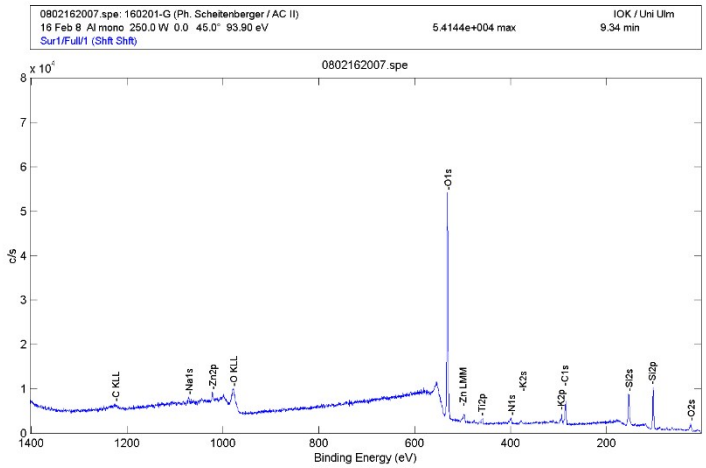

Supplementary information

Figure S1: XPS-spectra of glass substrate.

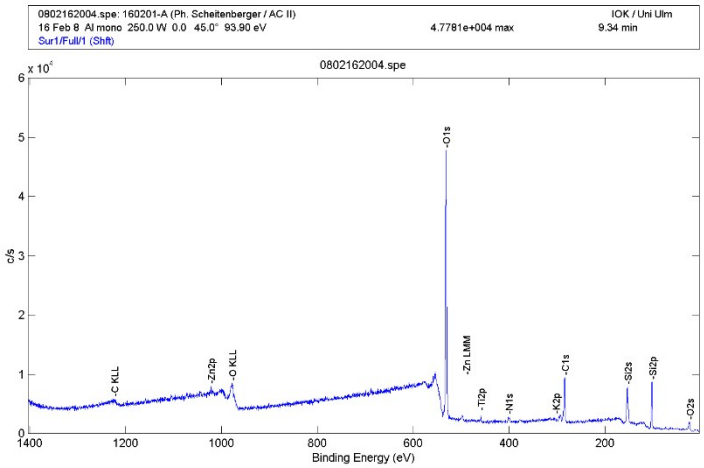

Figure S2: XPS-spectra of APTES functionalised substrate.

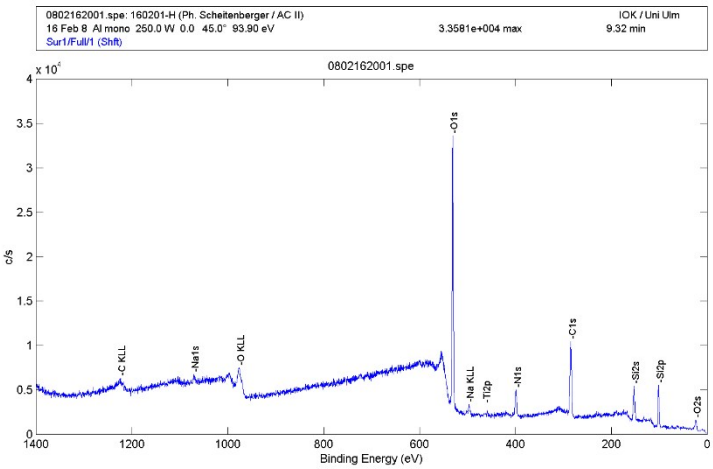

Figure S3: XPS-spectra of hyaluronic acid functionalised substrate.

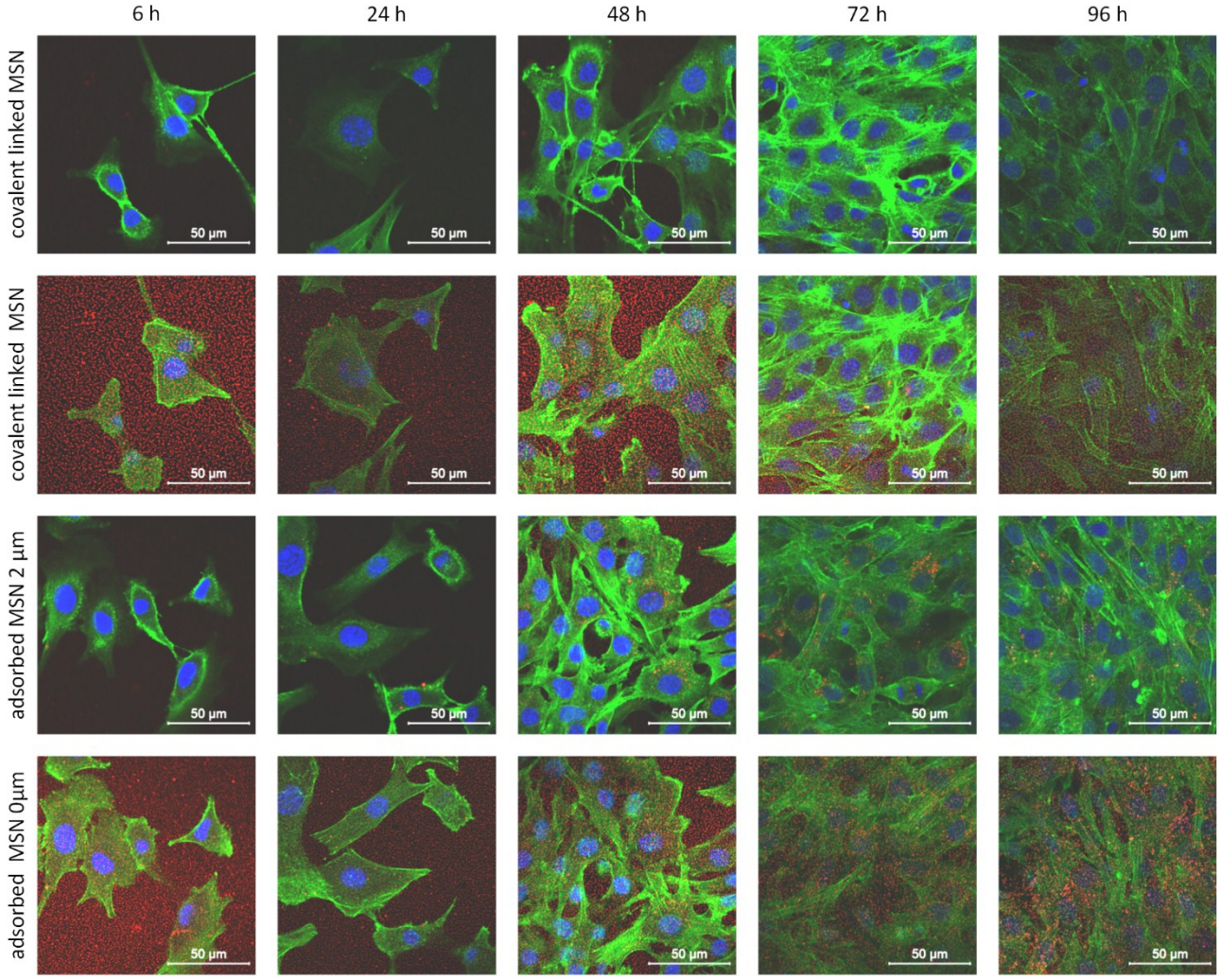

Figure S4: Confocal fluorescence microscopy images of C2C12 cells grown on submonolayer MSN films on cover slides coated with a hyaluronic acid layer. The MSNs were either adsorbed or covalently linked to the hyaluronic acid. Images were recorded 6, 24 and 72 h post-seeding. The cell mucleus was stained with DAPI (blue), actin was stained with phalloidine FITC (green) and the MSNs were labelled with Atto590 (red). The lower focal plane was positioned at level of the particular film, the other 2 µm above the particular film so the white signals near the cell core correspond to particles taken up by cells.