

Supplementary Materials

Combining Dextran conjugates with stimuli-responsive and folate-targeting activity: a new class of multifunctional nanoparticles for cancer therapy

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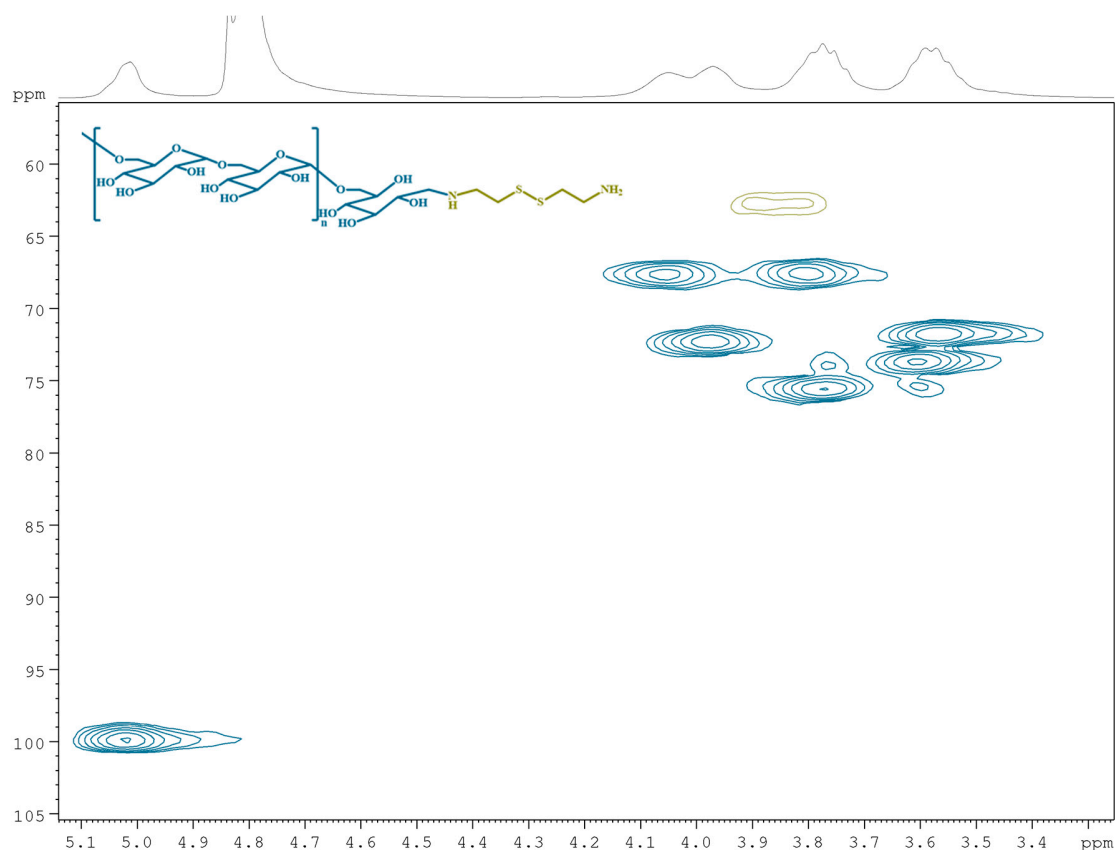


Figure S1. 2D-HSQC spectrum of DEXcys.

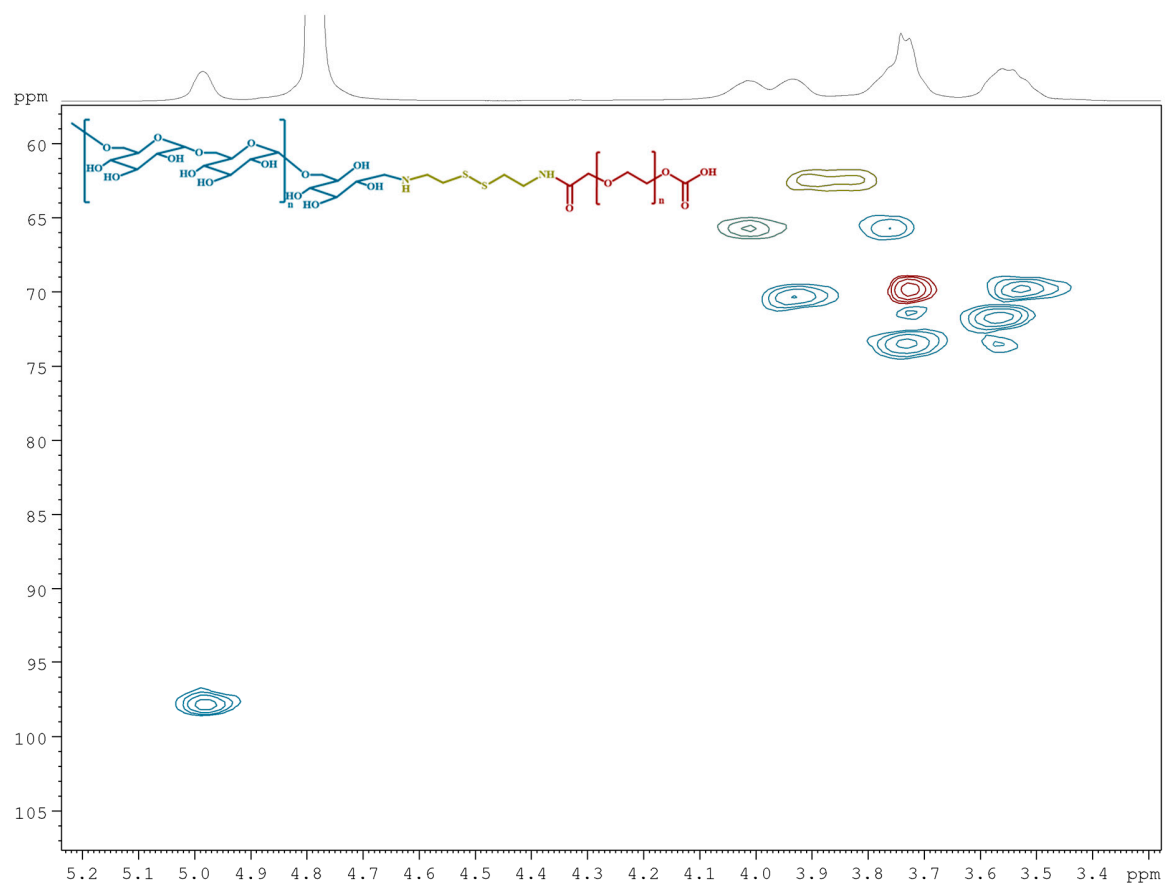


Figure S2. 2D-HSQC spectrum of DEXssPEGCOOH.

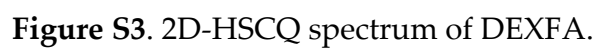


Figure S3. 2D-HSCQ spectrum of DEXFA.

¹H-DOSY analyses

¹H-DOSY spectra were recorded on a Bruker Avance III 400 MHz at 298 K. Briefly, 0.7 mg samples were dissolved in 0.6 ml of a D₂O:DMSO-d₆ (2:1 v/v) mixture. The DOSY pulse sequence adopted is the ledbp2s, LED-bipolar gradients pulse sequence. The decay curves were obtained through 16 step magnetic field gradient pulse acquisition in a range from 1 to 52 G/cm. All the parameters for the three experiments were kept identical: 60 scans, $\delta = 2$ ms, $\Delta = 285$ ms and $g = 26752$ rad/(s*Gauss). The results were elaborated with Dynamic Center, a routine of Bruker's TopSpin software. The Stejskal-Tanner analytic function, which approximates the dependence of the spin echo signal amplitude on the parameters of a magnetic field gradient pulse, was used

$$I(\delta, \Delta) = I_0 \exp[-D\gamma^2 g^2 \delta^2 (\Delta - \delta/3)]$$

where I and I_0 are the spin echo signal amplitudes in the presence and in the absence of a magnetic field gradient pulse, respectively; Δ is the diffusion time, ms; δ is the duration of a gradient pulse, ms; γ is the gyromagnetic ratio of the given nucleus, Hz/T; and g is the magnetic field gradient, T/m.

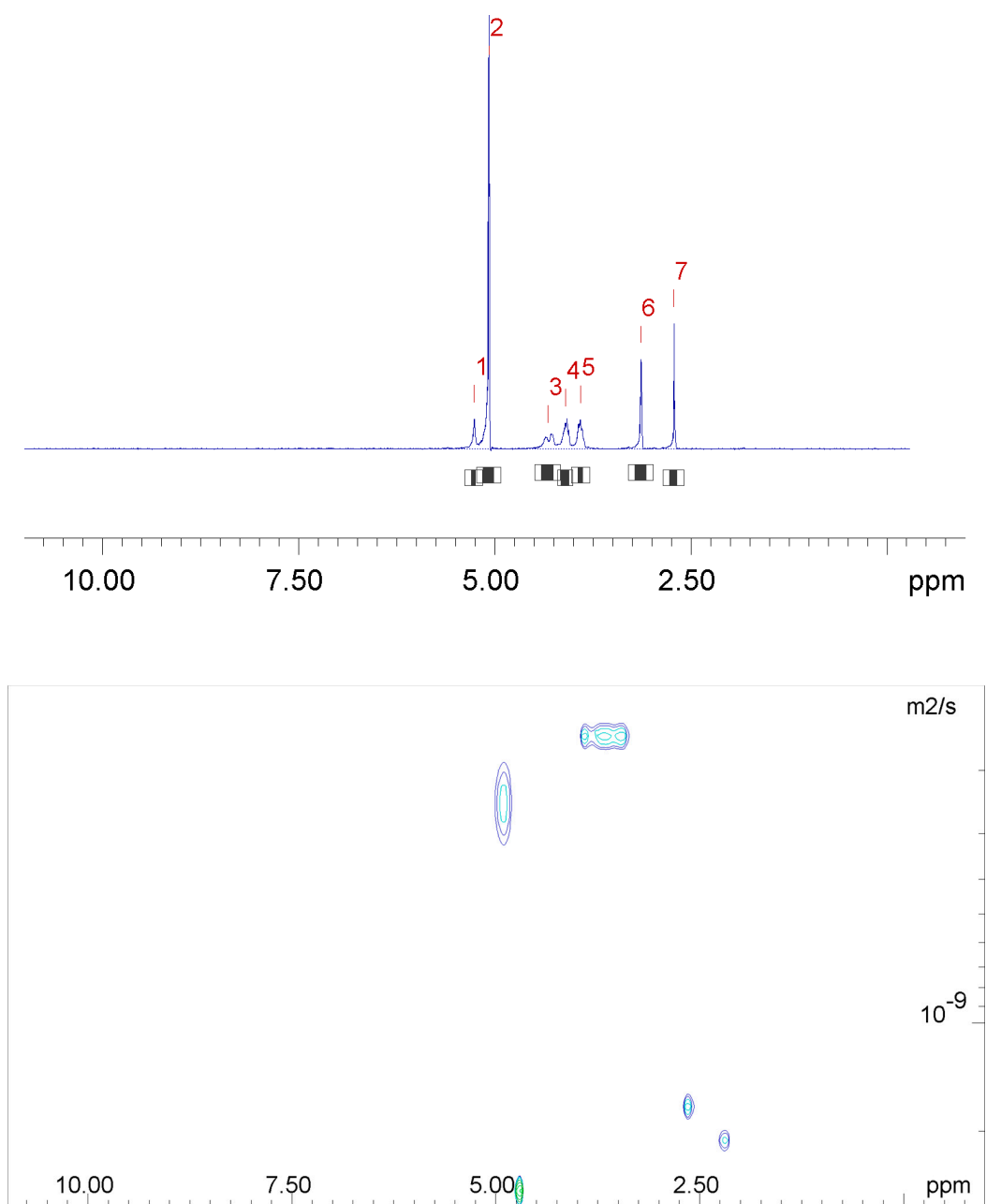


Figure S4. DOSY spectrum of DEX with fitting details.

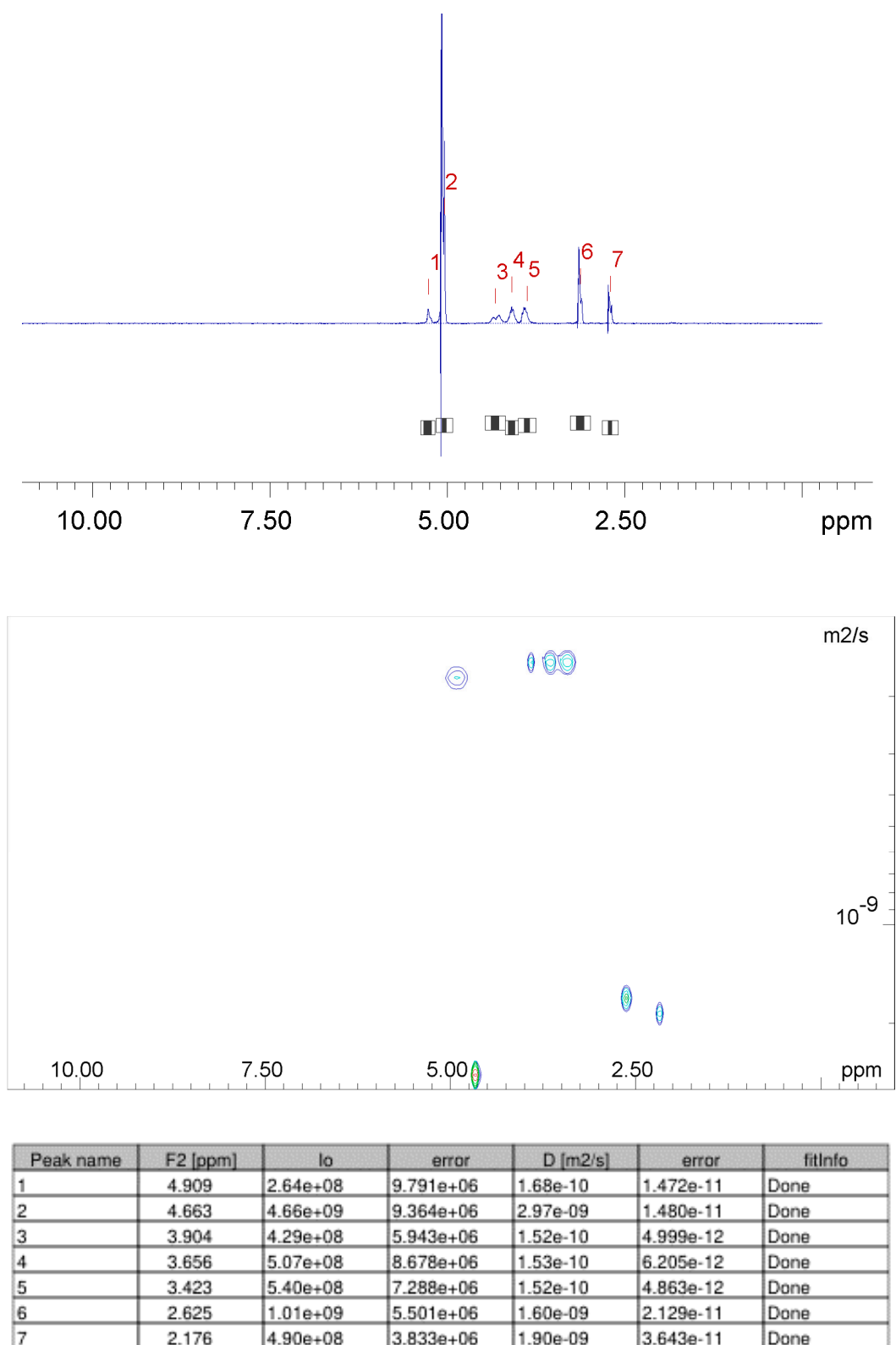
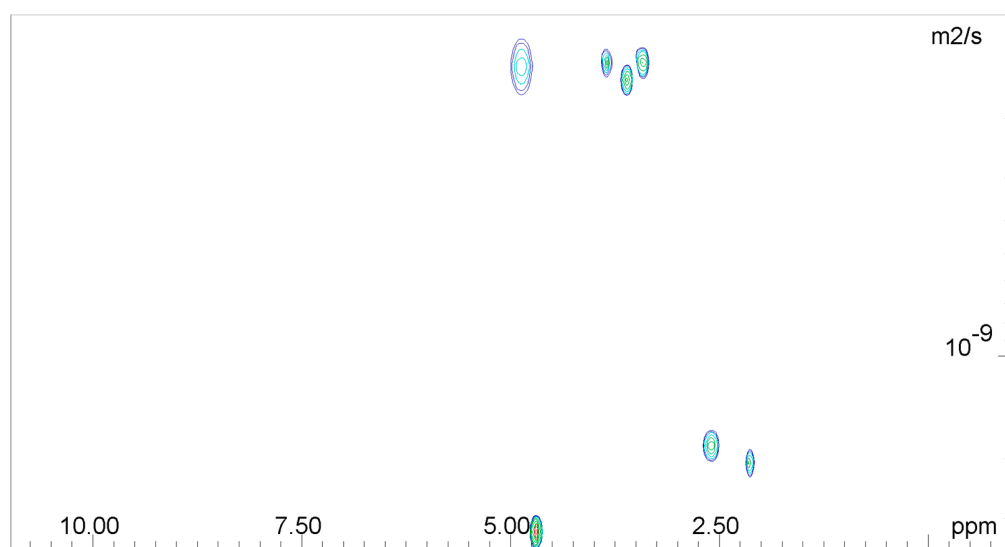
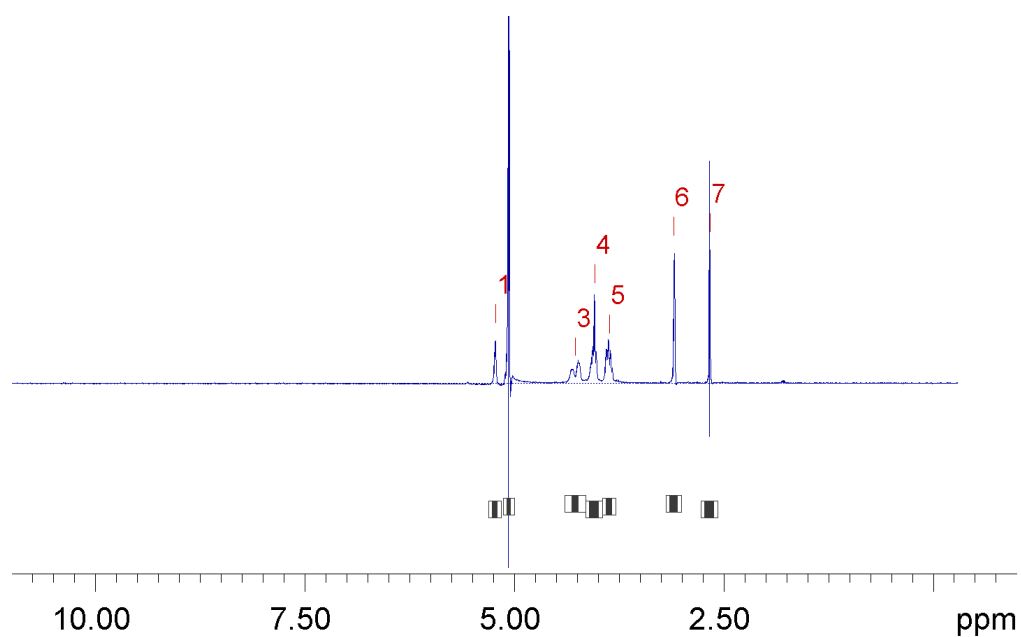


Figure S5. DOSY spectrum of DEXcys with fitting details.



Peak name	F2 [ppm]	lo	error	D [m2/s]	error	fitInfo
1	4.864	1.54e+08	8.736e+06	1.34e-10	1.812e-11	Done
2	4.690	2.44e+09	7.150e+06	3.44e-09	2.517e-11	Done
3	3.849	3.03e+08	3.710e+06	1.32e-10	4.620e-12	Done
4	3.605	4.41e+08	7.907e+06	1.45e-10	7.560e-12	Done
5	3.421	3.73e+08	2.667e+06	1.33e-10	2.627e-12	Done
6	2.601	3.32e+08	2.741e+06	1.77e-09	3.576e-11	Done
7	2.146	2.69e+08	1.805e+06	2.06e-09	3.383e-11	Done

Figure S6. DOSY spectrum of DEXssPEGCOOH with fitting details.