Supporting Information

In Vivo Delivery of Silica Nanorattle Encapsulated Docetaxel for
Hepatocellular Carcinoma Therapy with Low Toxicity and High Efficacy

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Supporting Information

Figure S1 Zeta potentials of (A) silica nanorattles, and (B) PEGylated silica nanorattles by dynamic light scattering (DLS) measurement. The silica nanorattle shows a positive zeta potential because of the existence of amino groups. After PEGylation, the nanoparticle shows a neutral zeta potential.

Supporting Information

Figure S2 (A) Size distribution and (B) TEM image of SN@ FITC. (C) Fluorescence spectra (excitation wavelength $\lambda_{ex}=488$ nm) of SN@FITC and SN@FITC-PEG. There is a red shift about 7 nm of the peak after PEGylation.

Supporting Information

Figure S3 Systematic toxicity of Taxotere[®] and SN-PEG-Dtxl after three times of i. v. administration of SN-PEG-Dtxl (20mg/kg Dtxl), Taxotere[®] (20mg/kg Dtxl) and saline. Viscera index in the Taxotere[®] and SN-PEG-Dtxl and saline control group.

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Figure S4 Systematic toxicity of Taxotere[®] and SN-PEG-Dtxl after three times of i. v. administration of SN-PEG-Dtxl (20 mg/kg Dtxl), Taxotere[®] (20 mg/kg Dtxl) and saline. (A) Alanine aminotransferase (ALT), (B) aspartate aminotransferase (AST), (C) total bilirubin (TBIL), (D) urea nitrogen (BUN) and (E) plasma creatinine (CRE).

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Figure S5 Systematic toxicity of Taxotere[®] and SN-PEG-Dtxl after three times of i. v. administration of SN-PEG-Dtxl (20mg/kg Dtxl), Taxotere[®] (20mg/kg Dtxl) and saline control. Histological section stained with H&E of (A-C) liver, (D-F) spleen, (G-I) kidney, and (J-L) lung samples. (A, D, G, J) SN-PEG-Dtxl, (B, E, H, K) Taxotere[®], and (C, F, I, L) control group.

Supporting Information

Figure S6 Graphs showing *in vivo* therapy efficacy on marine hepatocarcinoma 22 (H22) subcutaneous models. (A) SN-PEG-Dtx1 group (20 mg/kg), (B) Taxotere[®] group (20 mg/kg), and (C) control group after 4 cycles of therapy.