

## Supplementary Information

Repeated intravenous administration of silica nanoparticles induce pulmonary inflammation and collagen accumulation via JAK2/STAT3 and TGF- $\beta$ /Smad3 pathways in vivo

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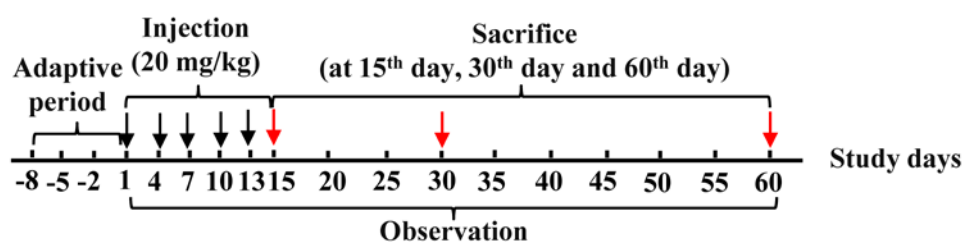
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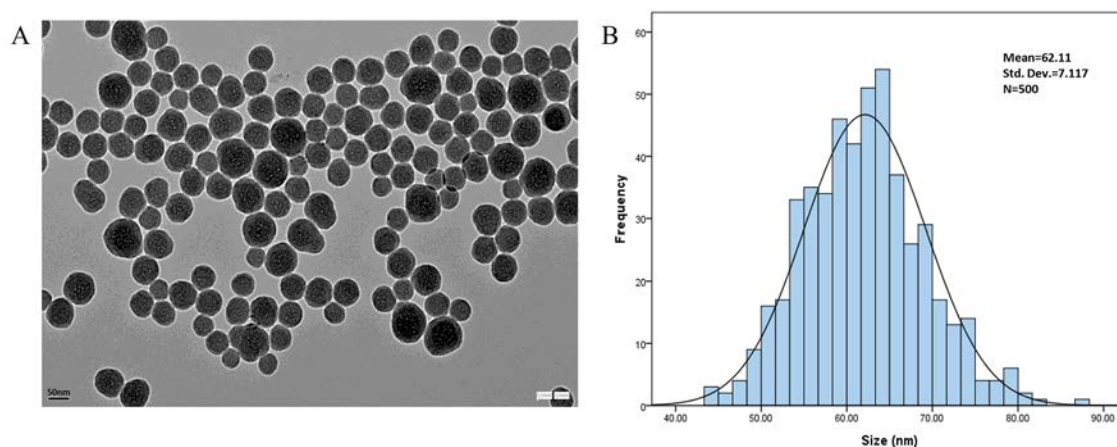
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**Figure S1.** Experimental design of repeated exposure of SiNPs in ICR mice. Black arrows: SiNPs injection from 1<sup>st</sup> day to 13<sup>th</sup> day; Red arrows: scarification at 15<sup>th</sup> day, 30<sup>th</sup> day and 60<sup>th</sup> day.



**Figure S2.** Characterization of SiNPs. (A) The SiNPs exhibited a near-spherical shape and were well dispersed. Scale bar: 50 nm. (B) The average diameter of SiNPs was  $62 \pm 7.1$  nm.

**Table S1 .**Hydrodynamic size and Zeta potential of SiNPs in dispersion media.

	Distilled water		Physiological saline		DMEM	
	Diameter (nm)	Zeta potential(mV)	Diameter (nm)	Zeta potential (mV)	Diameter (nm)	Zeta potential (mV)
1h	109.02 $\pm$ 3.54	-43.51 $\pm$ 4.67	110.26 $\pm$ 4.81	-39.44 $\pm$ 3.69	108.01 $\pm$ 1.43	-40.13 $\pm$ 4.29
3h	107.92 $\pm$ 3.31	-40.20 $\pm$ 2.13	108.93 $\pm$ 2.79	-37.26 $\pm$ 2.50	109.22 $\pm$ 3.10	-38.62 $\pm$ 2.76
6h	108.10 $\pm$ 2.23	-42.53 $\pm$ 3.84	107.64 $\pm$ 2.33	-40.30 $\pm$ 2.47	107.51 $\pm$ 2.07	-40.05 $\pm$ 3.60
12h	106.34 $\pm$ 1.67	-43.11 $\pm$ 4.06	105.42 $\pm$ 3.01	-38.11 $\pm$ 3.45	106.27 $\pm$ 4.09	-38.74 $\pm$ 2.91
24h	105.79 $\pm$ 2.51	-44.45 $\pm$ 3.71	105.65 $\pm$ 2.18	-37.70 $\pm$ 3.02	105.70 $\pm$ 2.44	-39.10 $\pm$ 2.83

Data are expressed as means  $\pm$  S.D. from five independent experiments.

**Table S2.** Endotoxin detection by LAL assay

Dosage	Sample	Sample+Positive control	Positive control	Negative control
0.5 mg/mL	-	+	+	-
1 mg/mL	-	+	+	-
3 mg/mL	-	+	+	-
6 mg/mL	-	+	+	-
12 mg/mL	-	+	+	-