**A Novel Nanoparticle Drug Delivery System based on PEGylated Hemoglobin for Cancer Therapy**

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**Figure S1.** SDS-PAGE analysis of Hb and PEG-Hb.



**Figure S2.** PTX release percentage (%) in PEG-Hb-PTX NPs. (A) HPLC chromatogram of PTX. (B) *In vitro* release profiles of PTX from the nanoparticles at pH 5.5 and 7.4.



**Figure S3.** Stability of of PEG-Hb-PTX NPs at different time points in fetal blood serum.



Figure S4. Plasma PTX concentration–time profile after the intravenous injection of a 10 mg/kg dose of Taxol and PEG-Hb-PTX NPs. Data are expressed as mean ± SD, n = 3 per time point.

**Table S1** Pharmacokinetic parameters of PTX in ICR mice by iv injection (10 mg/kg).

|  |  |  |
| --- | --- | --- |
| Pharmacokinetic Parameters | Taxol | PEG-Hb-PTX NPs |
| AUC (μg/mL\*h) | 8.7368±0.57 | 20.4286±1.12 |
| t1/2 (h) | 0.3917±0.22 | 1.0587±0.29 |
| MRT (h) | 0.5651±0.32 | 1.38±0.56 |

AUC: Area under the curve; t1/2: Half-life; MRT: Mean residence time.