Chronic Exposure to Carbon Nanotubes Induces Invasion of Human Mesothelial Cells through Matrix Metalloproteinase-2

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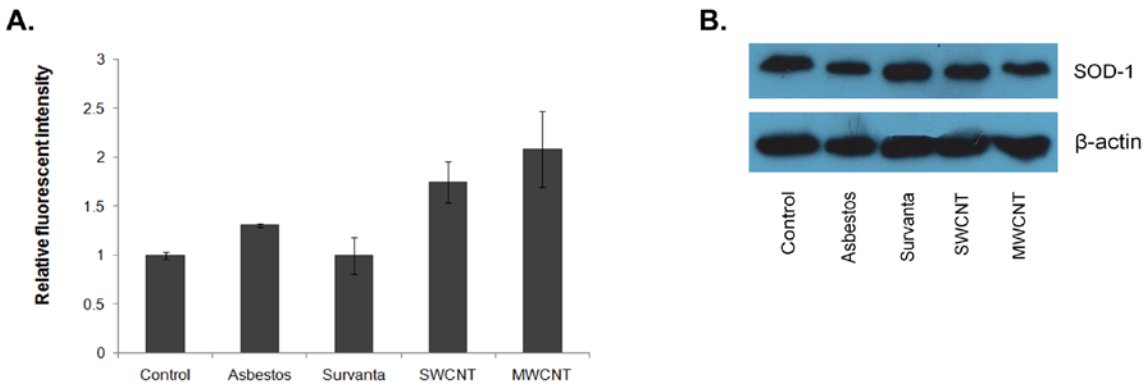
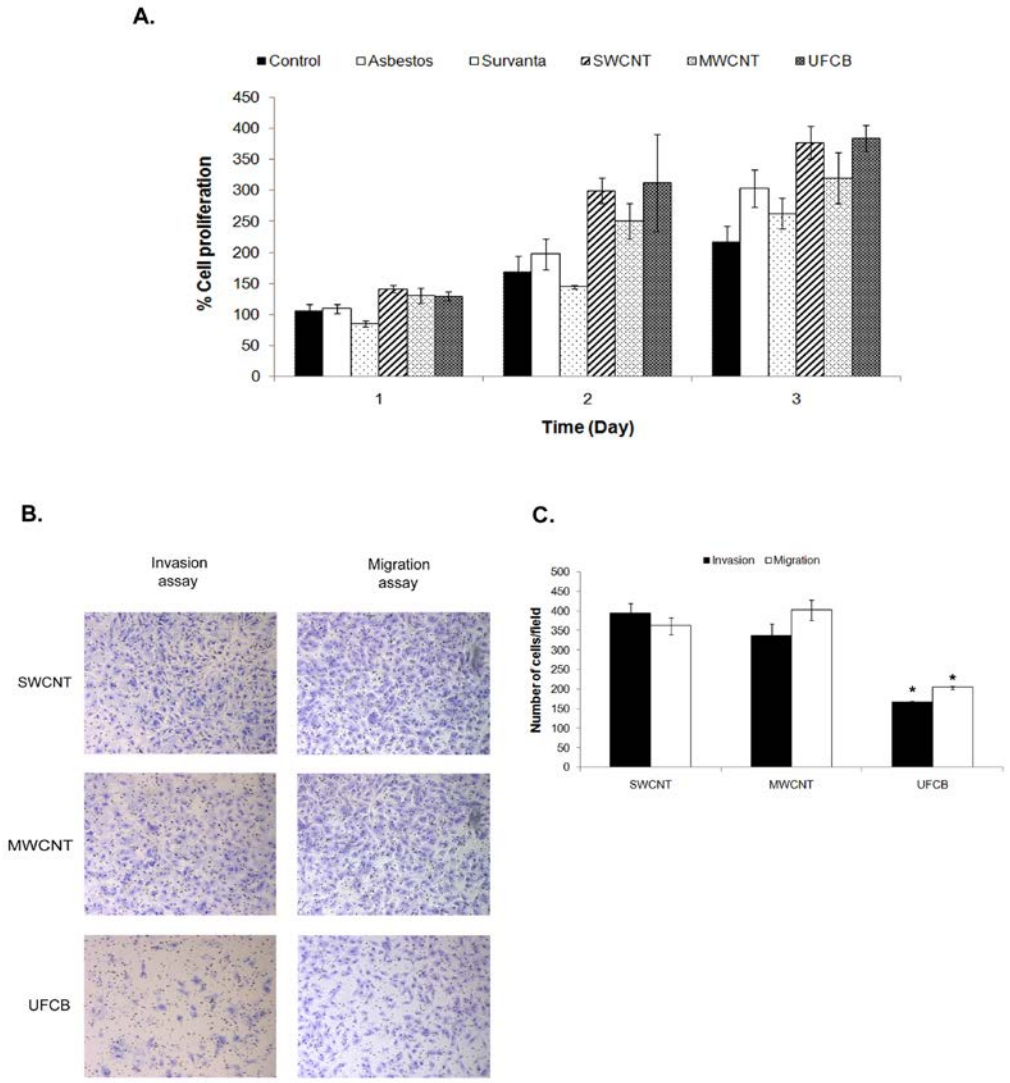


Supporting Figure S1: Persistent oxidative stress induction and depletion of ROS protective mechanism in mesothelial MeT5A cells after long-term exposure to SWCNT, MWCNT and asbestos. (A) Passage control (Control), vehicle control (Survanta) and chronic SWCNT, MWCNT or asbestos-exposed cells were seeded in 96 well plates. After overnight incubation, the cells were stained with 5 μM of 2,7-dichlorofluoroscein diacetate (DCF-DA) in Hank's balanced salt solution (HBSS) for 1 hour. Cellular fluorescence intensity was then measured at the excitation/emission wavelengths of 485/535 nm and expressed as relative fluorescence over control. (B) Superoxide dismutase-1 (SOD-1) expression in passage control, vehicle control, and chronic SWCNT, MWCNT or asbestos-exposed cells determined by Western blotting.



Supporting Figure S2: Similar proliferative but not invasive and migratory properties of ultrafine carbon black (UFCB)- and CNT-exposed cells. (A) Cell proliferation as determined by Cyquant® cell proliferation assays for 3 continuous days of passage control, vehicle control (Survanta) and chronic SWCNT, MWCNT, asbestos or UFCB-exposed cells. (B) Cell invasion and migration of chronic SWCNT, MWCNT or UFCB-exposed cells determined by Transwell® cell invasion and migration assays described under "Materials and Methods". (C) The invading and migrating cells were quantified and depicted as bar charts. * = significant difference from CNT-exposed cells with $P<0.05$.