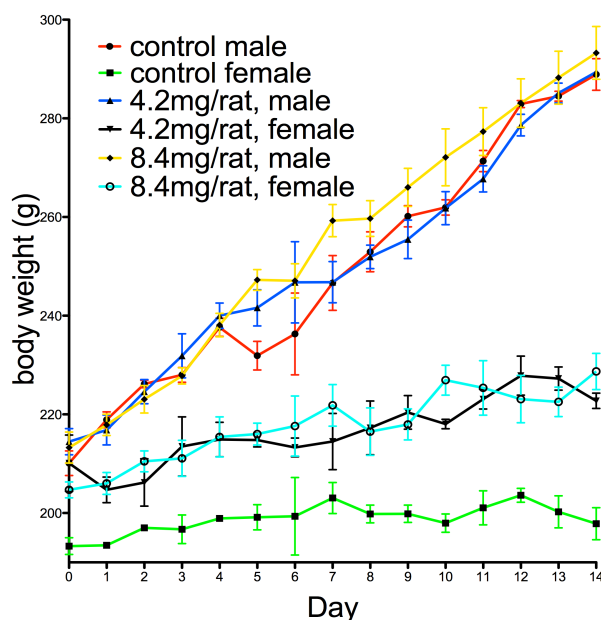


## Supporting Information

### Rapid-releasing of HI-6 via Brain-targeted Mesoporous Silica Nanoparticles for Nerve Agent Detoxification

*Jun Yang<sup>1</sup>, Lixue Fan<sup>1</sup>, Feijian Wang<sup>1</sup>, Yuan Luo<sup>1</sup>, Xin Sui<sup>1</sup>, Wanhua Li<sup>1</sup>, Xiaohong Zhang<sup>2</sup> and Yongan Wang<sup>1\*</sup>*

#### Experimental results



**Figure S1.** Average body weight of rats for evaluation of MSN toxicity. Rats were intravenously injected with one of two doses (4.2 and 8.4 mg/rat) of MSN three times a week for 14 days. Results are presented as mean  $\pm$  SD.

**Table S1.** Serological and hematological parameters of mice treated with MSN for 14 days

	Normal range	Control	TF-MSN [rat-1]	
		0	4.2 mg	8.4 mg
<b>CBC</b>				
WBC [K/ $\mu$ l]	5–25	7.86	13.15	7.73
RBC [K/ $\mu$ l]	5–12	8.20	8.23	8.22
HGB [g/l]	111–180	154.17	155.83	159.67
HCT [%]	39–53	45.47	46.35	46.27
MCV [fl]	44.5–69	55.55	56.52	56.45
MCH [PG]	12–24.5	18.80	19.00	19.45
MCHC [g/dl]	21.6–42	33.88	33.62	34.57
PLT [K/ $\mu$ l]	276.13–2972	1130.83	1136.67	1164.17
RDW [%]	2.55–47.03	30.03	30.33	30.53
PDW [%]	6.83–11.09	9.60	9.20	9.38
MPV [fl]	6.5–9.14	8.33	8.05	8.17
NEUT [%]	6.6–38.9	30.40	15.68	23.50
LYMPH [%]	65–84	63.22	78.28	71.93
MONO [%]	0–75	5.98	5.12	4.17
EO [%]	0–6	0.22	0.82	0.35
BASO [%]	0–2	0.18	0.08	0.05
<b>BP</b>				
ALT [U $\cdot$ l <sup>-1</sup> ]	7–98.7	17.00	11.50	42.50
AST [U $\cdot$ l <sup>-1</sup> ]	37–322.9	40.80	25.33*	130.67
ALP [U $\cdot$ l <sup>-1</sup> ]	13–291	74.60	148.50	241.50
TP [g $\cdot$ l <sup>-1</sup> ]	33–75.7	20.46	37.53	56.53
ALB [g $\cdot$ l <sup>-1</sup> ]	31.7–43.7	9.66	16.45	21.18
TCHO [mmol $\cdot$ l <sup>-1</sup> ]	0.76–2.22	1.27	1.83	1.76
BUN [mmol $\cdot$ l <sup>-1</sup> ]	2.08–7.75	2.78	4.02	6.55

TBIL [mmol·l <sup>-1</sup> ]	0.07–1.34	0.12	—	0.62
GLU [mmol·l <sup>-1</sup> ]	2.65–7.62	1.06	0.86	1.12
TG [mmol·l <sup>-1</sup> ]	1.3–1.62	0.11	0.31	0.41
CREA [mmol·l <sup>-1</sup> ]	19.43–64.97	5.90	10.03	11.68
CK [U·l <sup>-1</sup> ]	0–504.9	189.20	135.33	758.67
G [U8.679]	31.37–46.3	10.80	21.08	35.35

BP, biochemical parameters; CBC, complete blood count.

**Table S2.** Coefficients for various organs of rats injected intravenously with different doses of TF-MSNs (n = 6 rats each) three times a week for 14 days

Organ	Control group	Treatment group	
	0 mg/rat	4.2 mg/rat	8.2 mg/rat
Heart	0.37	0.36	0.35
Liver	3.72	3.78	3.55
Spleen	0.23	0.24	0.26
Kidney	0.82	0.81	0.82
Brain	0.68	0.62	0.67
Testicle	0.96	1.09	1.01
Ovarian	0.32	0.27	0.31