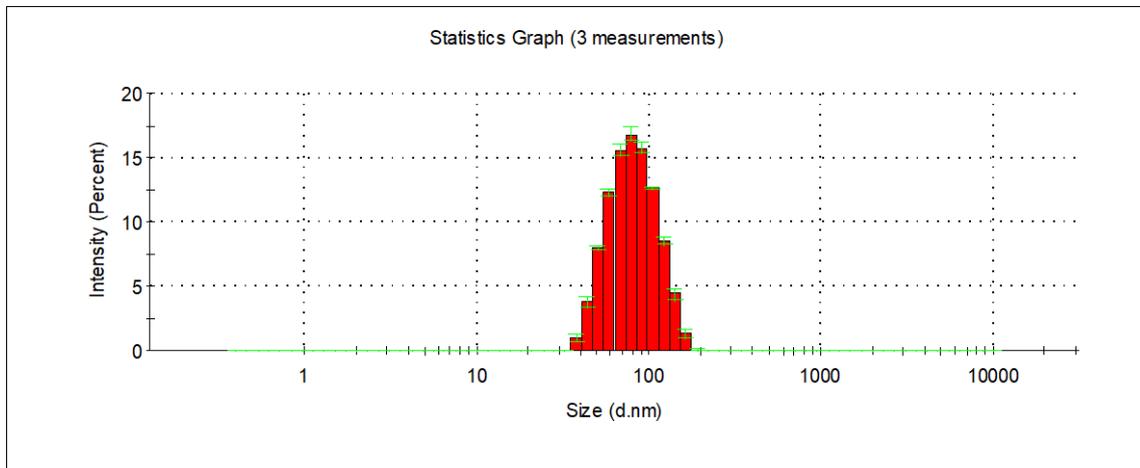
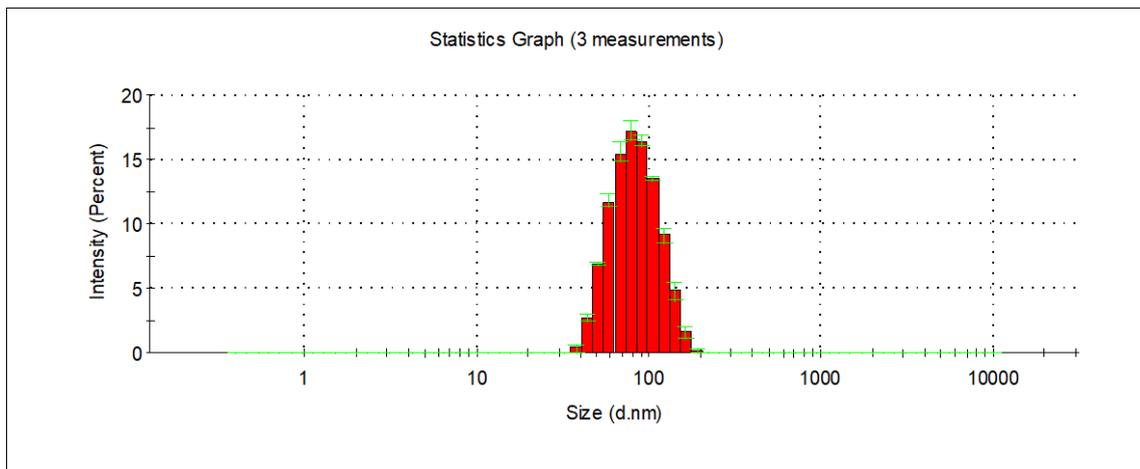


**Figure S1**

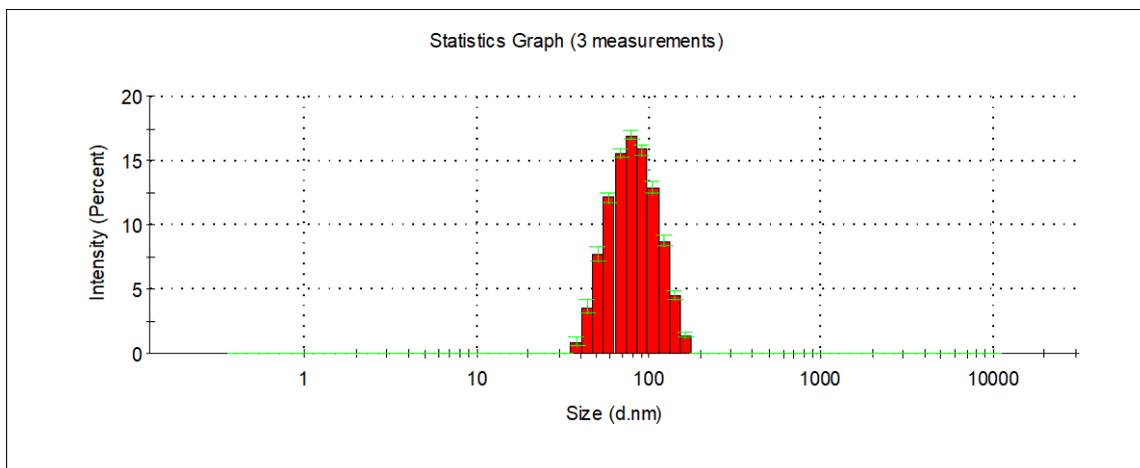
**A**



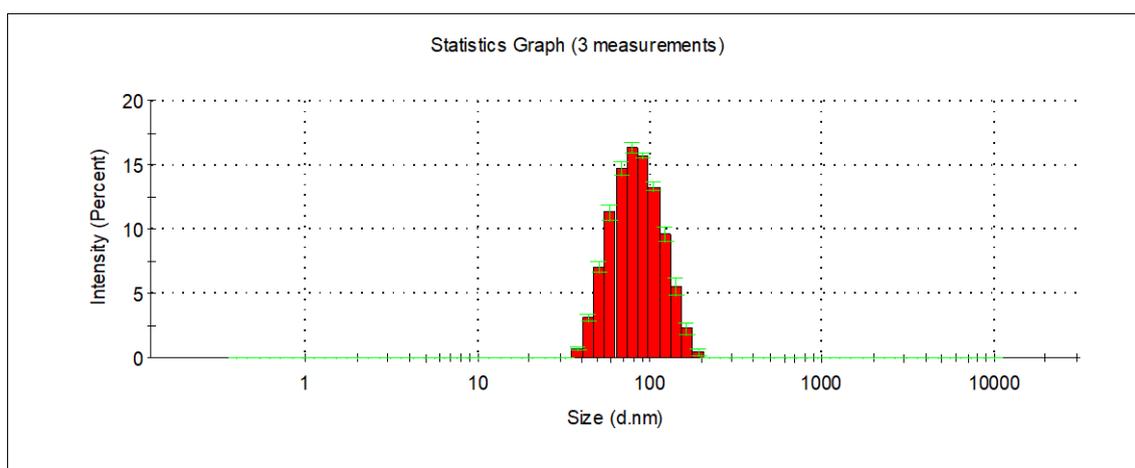
**B**



**C**



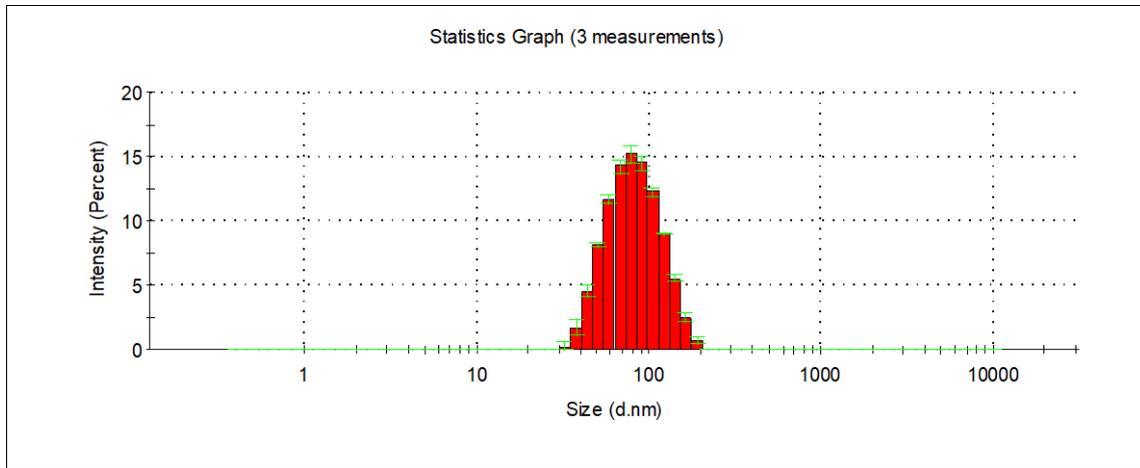
D



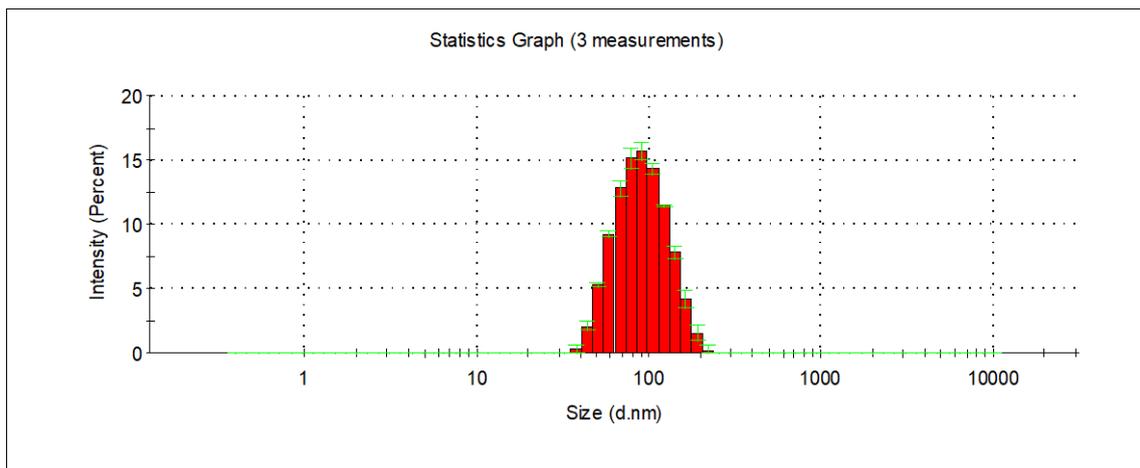
**Figure S1. Micellar size and size distribution (PDI) of free and drug-loaded Soluplus® micelles (5% w/v) at 25 °C.** A) Soluplus® (5% w/v) micelles. B) Histamine (5 mg/mL)-loaded Soluplus® (5% w/v) micelles. C) Paclitaxel (4 mg/mL)-loaded Soluplus® (5% w/v) micelles. D) Histamine (5 mg/mL) and Paclitaxel (4 mg/mL)-loaded Soluplus® (5% w/v) micelles. Data are expressed as mean  $\pm$  S.D. (n = 3).

**Figure S2**

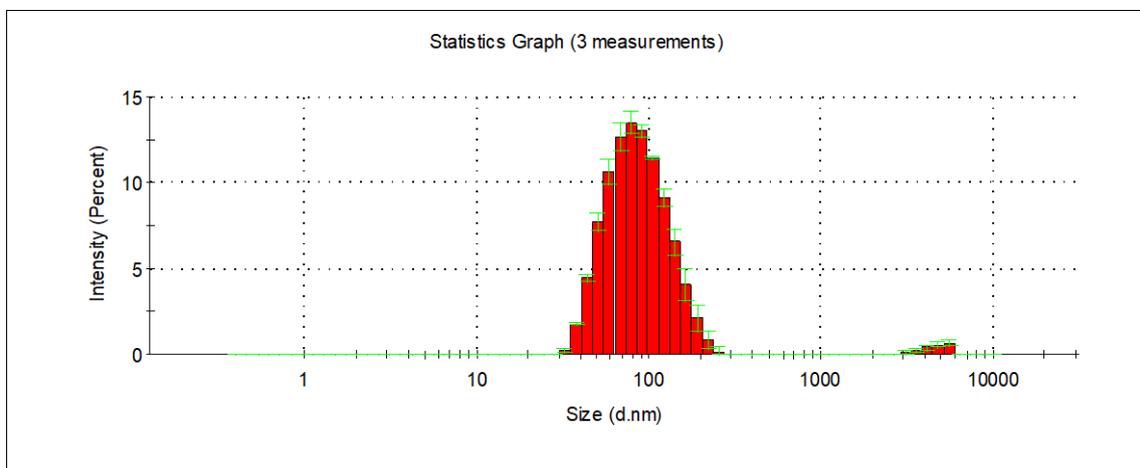
**A**



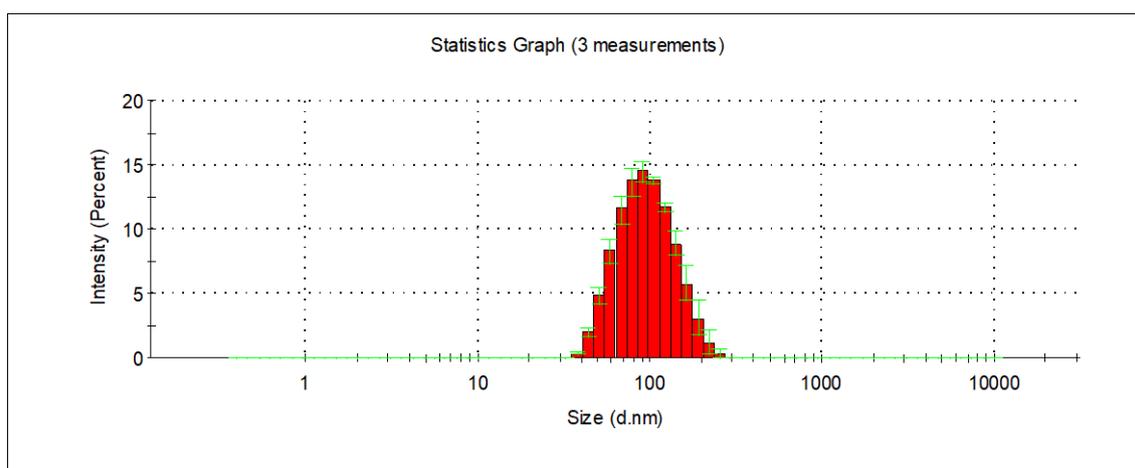
**B**



**C**

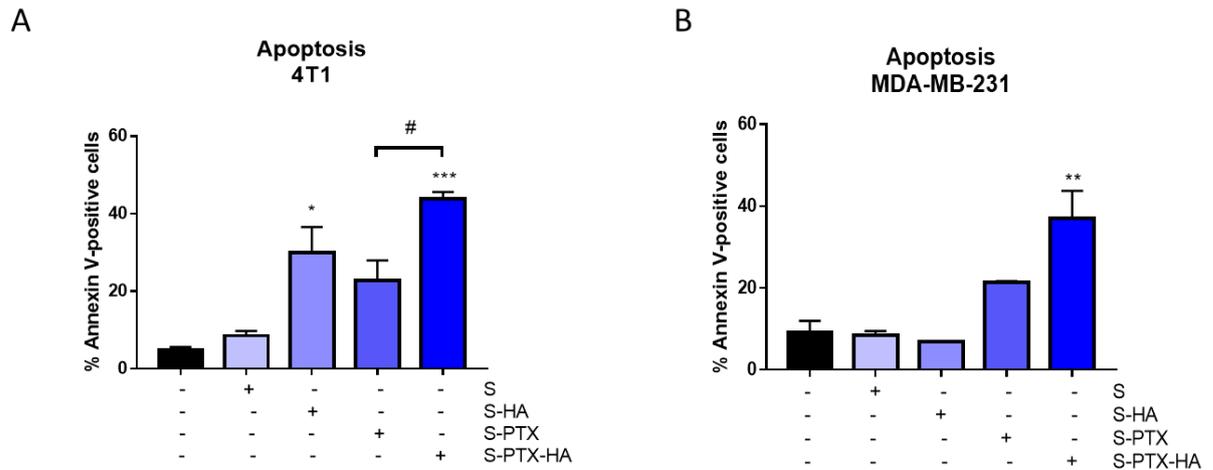


**D**



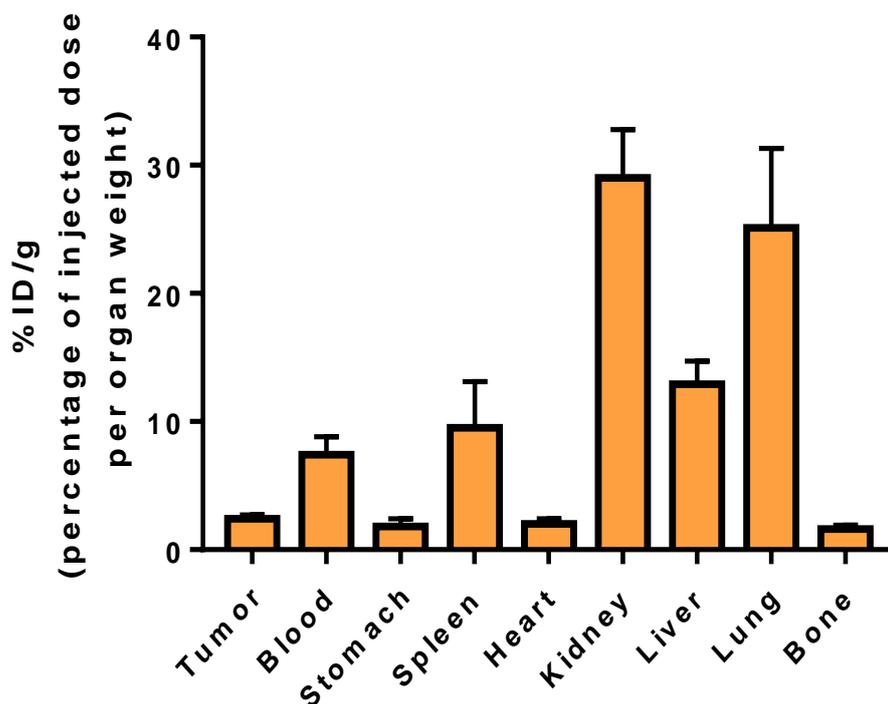
**Figure S2. Micellar size and size distribution (PDI) of free and drug-loaded Glucose-Soluplus® micelles (5% w/v) at 25 °C.** A) Glucose-Soluplus® (5% w/v) micelles. B) Histamine (5 mg/mL)-loaded Glucose-Soluplus® (5% w/v) micelles. C) Paclitaxel (4 mg/mL)-loaded Glucose-Soluplus® (5% w/v) micelles. D) Histamine (5 mg/mL) and Paclitaxel (4 mg/mL)-loaded Glucose-Soluplus® (5% w/v) micelles. Data are expressed as mean  $\pm$  S.D. (n = 3).

**Figure S3**



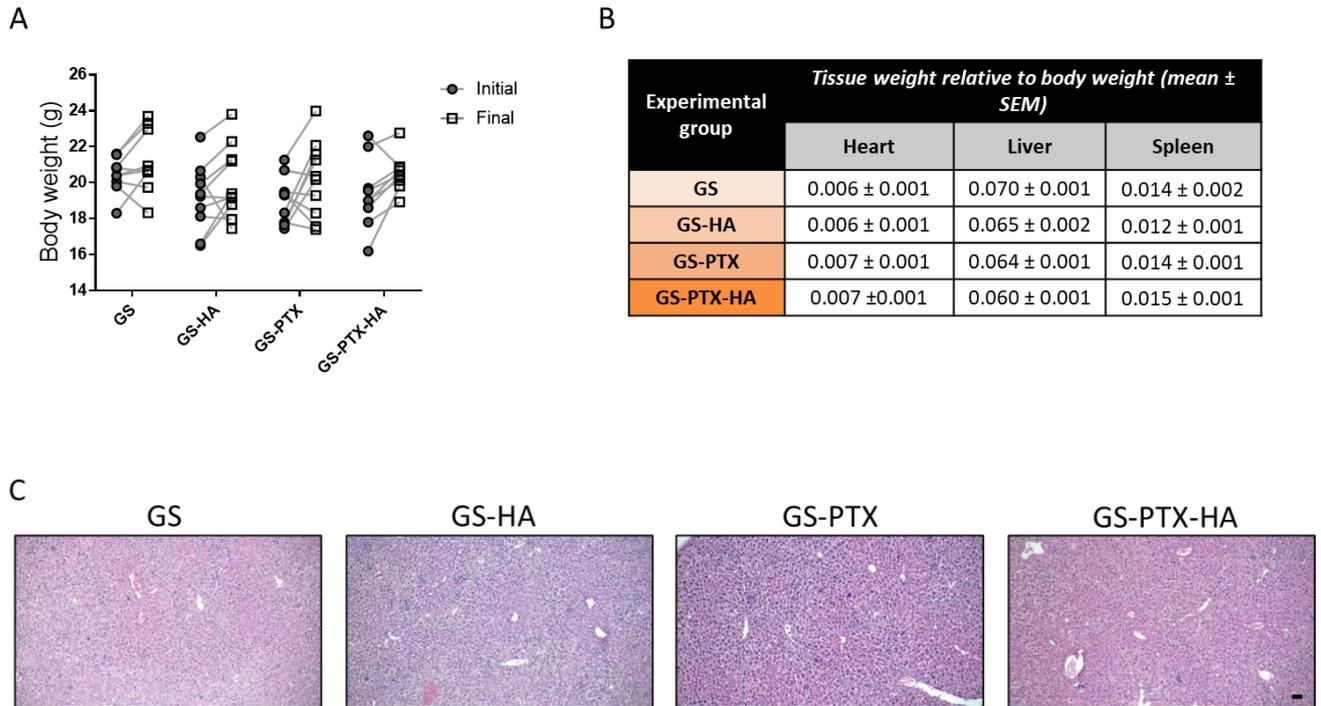
**Figure S3. Modulation of apoptosis in 4T1 and MDA-MB-231 cells by nanomicellar formulations.** A) 4T1 and B) MDA-MB-231 cells were treated with micellar systems (PTX 0.1  $\mu\text{g}/\text{mL}$ ) for 72 h. The percentage of Annexin-V was evaluated by flow cytometry. Error bars represent the mean  $\pm$  SEM (n = 3 independent experiments performed in triplicates). (ANOVA, Tukey's multiple comparisons test, \* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$  vs. control, # $P < 0.05$ ).

Figure S4



**Figure S4.**  $^{99m}\text{Tc}$ -radiolabeled micelles bio-distribution in 4T1 TNBC model developed in BALB/c mice. Animals were anesthetized with isoflurane 2%v/v and  $\text{O}_2$  as carrier.  $^{99m}\text{Tc}$ -radiolabeled GS micelles were i.v. administered (tail vein) in 0.05–0.1 mL (3.7–37 MBq or 0.1–1 mCi/animal) to 4T1 tumor-bearing animals. An *ex vivo* study was performed to evaluate biodistribution of radioactive 1 h after inoculation. Mice were euthanized in a  $\text{CO}_2$  chamber, and organs of interest were excised, weighed, and radioactivity was measured in a well-type solid scintillation counter (Alfanuclear, ZX, Argentina) to express results as percentage of injected radioactive dose normalized by the organ weight (%ID/g). Bars represent mean  $\pm$  SD (n=4 animals per group).

**Figure S5**



**Figure S5. A) Initial and final body weights. B) The weight of heart, liver, and spleen relative to final body weight of 4T1 tumor-bearing mice are shown (n= 9-10). Data represent the mean  $\pm$  SEM. C) Representative images of the liver samples stained with hematoxylin & eosin. x100 original magnification. Scale bar = 20  $\mu$ m.**