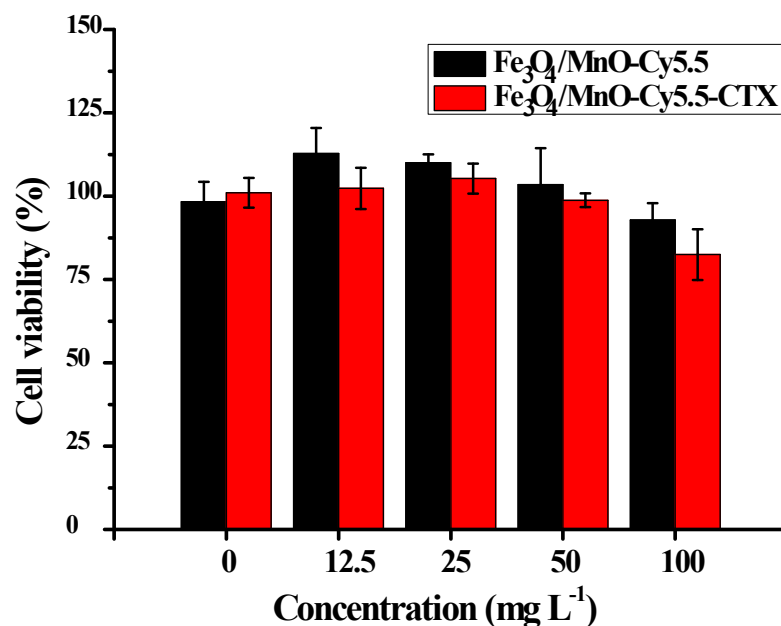
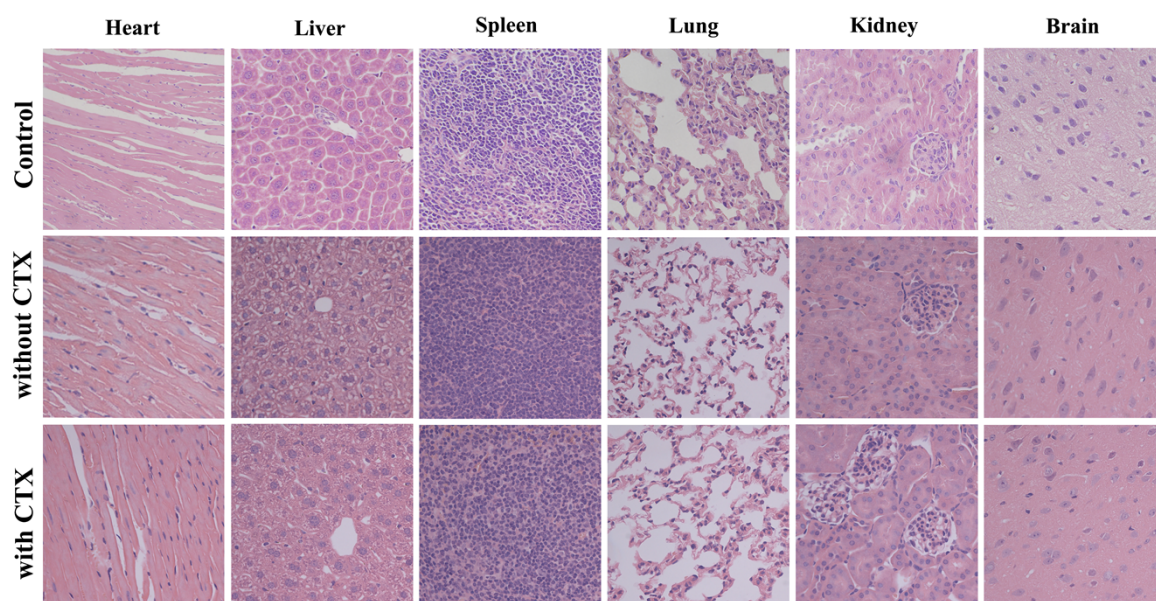


## Supplementary information



**Fig. S1.** Viability of 3T3 cells after 24 h incubation with Fe<sub>3</sub>O<sub>4</sub>/MnO-Cy5.5 or Fe<sub>3</sub>O<sub>4</sub>/MnO-Cy5.5-CTX NPs at various equivalent NPs concentrations. Each data represents the mean ± SD of three independent experiments.



**Fig. S2.** H&E-stained tissue sections from ICR mice receiving no injection and 15 days post-injection of  $\text{Fe}_3\text{O}_4/\text{MnO-Cy5.5}$  or  $\text{Fe}_3\text{O}_4/\text{MnO-Cy5.5-CTX}$  NPs ( $15\text{mg Mn kg}^{-1}$  body). Tissues were harvested from heart, liver, spleen, lung, kidney, and brain, respectively. No apparent tissue damage, inflammation, or lesions were observed.