

Supplementary Information

In vivo evaluation of an anticancer drug delivery system based on heparinized mesoporous silica nanoparticles

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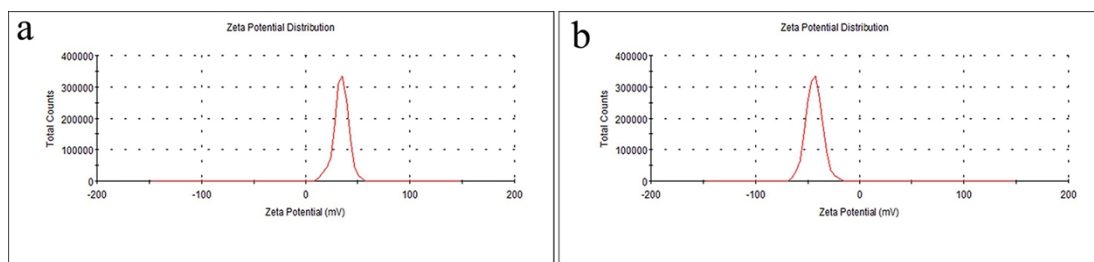


Fig. S1 Zeta potential of MSNs-NH₂ (a) and MSNs-HP (b).

Table S1 CI value of DOX in combination with MSNs-HP

DOX ($\mu\text{g} / \text{mL}$)	MSNs-HP ($\mu\text{g} / \text{mL}$)	Inhibitory rate (%, 48 h)	Parameters			CI value
			Dm ($\mu\text{g} / \text{mL}$)	m	r	
0.16		18.36	0.55	0.89	0.94	
0.31		33.53				
0.63		61.53				
1.25		74.89				
2.5		77.03				
	8	3.38	123.82	1.109	0.97	
	16	14.81				
	32	16.13				
	64	32.33				
	128	49.60				
0.16	8	26.97	0.26+13.28	0.866	0.96	0.92
0.31	16	62.35				0.43
0.63	32	78.48				0.49
1.25	64	89.66				0.68
2.5	128	92.24				1.25

Dose-effect relationships were calculated by the median-effect equation. *Dm* median-effect dose (concentration in $\mu\text{g} / \text{mL}$ that inhibits cell growth by 50 %), *m* is the slope of the median-effect plot, *r* linear correlation coefficient of the median effect plot. CI was calculated by Chou and Talalay's CI equation.

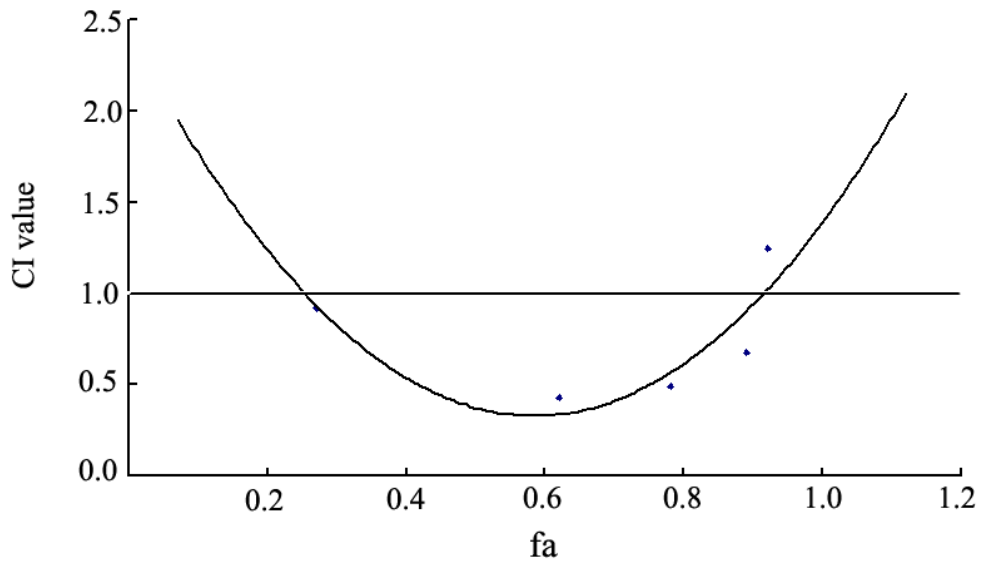


Fig. S2 Combination index (CI) vs fraction affected (fa) plots obtained from the median-effect analysis program. Curves with solid lines are computer simulated CI-fa plots, based on the parameters (m and D_m values) for DOX and MSNs-HP combinations in H22 cell lines. Circles are actual combination data points. $CI < 1$, $= 1$ and > 1 indicates synergism, additive effect and antagonism, respectively.