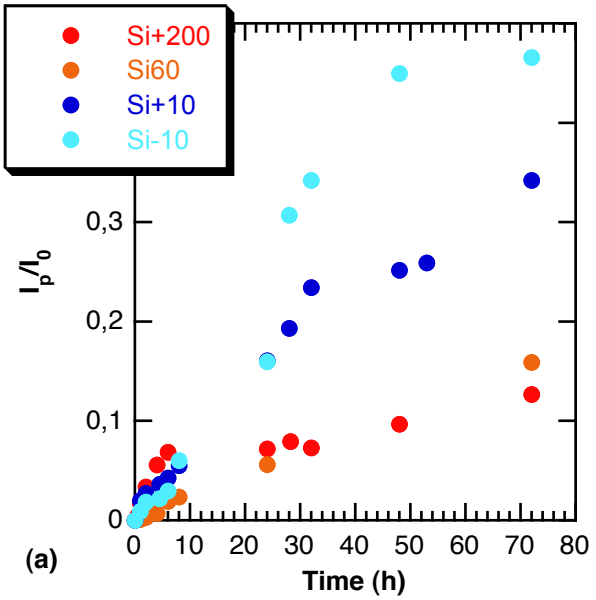
ESI-3 : Observation of nanoparticles uptake by fibroblasts immobilized in 3 $mg.mL^{-1}$ collagen hydrogels after 24 h of contact using fluorescence microscopy

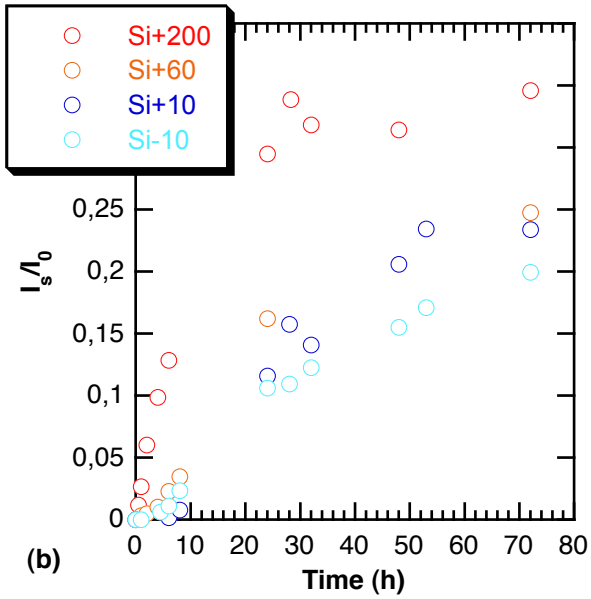
ESI-4 Evolution of cell metabolism from Alamar blue test for immobilized fibroblasts during Si+60 particle diffusion in 1.5 $mg.mL^{-1}$, 3 $mg.mL^{-1}$and 5 $mg.mL^{-1}$ collagen hydrogels

ESI-1. TEM images of (a) Si+200, (b) Si+60, (c) Si+10 and (d) Si-10

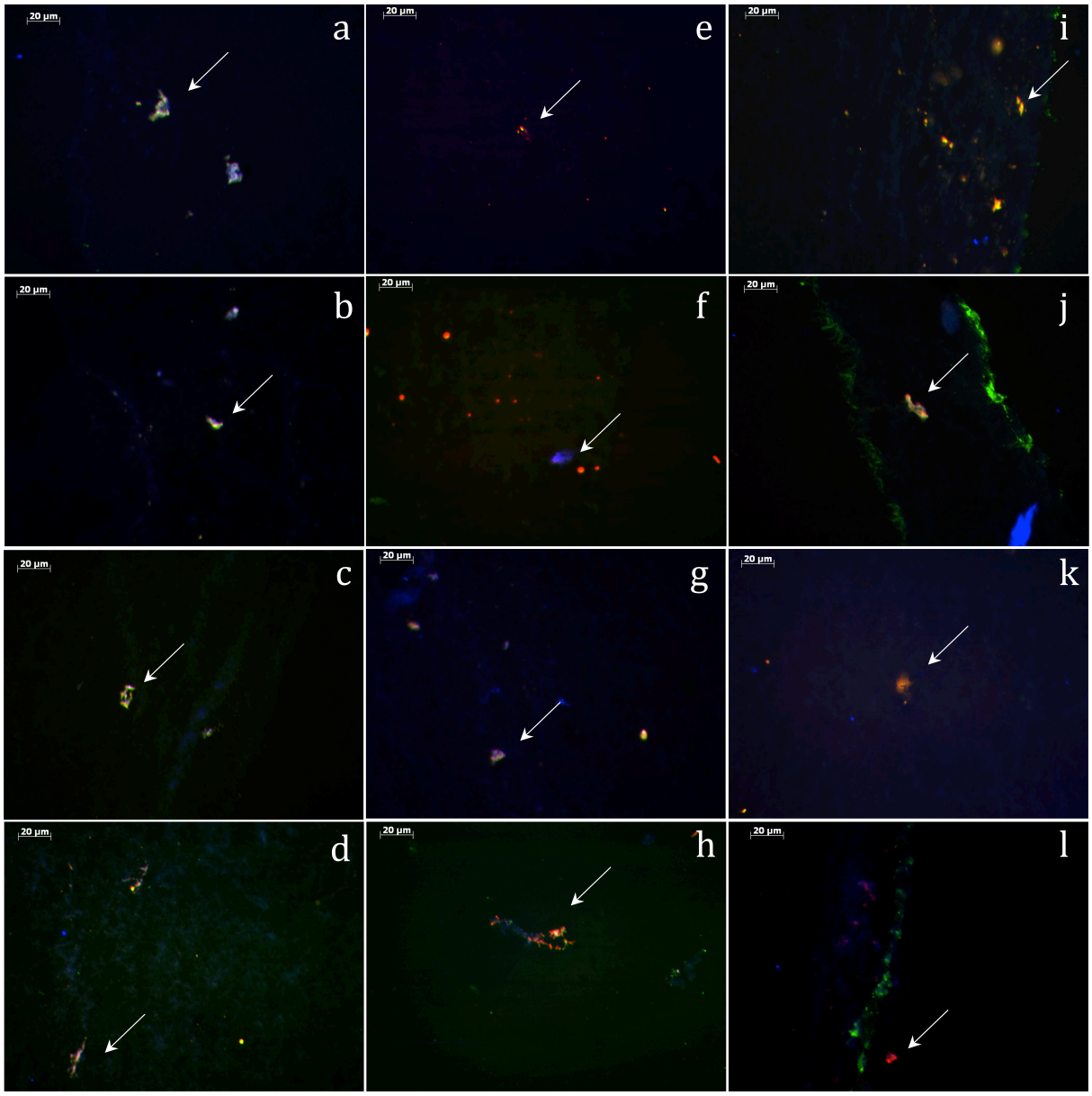


ESI-2 : Evolution of fluorescence intensity of nanoparticles (a) and of soluble forms (b) in the reservoir for particles in 3 mg.mL^{-1} cellularized collagen hydrogels





ESI-3 : Observation of nanoparticles uptake by fibroblasts immobilized in 3 $mg.mL^{-1}$ collagen hydrogels after 24 h of contact using fluorescence microscopy. From top to bottom : Si+200, Si+60, Si+10, Si-10. (a-d) without inhibitor, (e-h) with inhibitor of clathrin internalization route, (i-l) with inhibitor of caveolae internalization route. Lysosensor yellow-blue was used for blue staining of the endosomes. Green fluorescence corresponds to FITC (scale bar = 20 μm). Arrows indicate immobilized cells.



ESI-4 Evolution of cell metabolism from Alamar blue test for immobilized fibroblasts during Si+60 particle diffusion in 1.5 mg.mL^{-1}, 3 mg.mL^{-1}and 5 mg.mL^{-1} collagen hydrogels