SUPPORTING INFORMATION

Versatile cellular uptake mediated by catanionic vesicles: simultaneous spontaneous membrane fusion and endocytosis

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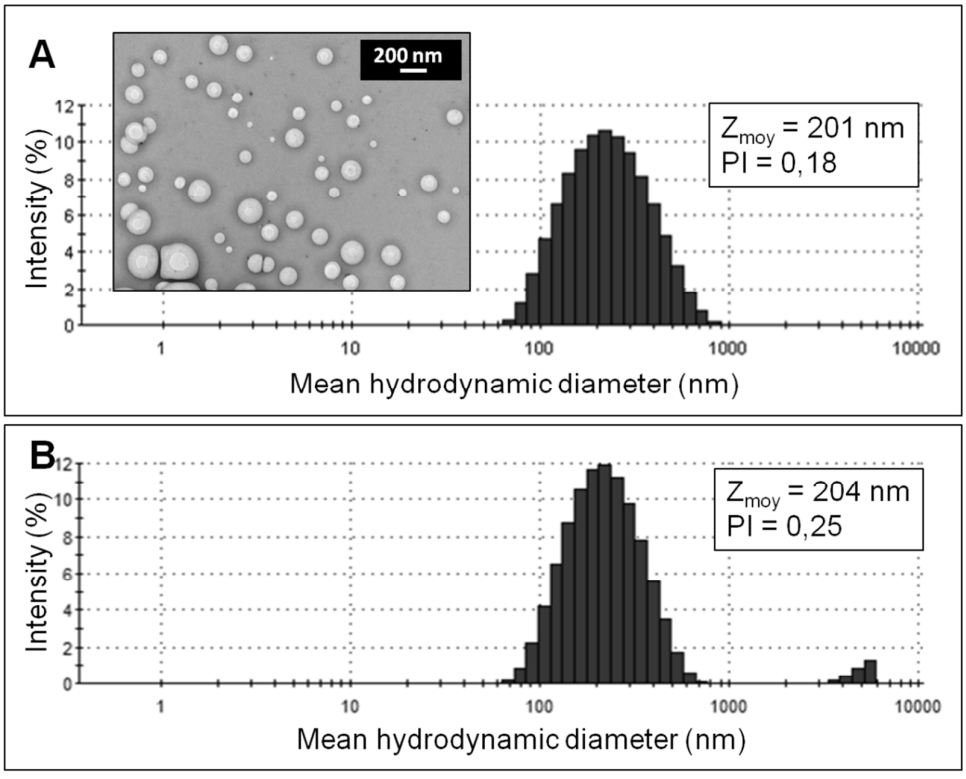

Figure S1. (A) TEM snapshot and size distribution of catanionic vesicles (1 x 10^{-4}M). (B) Size distribution of catanionic vesicles after dilution in EMEM (2 x 10^{-5}M); Z_{moy} is the mean hydrodynamic diameter (nm), PI is the polydispersity index.

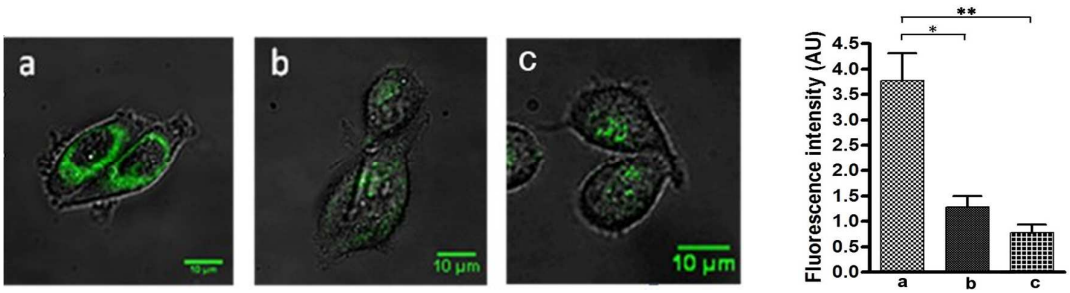

Figure S2. Flow cytometry results: Mean fluorescence intensity data of CHO cells (a) incubated at 37°C with vesicles of TriCat / FluoCat at 2 x 10^{-5}M; (b) incubated at 4°C with vesicles of TriCat / FluoCat at 2 x 10^{-5}M; (c) pretreated with Amiloride, Chlorpromazine and Filipin simultaneously and incubated at 37°C with vesicles of TriCat / FluoCat at 2 x 10^{-5}M. Flow cytometry experiments have been performed three times and data were collected on 10 000 cells.

Fluorescence intensities show relative results (respective controls were subtracted from each intensity value). The statistical significance of the differences between the means was evaluated by an unpaired Student's t-test. All statistics tests were two sided (NS, not significant; *$p < 0.05$; **$p < 0.01$).

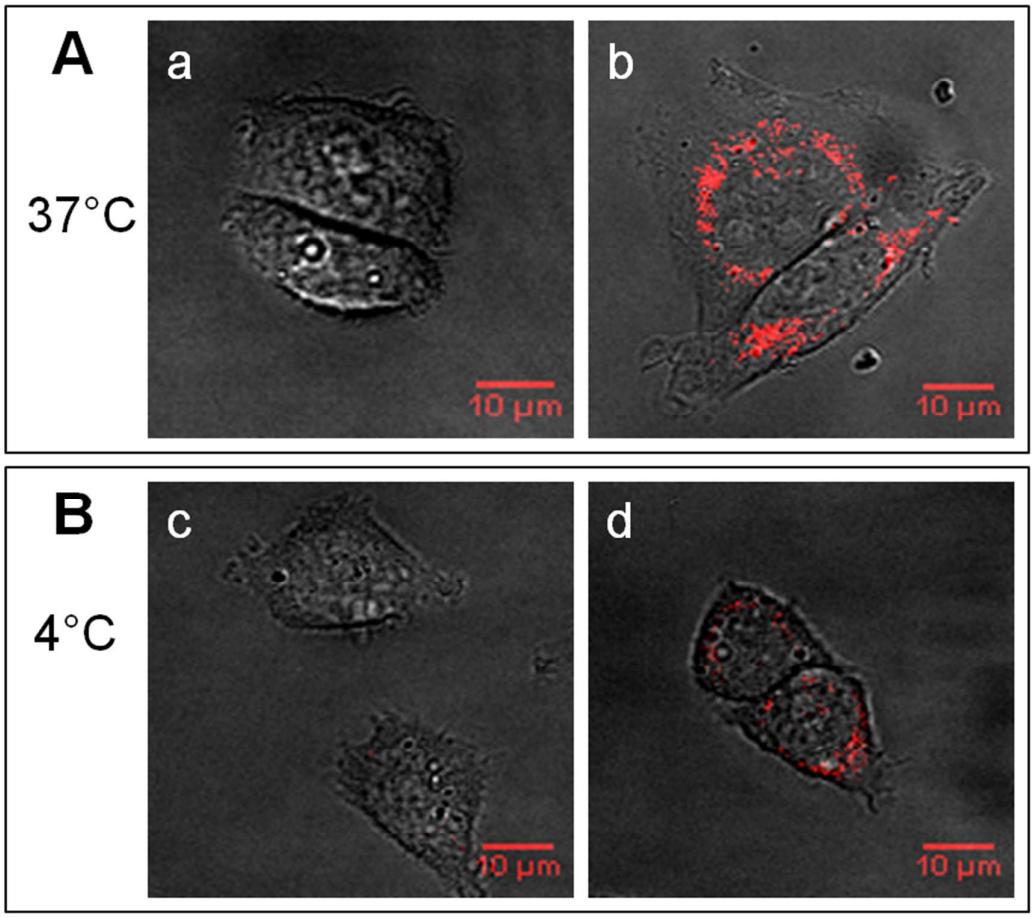

Figure S3. Confocal microscopy snapshots at (A) 37°C or (B) 4°C (merge of the 561nm channel and the DIC channel). In both cases, CHO cells were incubated in the absence of core-labeled vesicles (a and c, respectively) or after incubation with Texas Red-labeled vesicles (b and d, respectively). Cells were rinsed with culture medium without Red Phenol before observation. Snapshots are representative of what was observed on 30 cells.

Confocal microscopy study (Fig. S3) showed fluorescence internalization inside cytoplasm only in the presence of catanionic vesicles, at 37°C as well as at 4°C, when endocytosis is highly slowed down. No fluorescence was observed in the absence of catanionic vesicles, showing no possible spontaneous penetration of free Texas Red probe through cellular membrane.

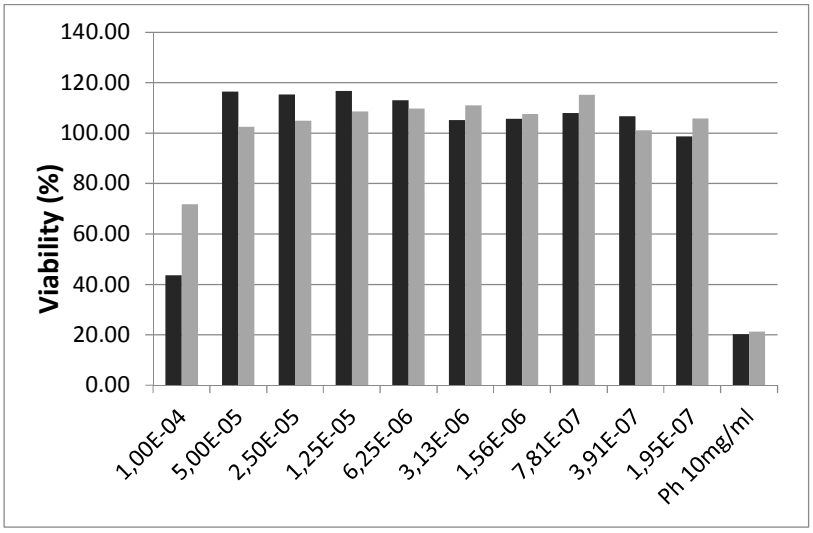

Figure S4. Cytotoxicity of catanionic vesicles. (black) TriCat vesicles in PBS; (grey) TriCat/FluoCat vesicles in PBS.