

Supporting Information

Co-delivery of 8-Hydroxyquinoline Glycoconjugates and Doxorubicin by Supramolecular Hydrogel from α -Cyclodextrin and pH-responsive Micelles for Enhanced Tumor Treatment

Adrian Domiński^{a*}, Tomasz Konieczny^a, Marcin Godzierz^a, Marta Musioł^a, Henryk Janeczek^a, Aleksander Foryś^a, Monika Domińska^{b,c}, Gabriela Pastuch-Gawołek^{b,c}, Tomasz Piotrowski^d, Piotr Kurcok^{a,*}

^a Centre of Polymer and Carbon Materials, Polish Academy of Sciences, 34, M. Curie-Skłodowskiej St, 41-819 Zabrze, Poland

^b Department of Organic Chemistry, Bioorganic Chemistry and Biotechnology, Faculty of Chemistry, Silesian University of Technology, Krzywoustego 4, 44-100 Gliwice, Poland

^c Biotechnology Centre, Silesian University of Technology, B. Krzywoustego 8, 44-100 Gliwice, Poland

^d Department of Chemical Organic Technology and Petrochemistry, Faculty of Chemistry, Silesian University of Technology, Bolesława Krzywoustego 4, 44-1100 Gliwice, Poland

*Correspondence: piotr.kurcok@cmpw-pan.edu.pl, adominski@cmpw-pan.edu.pl

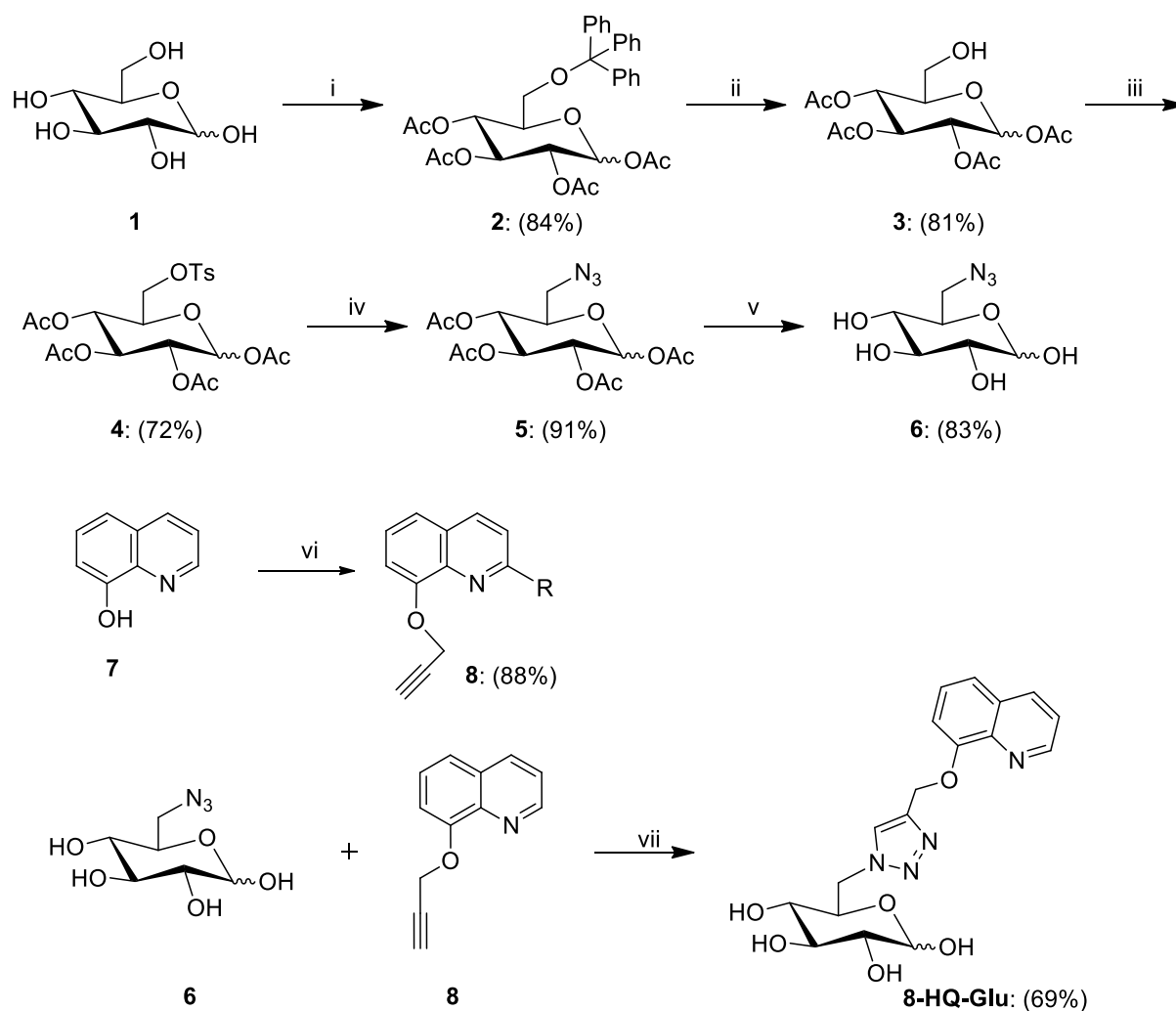


Fig. S1. Synthesis of 8HQ-Glu (6-(4-(8-quinolinylloxymethyl)-1H-1,2,3-triazol-1-yl)-6-deoxy-D-glucopyranose). Reagents and Conditions: (i) 1. trityl chloride, DMAP, pyridine, r.t., 24 h; 2. CH_3COCl , pyridine, r.t., 1h; (ii) CH_3COOH , 33% HBr/AcOH , 0 °C-r.t., 1 h; (iii) p-TsCl, DMAP, pyridine, r.t., 24 h; (iv) NaN_3 , DMF, 80 °C, 2 h; (v) 1. MeONa, MeOH, r.t., 0.5 h; 2. Amberlyst-15; (vi) propargyl bromide, K_2CO_3 , acetone, r.t., 24 h; (vii) $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$, NaAsc, i-PrOH/THF/ H_2O (1:1:1, v:v:v), r.t., 24 h.

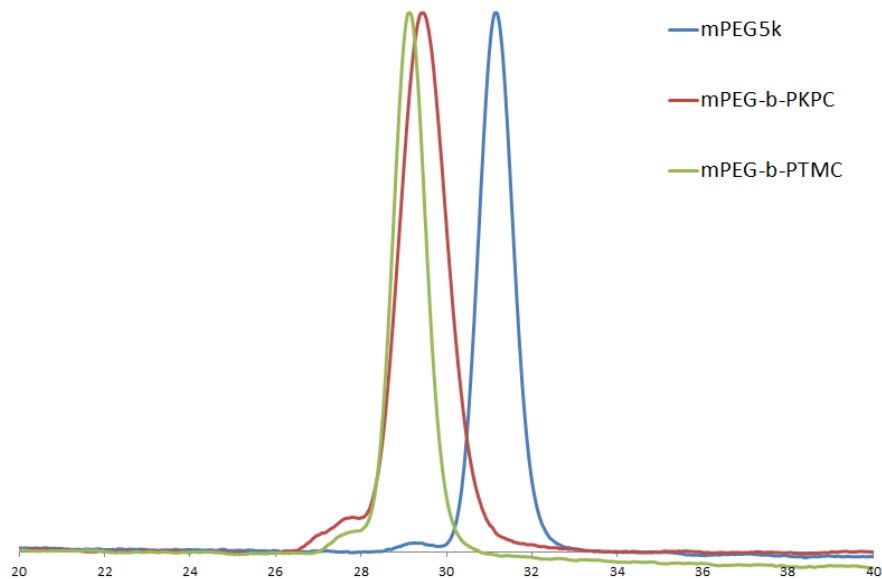


Fig. S2. Size exclusion chromatograms of mPEG5k, mPEG-*b*-PKPC and mPEG-*b*-PTMC (in DMF, calibrated against PEG standards).

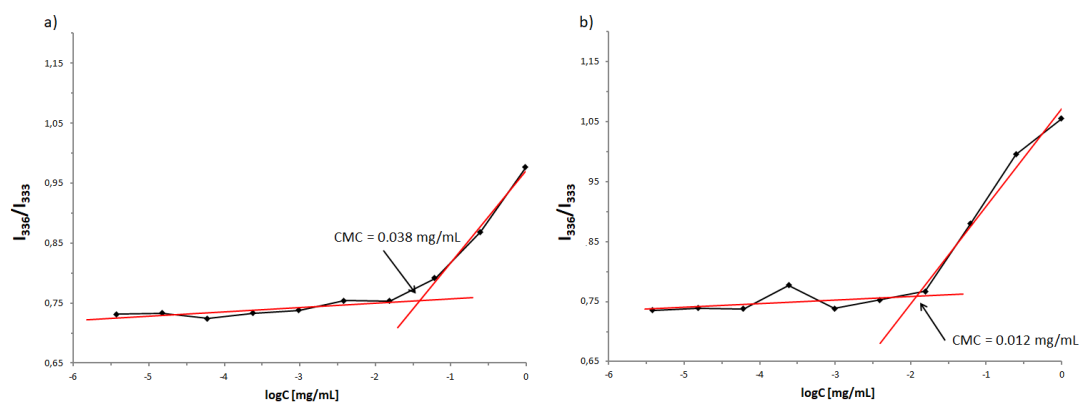


Fig. S3. Self-assembled critical micelle concentration of a) mPEG-*b*-PKPC and b) mPEG-PKPC-*b*-PTMC.

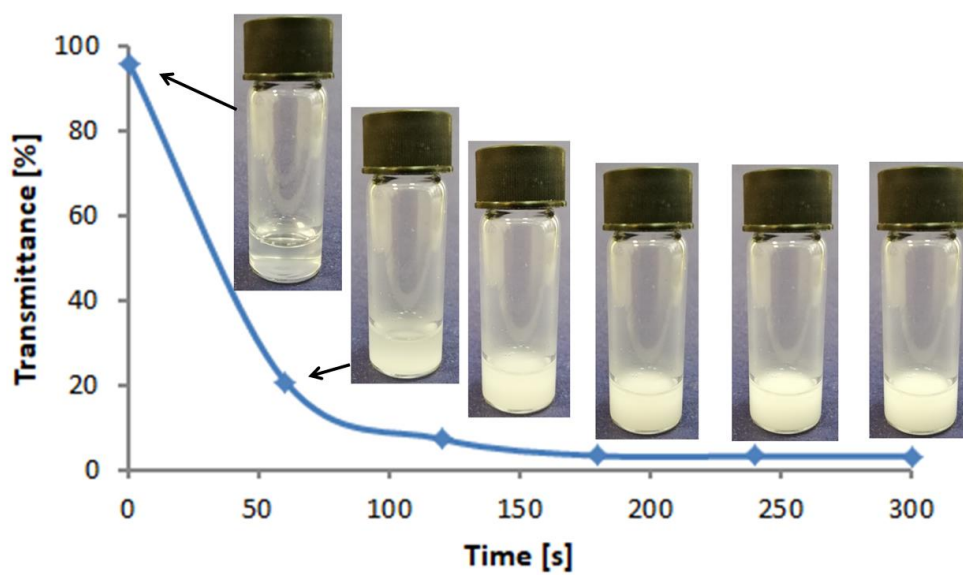


Fig. S4. Time-dependent solution transmittance plot of mPEG-b-PKPC^{mic} (15 mg mL⁻¹) and α-CD (10%) mixture.

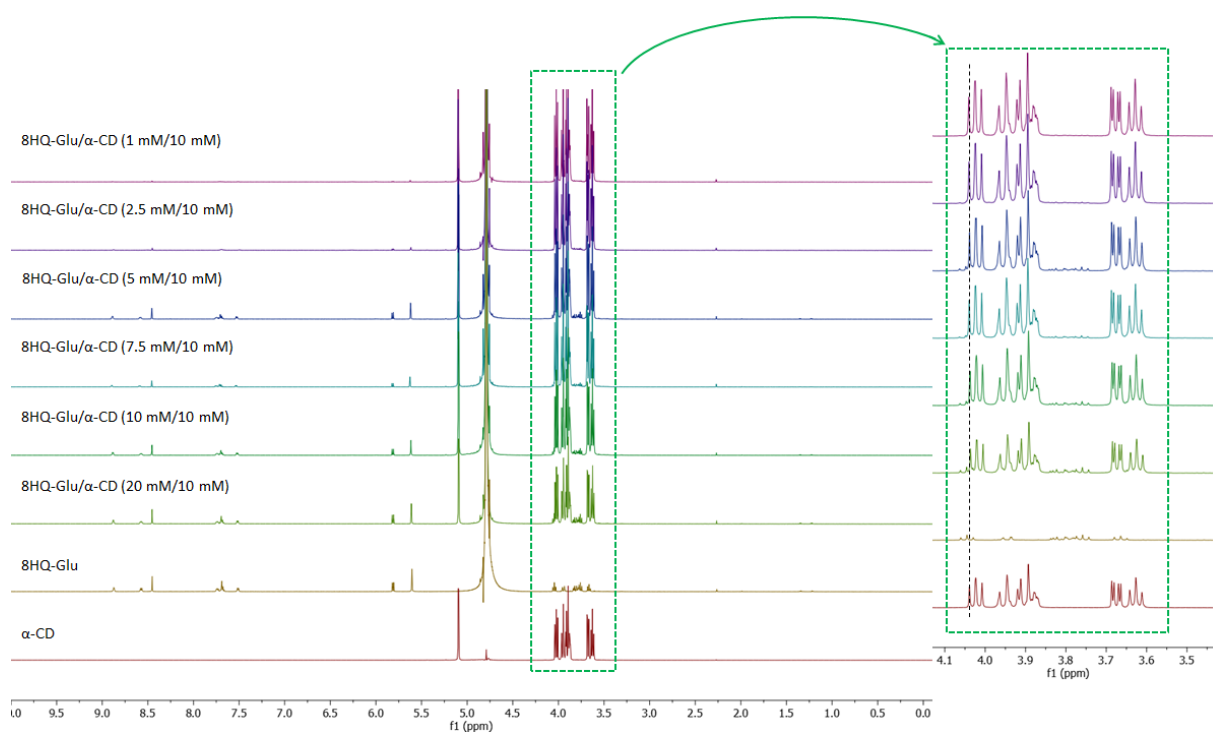


Fig. S5. ¹H NMR (600 MHz, D₂O) spectra of α-CD and 8HQ-Glu and their mixture at different molar ratios.