Shear Stress and its Effect on the Interaction of Myoblast Cells with Nano-Sized Drug Delivery Vehicles

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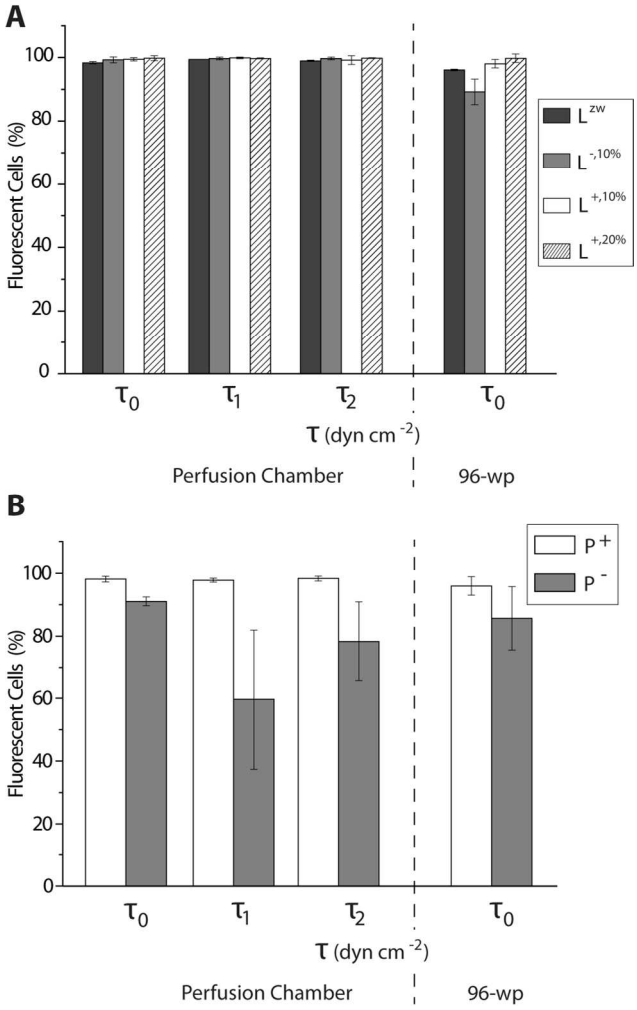

Figure S1. a) The percentage of fluorescent myoblast cells associated with nitrobenzoxadiazole labeled liposomes containing either only zwitterionic lipids (L^{zw}, dark gray bars) or 10 wt% negatively charged lipids ($L^{-,10\%}$, light gray bars) or 10 wt% and 20 wt% positively charged lipids ($L^{+,10\%}$, white bars and $L^{+,20\%}$, striped white bars) in the presence of different shear stresses (τ_0=0 dyn cm^{-2}, τ_1=0.0146 dyn cm^{-2}, and τ_2=0.146 dyn cm^{-2}) was assessed in both, the perfusion chamber and 96-well plates. b) The percentage of fluorescent myoblast cells with fluorescein isothiocyanate (FITC) labeled poly(L-Lysine) (PLL-FITC) (P^+, white bars) or PLL-FITC/polymethacrylic acid (PMA) (P^-, dark gray bars) coated 300 nm-diameter silica nanoparticles in the presence of τ_0, τ_1 and τ_2. In a) and b), the threshold for the cell population testing positive for uptake/association with the fluorescent drug carriers has been chosen above the cells only control

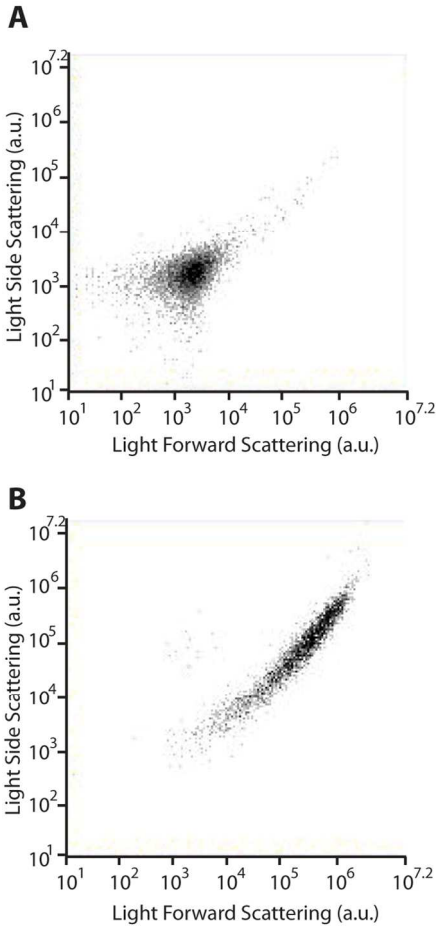

Figure S2. Flow cytometry dot plot of 300 nm-diameter silica nanoparticles coated with fluorescein isothiocyanate (FITC) labeled poly(L-Lysine) (PLL-FITC) (P^+) (a) and PLL-FITC/polymethacrylic acid (PMA) (P^-) (b).

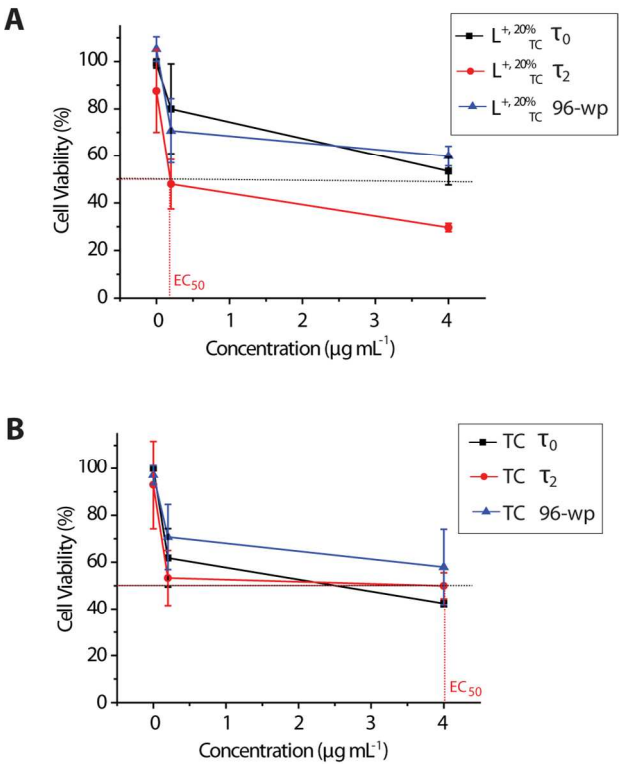

Figure S3. Dose-response curve of myoblast cells measured after 24 h after 30 min exposure to $L^{+,20\%}$ or $L^{+,20\%}$ loaded different concentrations of Thiocoraline (TC) (c_1 = 0.2 µg mL^{-1} and c_2 = 4 µg mL^{-1}) (a) or free TC in the same concentration (b) in the presence of τ_0 and τ_2 in both, the perfusion chamber and the 96-well plates (96-wp). The results have been normalized to cells exposed to cell medium under static conditions in the perfusion chamber.

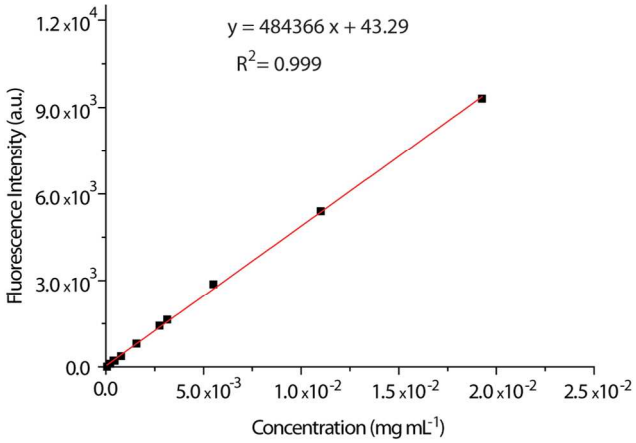

Figure S4. Fluorescence calibration curve for Thiocoraline (TC) in water. Different concentrations of TC were excited at a wavelength of 365 nm and the fluorescence intensity was recorded at an emission wavelength of 547 nm.