

SUPPORTING INFORMATION

for

Sustained anti BCR-ABL activity with pH responsive Imatinib Mesylate loaded PCL nanoparticles in CML cells

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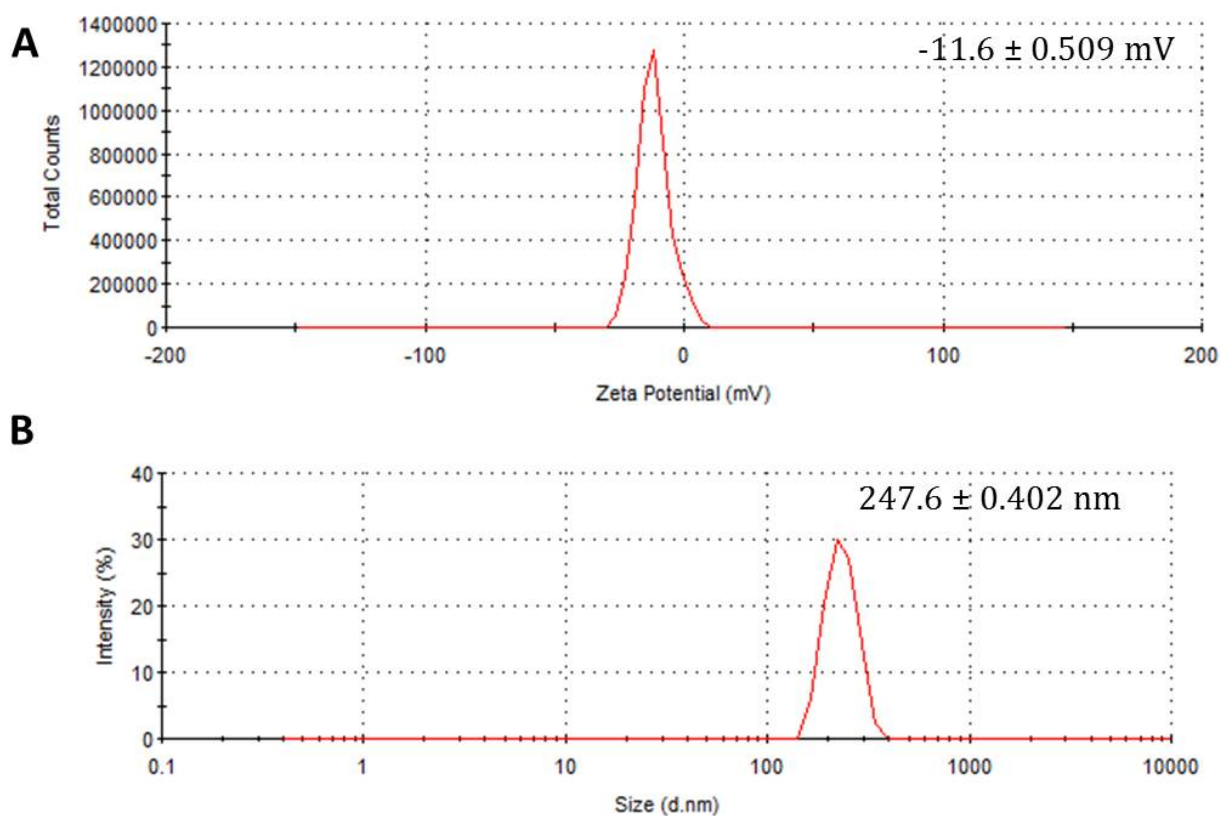


Figure S1. (A) Surface zeta potential distribution demonstrating the uniformity of IM-CH PCL NPs. (B) Size distribution from DLS analysis showing the mean \pm standard deviation of IM-CH PCL NPs. Values represents the mean \pm standard deviation of four independent experiments.

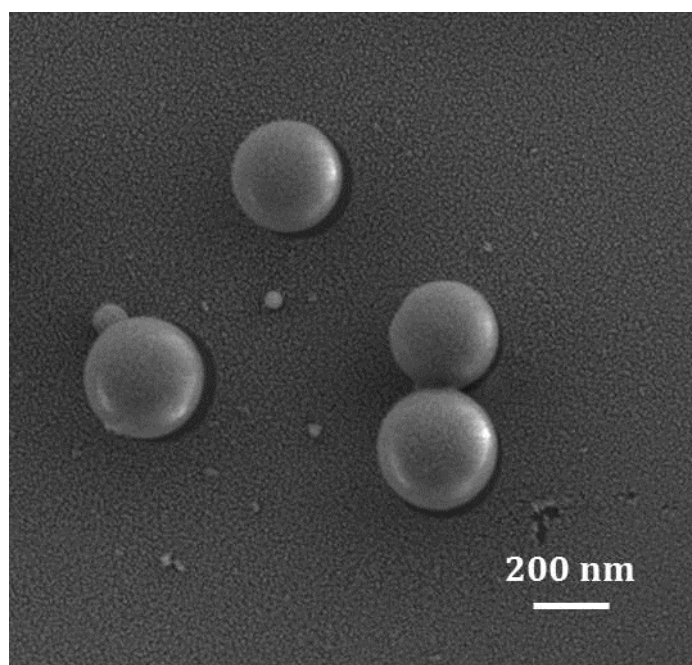


Figure S2. SEM image PCL NPs after IM-CH loaded. Magnification: 34.01 KX. Scale bars: 200 nm

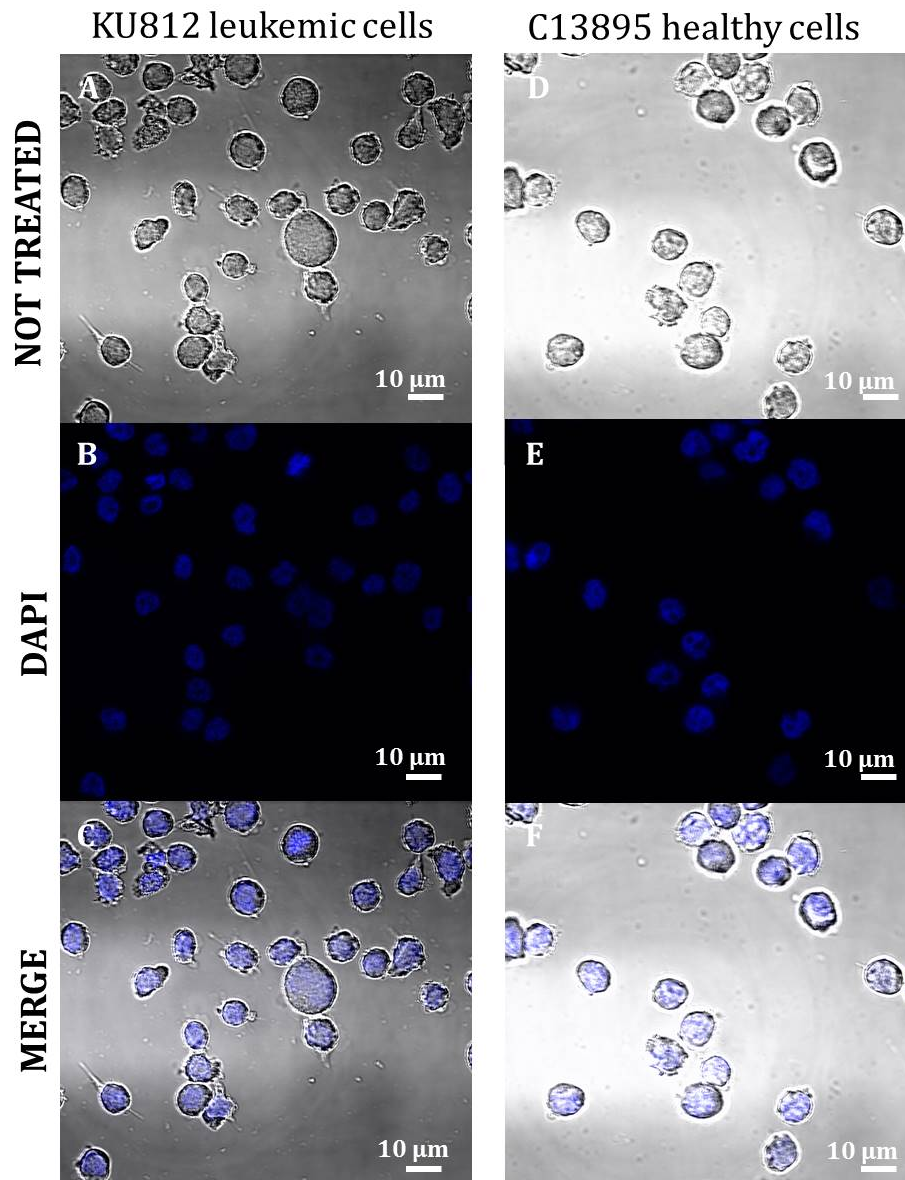


Figure S3. CLSM images of not treated (control) KU812 leukemic cells (A,B,C) and healthy C13895 cells (D,E,F). A,D represent transmission images of not treated cells. Cell nuclei were counterstained with DAPI (B,E, blue). C,F represent merge confocal images. 63X oil immersion objective. *Scale bars: 10 μm.*

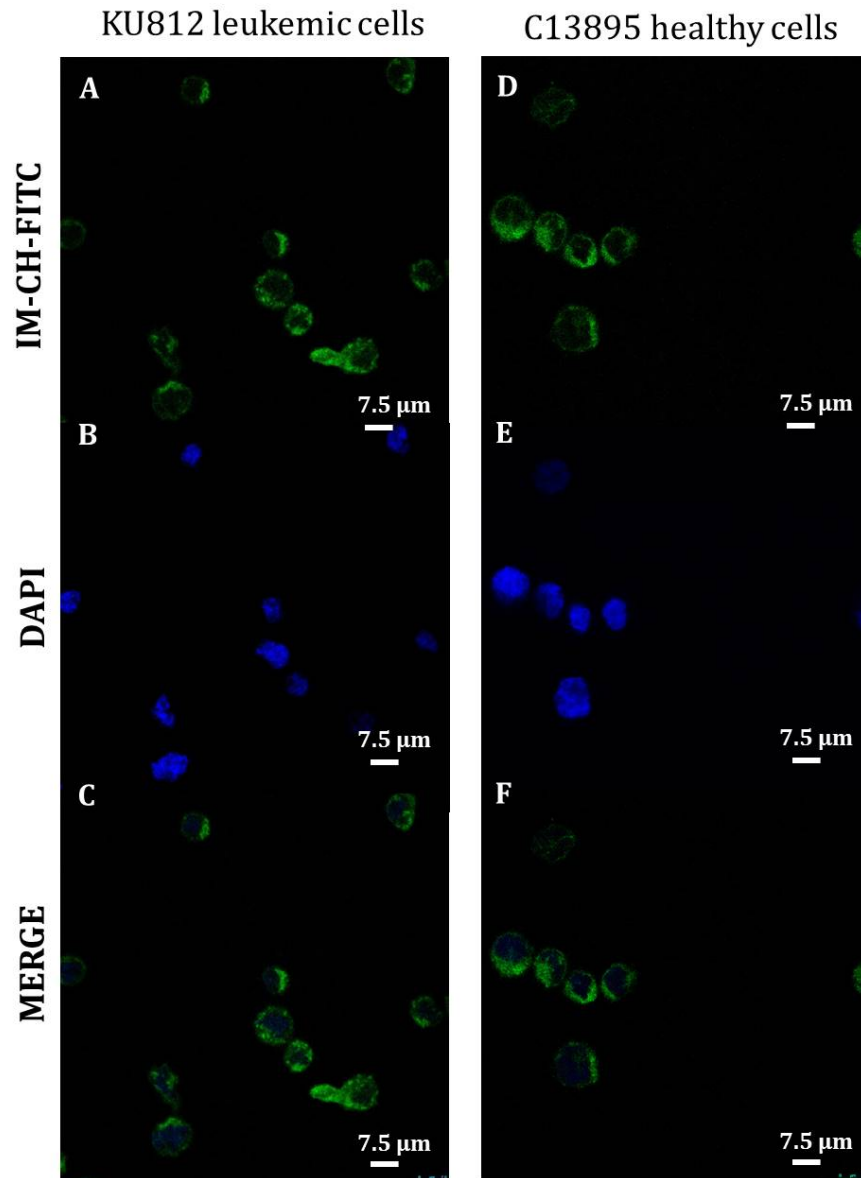


Figure S4. CLSM images of IM-CH-FITC (A,D, green) treated KU812 leukemic cells (A,B,C) and healthy C13895 cells (D,E,F) after 3 hours of incubation. Cell nuclei were counterstained with DAPI (B,E, blue). C,F represent merge confocal images. 63X oil immersion objective. *Scale bars: 7.5 μm.*

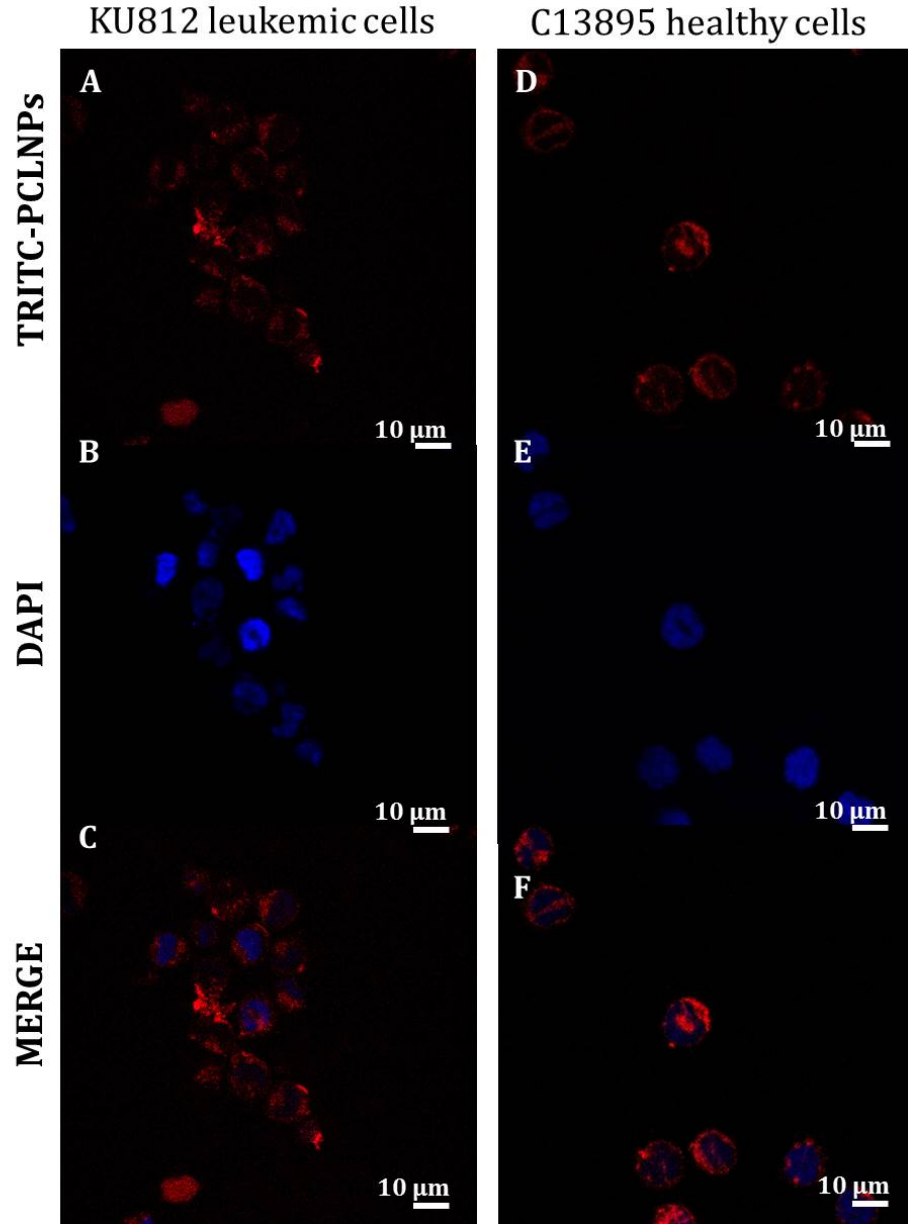


Figure S5. CLSM images of TRITC PCL NPs (A,D, green) treated KU812 leukemic cells (A,B,C) and healthy C13895 cells (D,E,F) after 3 hours of incubation. Cell nuclei were counterstained with DAPI (B,E, blue). C,F represent merge confocal images. 63X oil immersion objective. *Scale bars: 10 μm.*

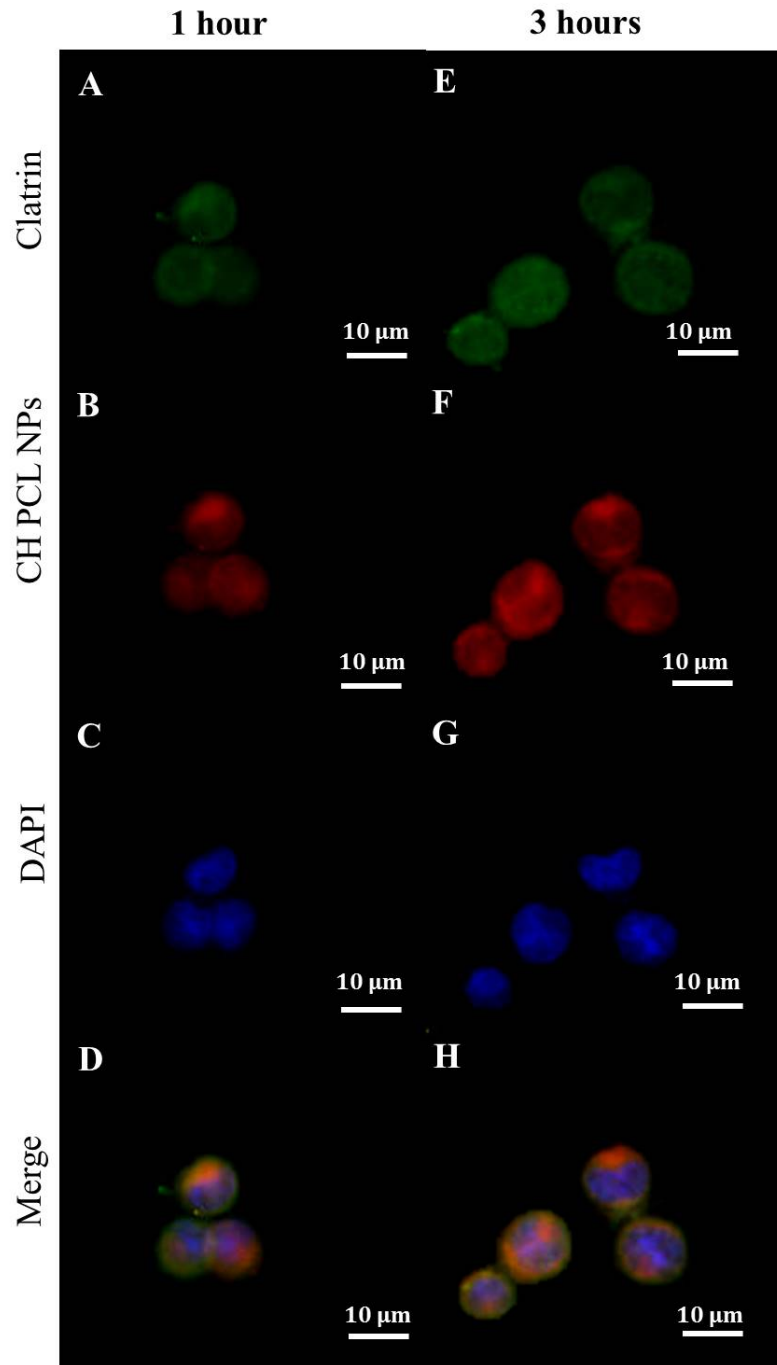


Figure S6. Clatrin (A,E) immunofluorescence (green) in healthy C13895 cells after 1 (A) and 3 (E) hours of incubation with (B,F) CH-TRITC PCL NPs (red). Cell nuclei (C,G) were counterstained with DAPI (blue). Merge images (D,H) shows colocalization of NPs with clatrin. 63X oil immersion objective. *Scale bars: 10 μm.*

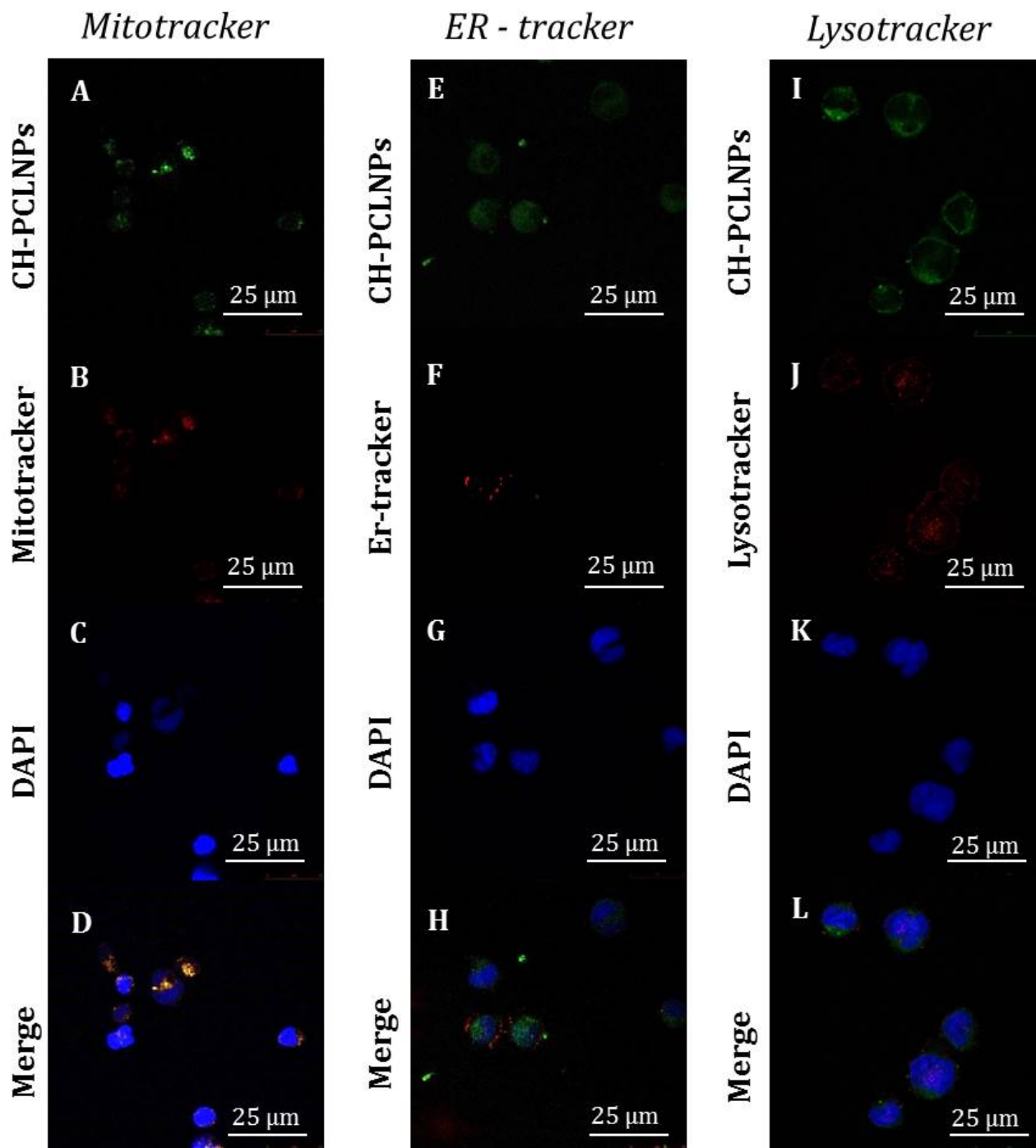


Figure S7. Subcellular localization of CH-FITC loaded PCL NPs in C13895 healthy cells (A,E,I, green). CLSM images of cell staining with Mitotracker (B, mitochondria marker, red), ER-tracker (F, endoplasmic reticulum marker, red) and Lyso-tracker (J, lysosome marker, red). In D,H,L images are shown colocalization of CH-FITC loaded NPs (A,E,I) with Mitotracker (B), ER-tracker (F) and Lyso-tracker (J) after 3 hours treatment with the nanoparticles, respectively. Cell nuclei were counterstained with DAPI (blue) as shown in the CLSM images C,G,K. 63X oil immersion objective. *Scale bars: 25 μm*

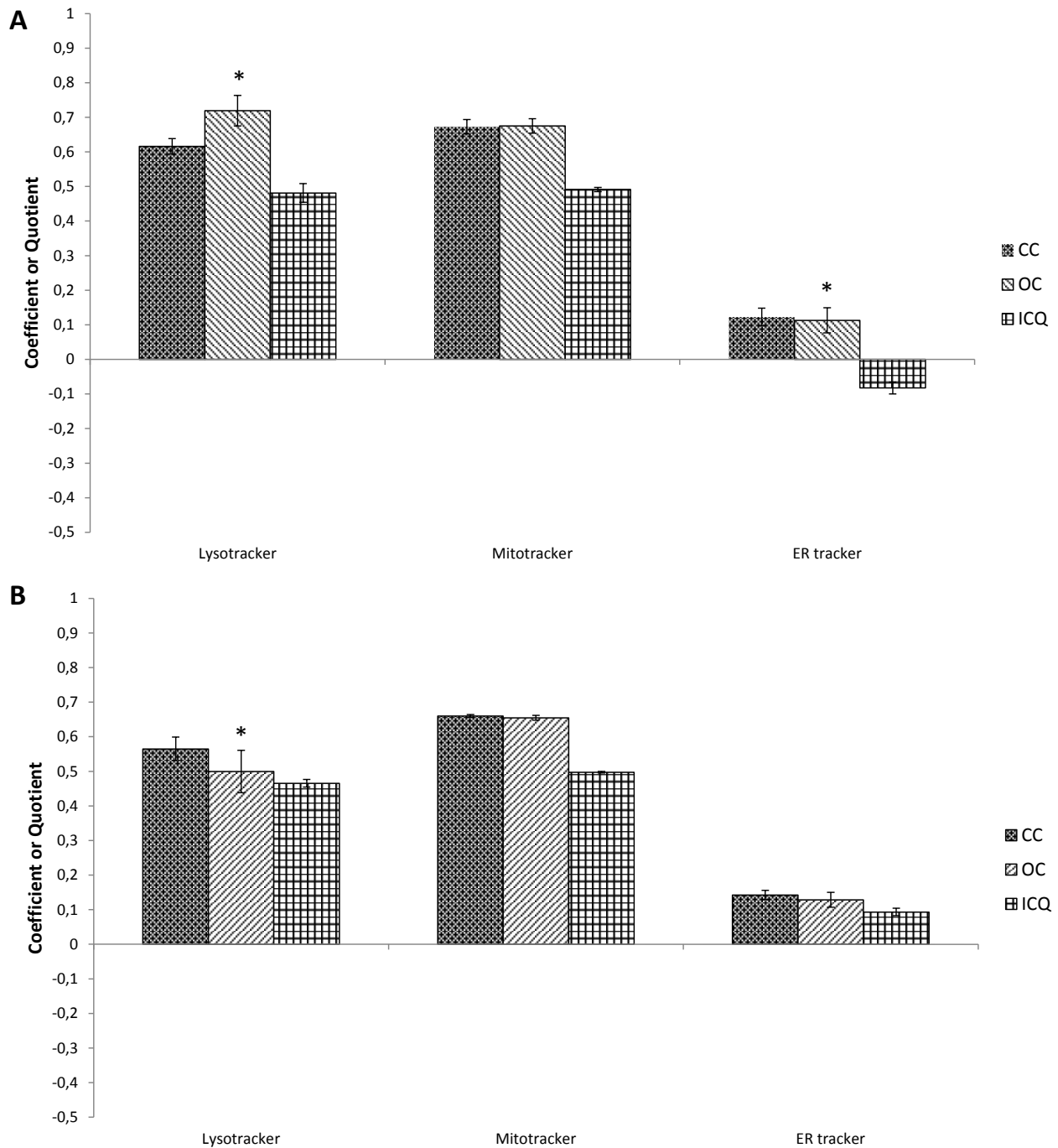


Figure S8. Quantitative colocalization analysis between PCL NPs and LysoTracker, MitoTracker and ER-Tracker for KU812 leukemic cells (A) and C13895 healthy cells (B). For the same confocal images the CC (coefficient of correlation), OC (overlap coefficient) and ICQ (intensity correlation quotient) were calculated and plotted. In particular, CC immunofluorescence signals in the confocal images can range from -1 to 1, where 1 means perfect overlap, and 0 means random distribution. OC for the fluorescence signals can range from 0 to 1, where 0 means no overlap, and 1 indicates perfect overlap. ICQ for the fluorescence signals can show a range from -0.5 to 0.5, where 0.5 means perfect overlap, and 0 means random overlap. Ten different fields were randomly selected for each sample, and three distinct experiments were performed; * indicates P -values of <0.05 for t -Student test.

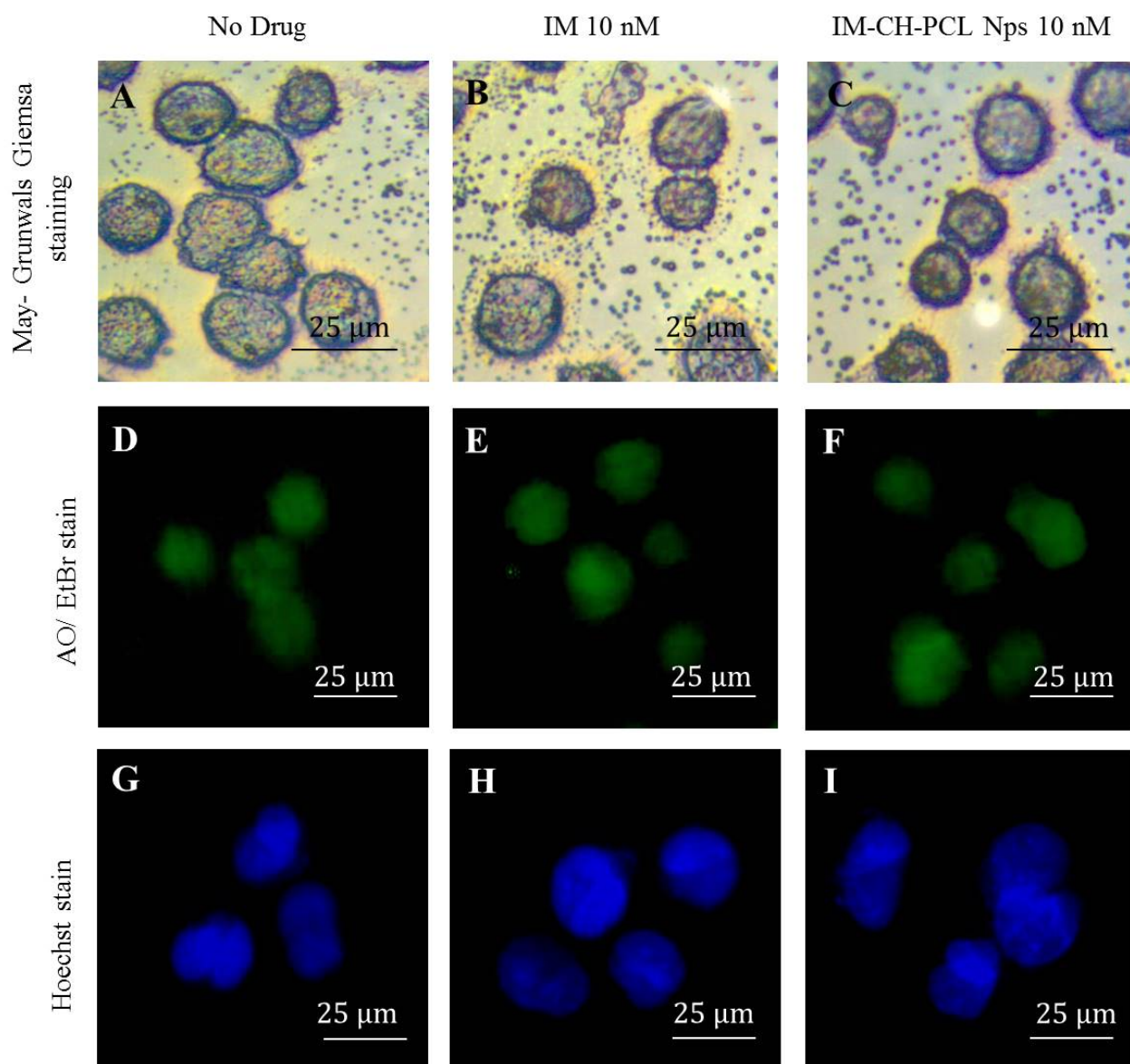


Figure S9. May-Grunwals-Giemsa (A,B,C), AO/EtBr (D,E,F) and Hoechst (G,H,I) staining of C13895 healthy cells after 72 hours of treatments, untreated cells as control (A,D,G), C13895 treated with 10 nM of IM free (B,E,H) or 10 nM of IM-CH loaded PCL NPs (C,F,I). 50X objective. Scale bars: 25 μ m.