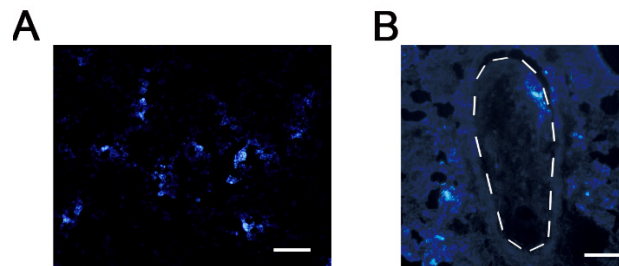


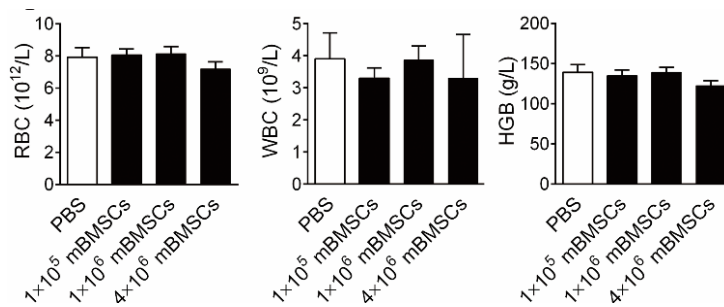
## Supplementary Figures



**Supplementary Figure S1. Injected mBMSCs are involved in the thrombosis of lung.**

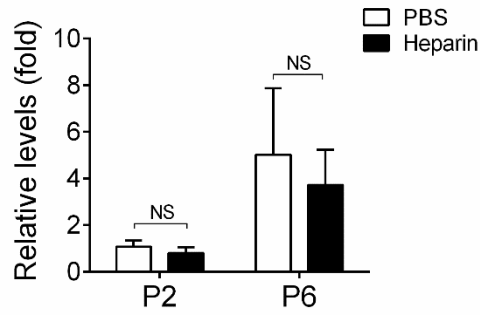
**A**, Fluorescence analysis of mouse lung tissue after intravenous administration of  $3 \times 10^6$  mBMSCs labelled with Hoechst (blue). Representative images are shown. Scale bar, 500 $\mu$ m.

**B**, Fluorescence analysis of thrombus in vascular of lung after intravenous administration of  $3 \times 10^6$  mBMSCs labelled with Hoechst (blue). Representative images are shown. Scale bar, 200 $\mu$ m.



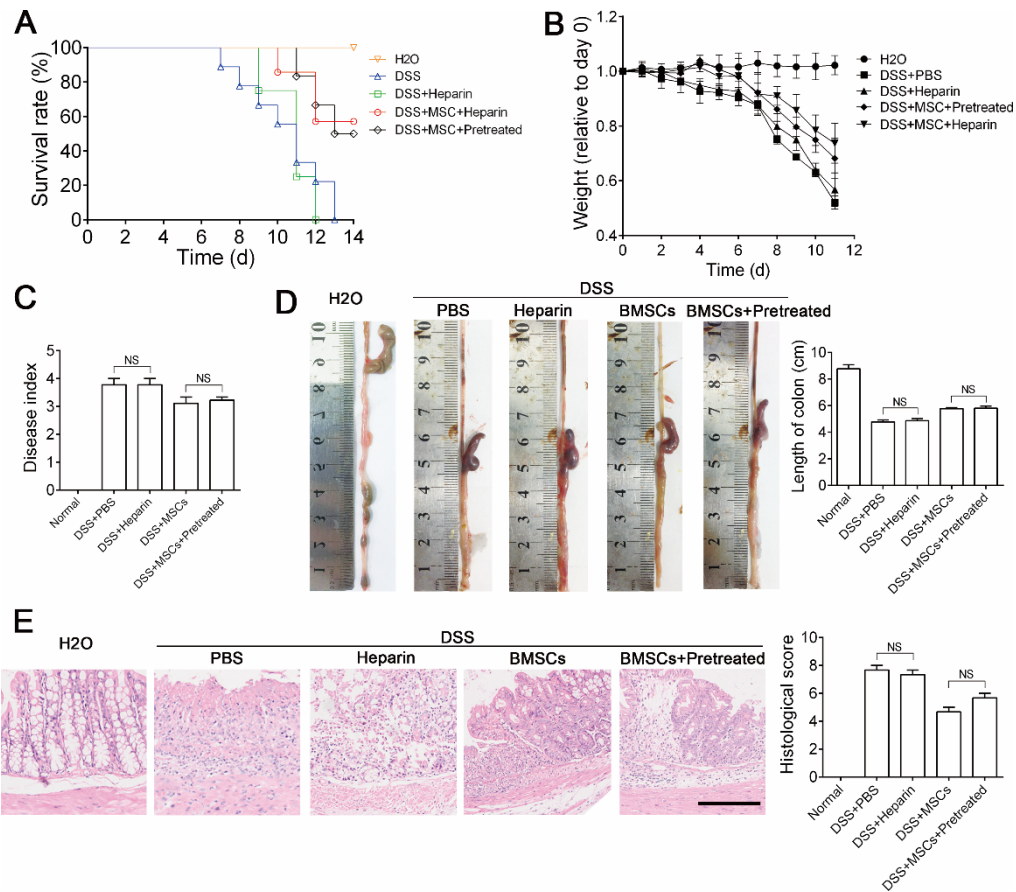
**Supplementary Figure S2. Injected mBMSCs do not induce hemolytic reaction.**

Blood examination of mice 10 min after injection of different dose of mBMSCs. n=4.



**Supplementary Figure S3. Heparin treatment dose not inhibit TF expression in mBMSCs.**

P2 mBMSCs were treated with 4 u/ml heparin or equal volume of PBS (vehicle control) *in vitro* for 12 hr or for 4 passages (P6). Realtime RT-PCR was performed to detect TF mRNA expression in BMSCs. n=3.



**Supplementary Figure S4. Heparin does not directly improve BMSCs cell therapy on experimental colitis.**

Mice were fed with drinking water containing 3% DSS for 14 days. At the third day, PBS, Heparin,  $1 \times 10^6$  mBMSCs or mBMSCs pretreated with 4 u/ml Heparin for 12 hr were separately injected into the mice *via* tail vein. **A**, Mortality of mice was recorded for 14 days.  $n=10$ . **B**, Body weight was recorded daily for 10 days. The body weight of each mouse was normalized by its weight at day 0.  $n=5$ . **C**, Disease index was measured at day 10 of DSS feeding.  $n=5$ . **D**, Colons of each group were collected after 10 days and their lengths were measured.  $n=5$ . **E**, Histological structure of the colon was detected by H&E staining, and the histological score was measured.  $n=5$ . The images at the bottom are higher magnifications of the images at the top. Scale bar, 200  $\mu$ m. NS, no significance.

## Supplementary Tables

Supplementary Table S1. Acute adverse symptoms of mice after injection of different concentration of mBMSCs.

	1×10 <sup>6</sup> mBMSCs/ml		2×10 <sup>6</sup> mBMSCs/ml		3×10 <sup>6</sup> mBMSCs	
	1ml	3ml	500µl	1.5ml	333µl	1ml
	(n=4)	(n=4)	(n=4)	(n=4)	(n=4)	(n=4)
Dyspnea	0	4(100)	0	4(100)	0	4(100)
Cyanosis	0	4(100)	0	4(100)	0	4(100)
Slow response	0	4(100)	0	4(100)	0	4(100)
Exophthalmus	0	3(75)	0	3(75)	0	2(50)
Tetraplegia	0	3(75)	0	2(50)	0	3(75)
Coolness of extremities	0	3(75)	0	2(50)	0	2(50)
Mortality	0	3(75)	0	2(50)	0	2(50)

Data are shown as n (%).

Supplementary Table S2. Acute adverse symptoms of mice after injection of P12 mBMSCs with or without heparin.

	PBS (n=4)	P12 mBMSCs		P12 mBMSCs combined with heparin	
		2×10 <sup>6</sup>	4×10 <sup>6</sup>	2×10 <sup>6</sup>	4×10 <sup>6</sup>
		(n=4)	(n=4)	(n=4)	(n=4)
Dyspnea	0	4(100)	4(100)	0	2(50)
Cyanosis	0	4(100)	4(100)	0	1(25)
Slow response	0	4(100)	4(100)	0	1(25)
Exophthalmus	0	4(100)	4(100)	0	0
Tetraplegia	0	4(100)	4(100)	0	0
Coolness of extremities	0	4(100)	4(100)	0	0
Mortality	0	4(100)	4(100)	0	0

Data are shown as n (%).