Supporting Information

Figure S1

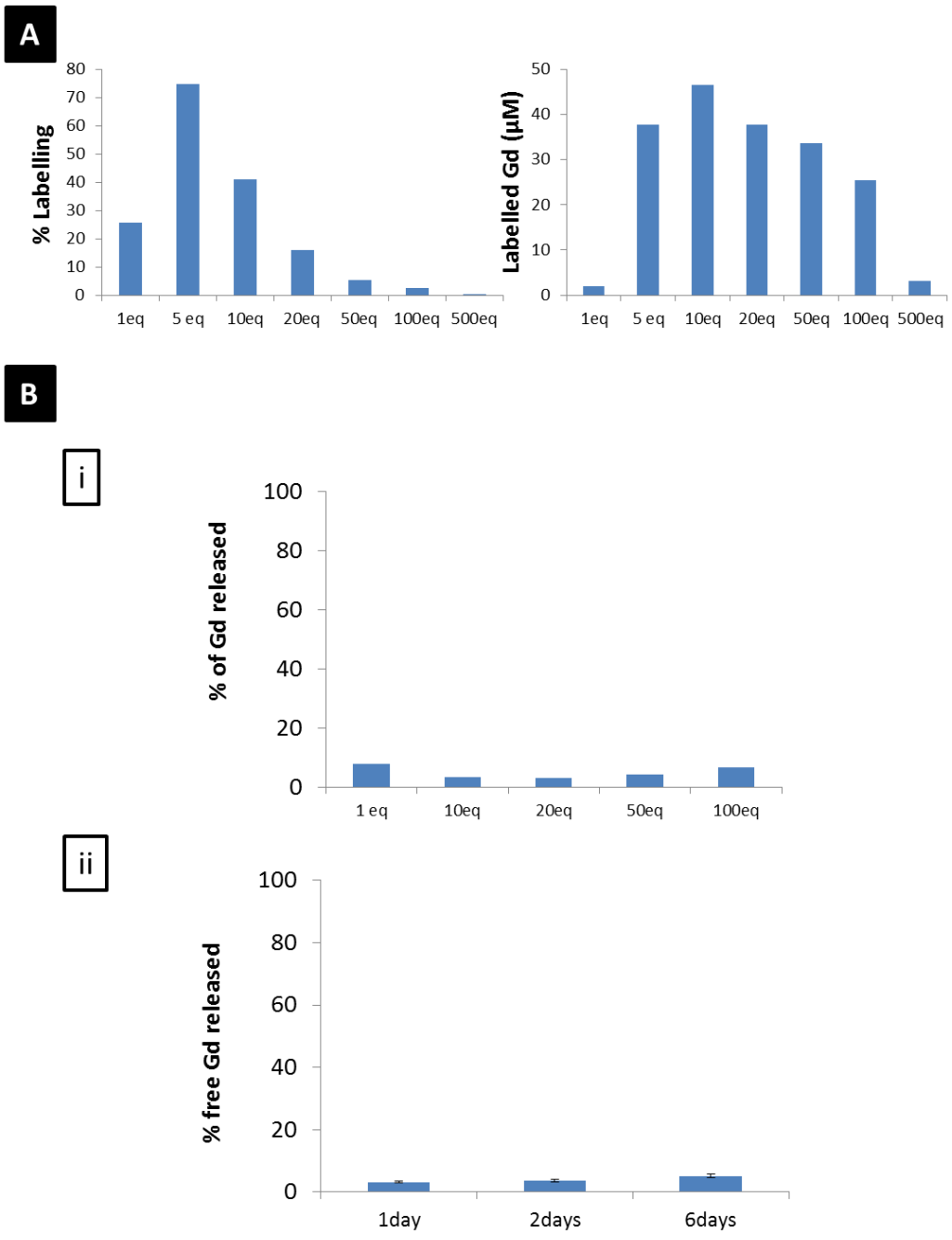
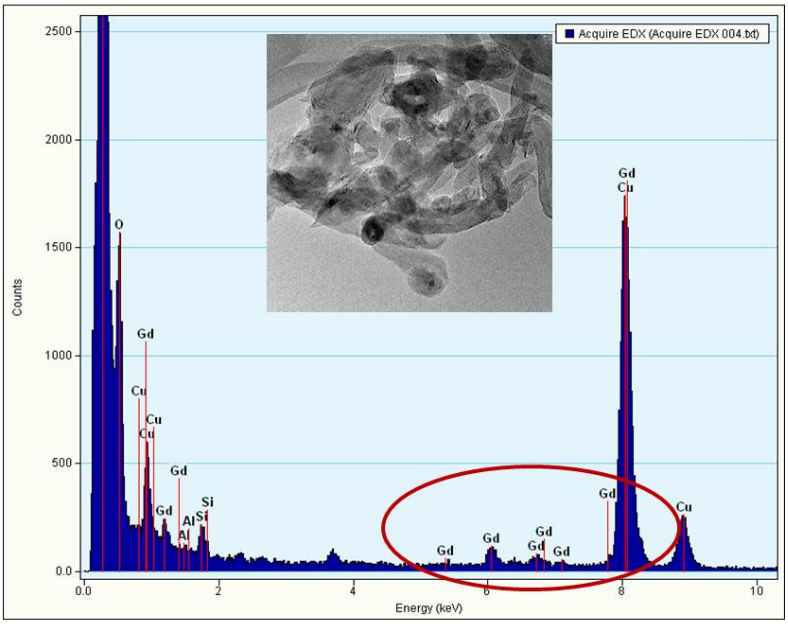


Figure S1: Gd-labelling of multiwalled carbon nanotubes. (A) Gd-labelling efficiency at different concentrations of Gadolinium. The optimal concentration of gadolinium for CNT labelling was found to be for 10 equivalents of gadolinium relative to the DTPA ligand on the CNT backbone. **(B)** 1-week stability of the Gd-labelling on the carbon nanotubes in (i) water and in (ii) mouse serum. Free gadolinium concentration was monitored overtime using UV-Visible spectroscopy in water and using ICP-MS in mouse serum.

Figure S2

A



B

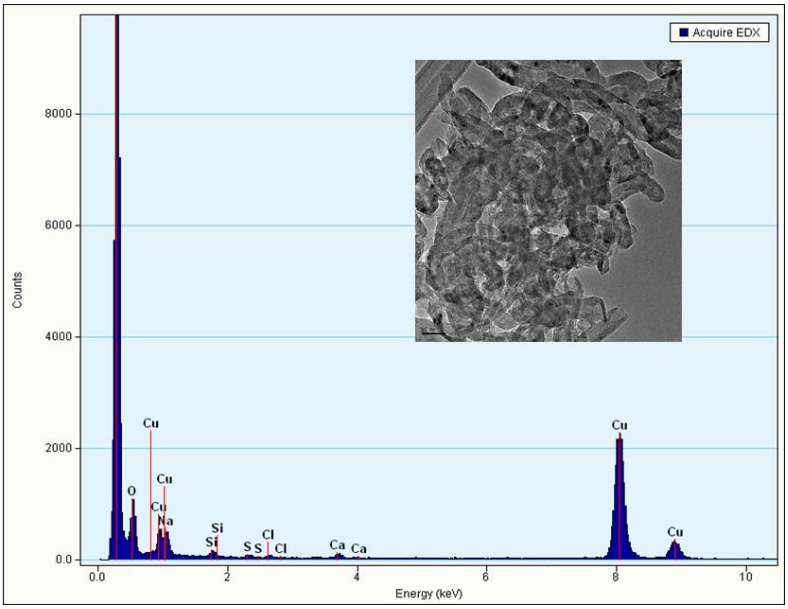


Figure S2: Energy Dispersive X-Ray Spectroscopy (EDX) of: **(A)** Gd-CNTs; and **(B)** unlabelled CNTs.

Figure S3

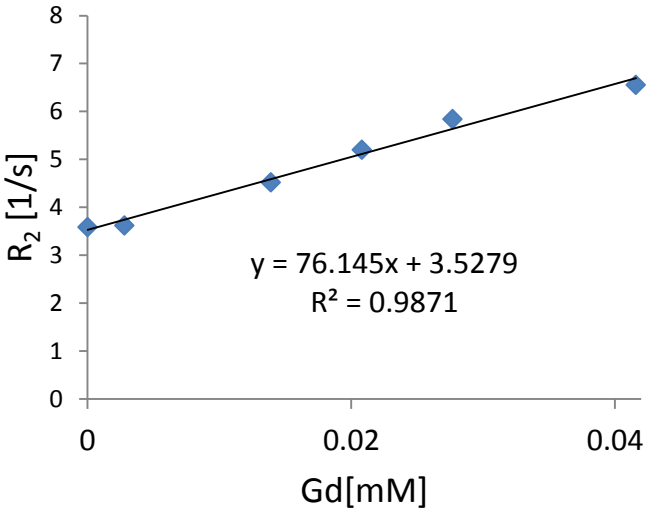


Figure S3: T_2-weighted characterisation and contrast efficiency of Gd-CNTs. Transversal relaxation rates R_2 at increasing Gd concentrations ranging from 0.002 mM to 0.04 mM; determination of the contrast efficiency r_2 of Gd-CNTs that was found to be around 76.1 $mM^{-1}.s^{-1}$ (slope of the curve)**.**

Figure S4

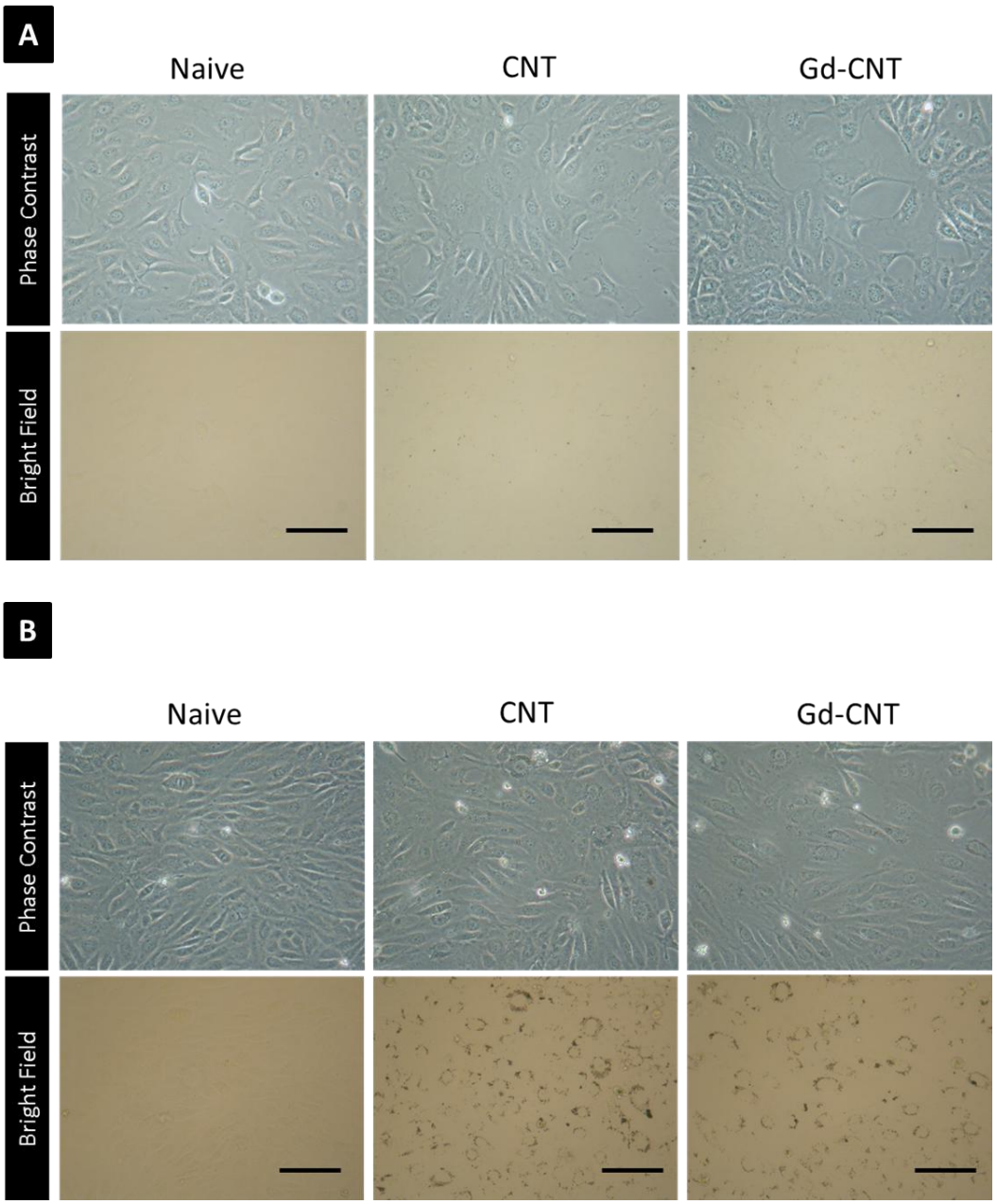


Figure S4: unlabelled and Gd-labelled CNT internalisation in HUVECs exposed for (A) 4 hours; and **(B)** 24 hours at 20 µg/ml of CNTs. The internalisation was monitored overtime by optical microscopy comparing phase contrast versus bright field wherein unexposed cells have no contrast.