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ARTICLE TYPE

Supplementary Materials

Targeting peptide iRGD-conjugated amphiphilic chitosan-co-PLA/DPPE drug delivery system for enhanced tumor therapy

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The abstract should be a single paragraph which summarises the content of the article.

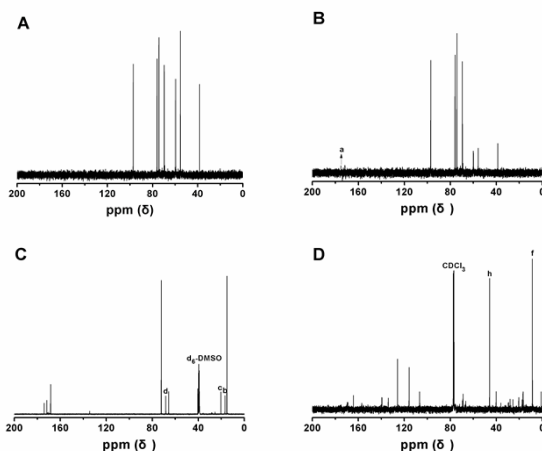


Fig. S1. ¹³C NMR spectra of (A) CS, (B) SMCC-CS, (C) SMCC-CS-co-PLA and (D) SMCC-CS-co-PLA/DPPE.

1. Measurement of ¹³C NMR and ³¹P NMR spectra

15 ¹³C NMR and ³¹P NMR spectra of CS, SMCC-CS, SMCC-CS-co-PLA and SMCC-CS-co-PLA/DPPE polymers were recorded on a Bruker AVANCE 400 NMR spectrometer (Billerica, MA, USA). D₂O, DMSO-*d*₆ and CDCl₃ were chosen as solvents for SMCC-CS (CS), SMCC-CS-co-PLA, SMCC-CS-co-PLA-DPPE, 20 respectively according to their different dissolubility.

2. Results

The ¹³C NMR spectra of CS, SMCC-CS, SMCC-CS-co-PLA and SMCC-CS-co-PLA/DPPE polymers were shown in Supplementary Figure S1. Compared with the ¹³C NMR spectra 25 of CS (Figure S1. A.), the new peak at ~ 174 ppm in SMCC-CS spectra (Figure S1. B.) was assigned to the new ester group from the reaction between CS and SMCC. The peak at ~ 68 ppm newly presented in the ¹³C NMR spectra of SMCC-CS-co-PLA (Figure

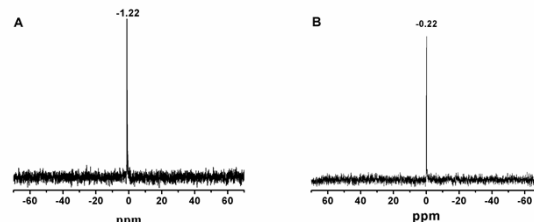


Fig. S2. ³¹P NMR spectra of the (A) DPPE and (B) SMCC-CS-co-PLA/DPPE.

S1. C.), which indicated the -CH group carbon peak of PLA moiety located in the terminal groups. The peaks at ~ 17 and ~ 20 35 ppm attributed to the carbon peak of -CH₃ of the PLA moiety located in repeat units and terminal groups. These results further proved the successful conjunction of the PLA side chain to the SMCC-CS. In Figure S1. D, the peak at ~ 8.9 ppm was attributed to the terminal -CH₃ on DPPE. The peak at ~ 45 ppm was 40 ascribed to -CH₂- on DPPE. These results indicated that the SMCC-CS-co-PLA copolymer contained PLA side chains. Furthermore, the ³¹P NMR spectra of DPPE and SMCC-CS-co-PLA-DPPE copolymer were shown in Figure S2. The signal at ~ -1.22 ppm (Figure S2, A.) was attributed to the phosphate group 45 of DPPE. Compared with DPPE, the peak at ~ -0.22 ppm of the SMCC-CS-co-PLA-DPPE spectra (Figure S2, B.) was generally expected for ³¹P functionalities. These data confirmed that phosphate groups were chemically bonded to the polymers.

Notes and references

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† Electronic Supplementary Information (ESI) available: [details of any supplementary information available should be included here]. See DOI: 10.1039/b000000x/