

Supporting information

Chitosan coated ultrapure silicon nanoparticles produced by laser ablation: Promising nanocarrier for tumor targeting

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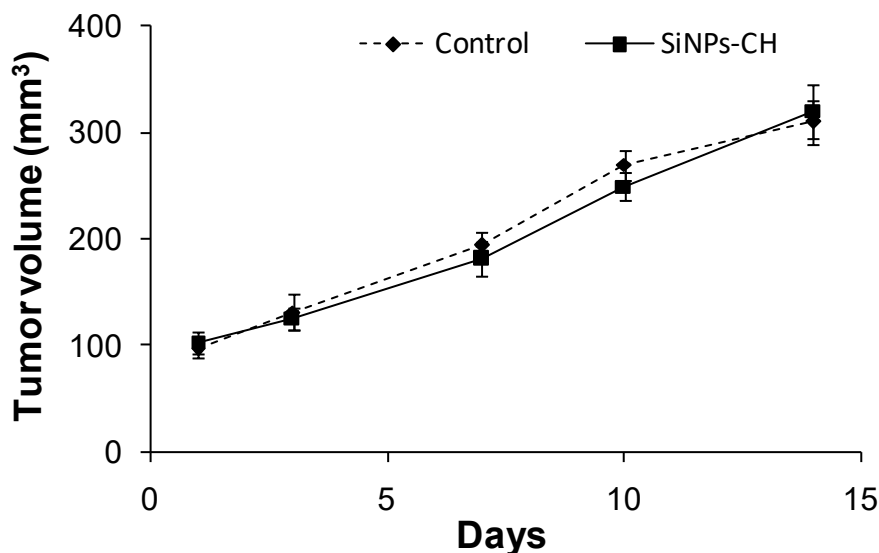


Figure S1 Tumor growth of control group treated with chitosan or treated mice with 20 mg.Kg⁻¹ of SiNPs-CH during 1, 7 and 15 days following the intravenous injection showing no significant differences.

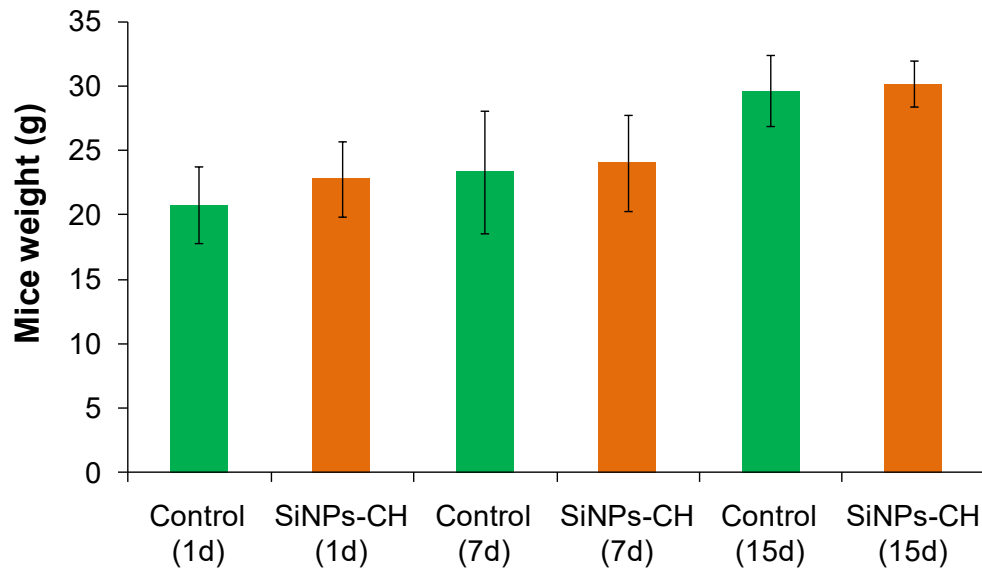


Figure S2 Body weight of animals treated with chitosan (control) and SiNP-CH (20 mg.Kg⁻¹) after 1, 7 and 15 days of the intravenous injection.

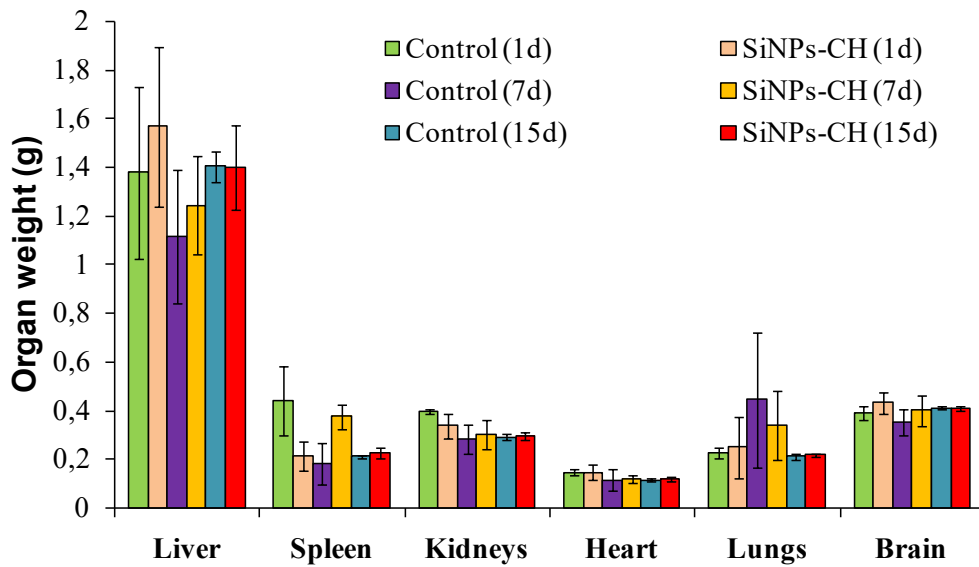


Figure S3 organs weight of animals treated with chitosan (control) and SiNPs-CH (20 mg.Kg⁻¹) after 1, 7 and 15 days of the intravenous injection.

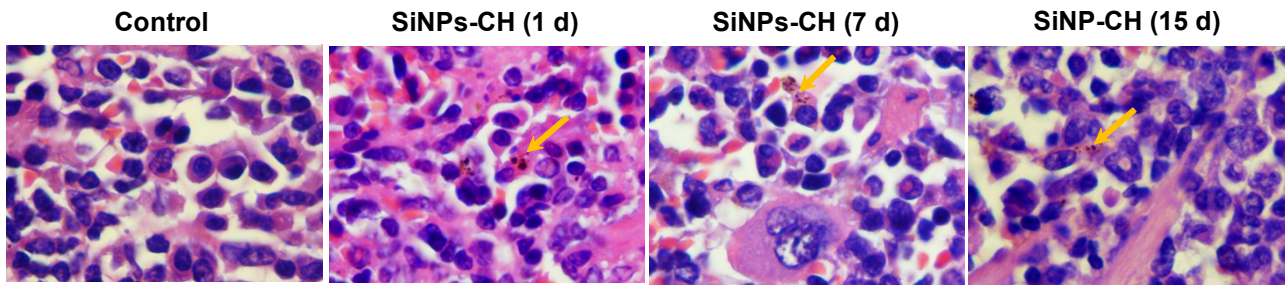


Figure S4 Histology of mice spleen 1, 7 and 15 days after the intravenous administration of SiNPs-CH (20 mg/kg) compared to the control group. Sections were stained with haematoxylin and eosin. The arrows indicated SiNPs-CH taken up by macrophages.

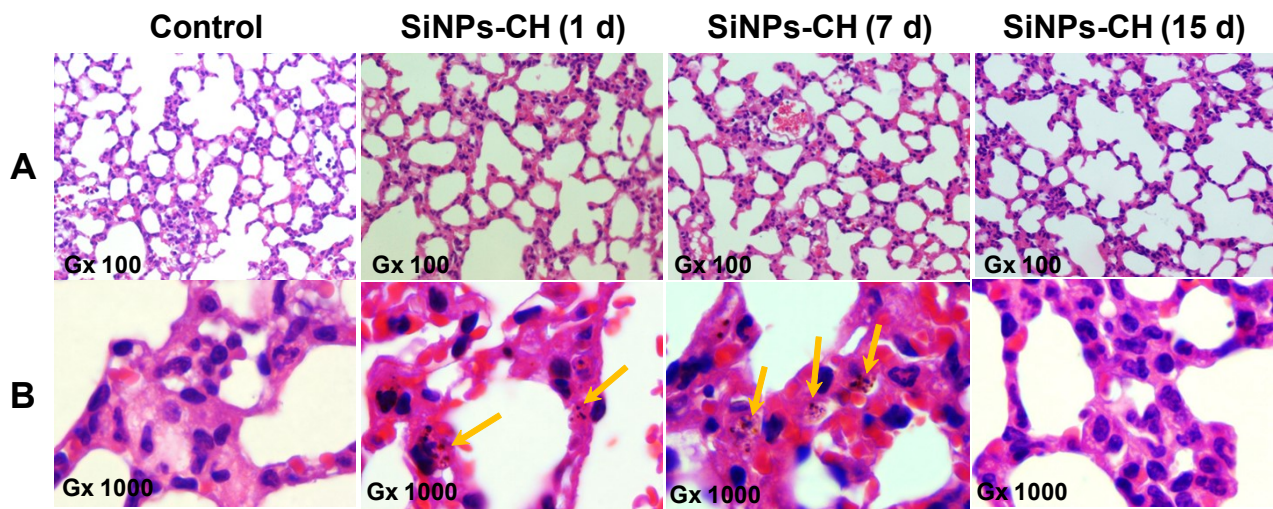


Figure S5 Histology of mice lungs 1, 7 and 15 days after the intravenous administration of SiNPs-CH (20 mg/kg) compared to the control group. Sections were stained with haematoxylin and eosin. The arrows indicate aggregation of SiNPs-CH in some lungs capillary. (B) is a magnification of (A).

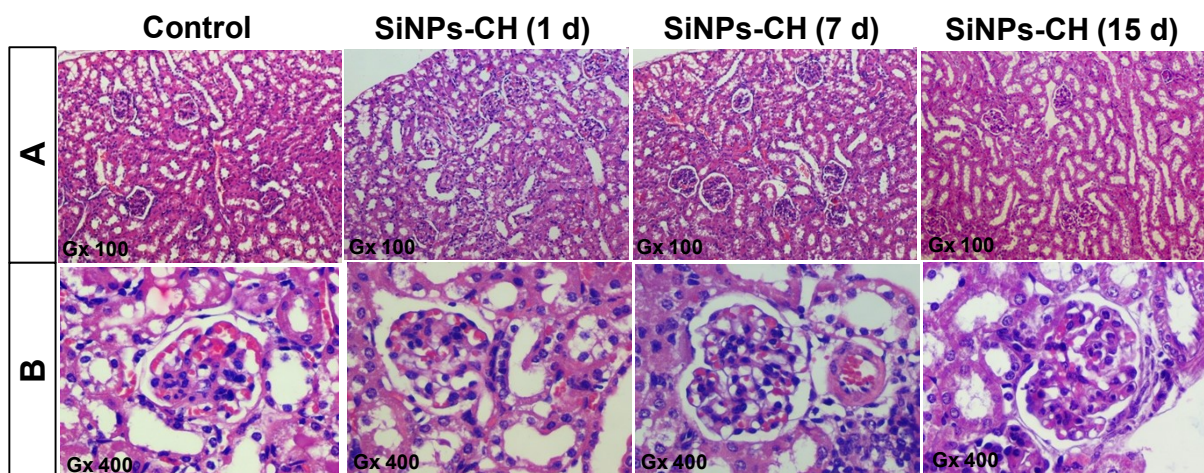


Figure S6 Histology of mice kidneys 1, 7 and 15 days after the intravenous administration of SiNPs-CH (20 mg/kg) compared to the control group. Sections were stained with haematoxylin and eosin. (B) is a magnification of (A).

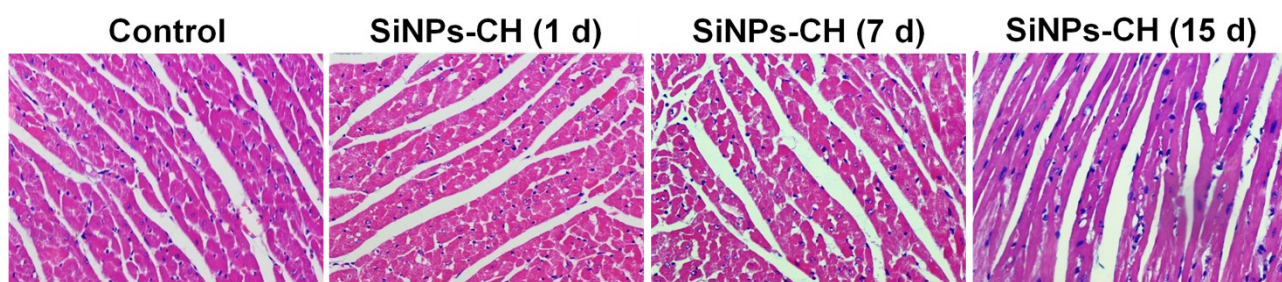


Figure S7 Histology of mice heart 1, 7 and 15 days after the intravenous administration of SiNPs-CH (20 mg/kg) compared to the control group. Sections were stained with haematoxylin and eosin.

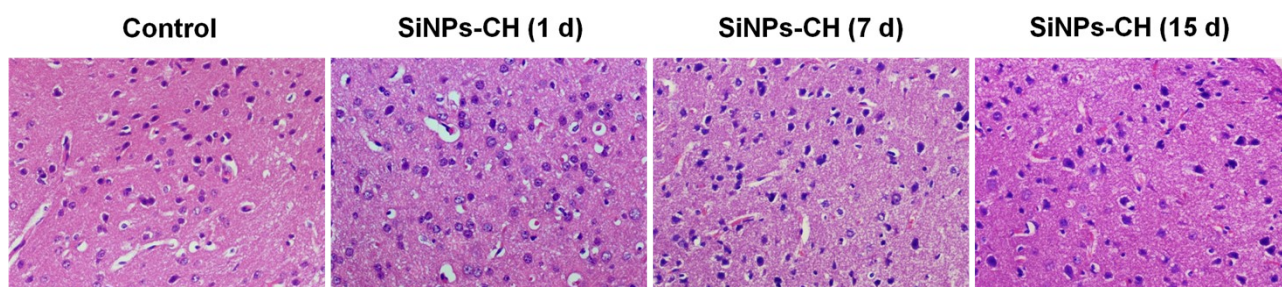


Figure S8 Histology of mice brain 1, 7 and 15 days after the intravenous administration of SiNPs-CH (20 mg/kg) compared to the control group. Sections were stained with haematoxylin and eosin.

	[Si] ($\mu\text{g/g}$ of organ or feces or mL of urine)			
	Control	1 day	7 days	15 days
Liver	6,33 (\pm 3,08)	23,79 (\pm 8,30) **	63,24 (\pm 12,15) **	36,53 (\pm 10,20) **
Spleen	7,13 (\pm 1,13)	29,34 (\pm 7,03) **	46,18 (\pm 18,28) **	30,24 (\pm 7,86) **
Kidney	5,07 (\pm 1,87)	13,67 (\pm 4,74) *	28,33 (\pm 6,17) **	46,48 (\pm 17,06) **
Lungs	4,36 (\pm 1,35)	4,09 (\pm 2,23)	5,01(\pm 2,18)	4,29 (1,83)
Heart	5,38 (\pm 1,75)	4,46 (\pm 1,81)	3,42 (\pm 1,26)	4,97 (\pm 2,16)
Brain	3,26 (\pm 1,27)	2,20 (\pm 1,20)	10,95 (\pm 2,64) *	14,86 (\pm 5,03) *
urine	0,04 (\pm 0,012)	20,20 (\pm 9,73) **	25,33 (\pm 8,43) **	70,33 (\pm 20,82) **
Feces	1,02 (\pm 0,13)	1,18 (\pm 0,86)	1,36 (\pm 0,96)	2,04 (\pm 1.03)

Table S1 Silicon content in different organs, urine and feces of mice intravenously administered with a solution of Si-NPs-CH (20 mg/kg) 1, 7 and 15 days after the injection related to control group of mice (n = 6, data are the mean \pm SD). Statistical significance was determined by Tukey HSD test. *p < 0.05, **p < 0.01 compared to the control.