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Synthesis, characterisation and evaluation of hyperbranched N-(2-hydroxypropyl) methacrylamides for transport and delivery in pancreatic cell lines *in vitro* and *in vivo*

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Table S1 Reaction conditions used for the synthesis of the hyperbranched HPMA polymers

Polymer	HPMA (mg)	EDMA (mg)	RAFT agent (mg)	Initiator (mg)	Solvent (mL)	Time (hr)	% conversion	Yield (%)
HPMA-HB-7	200	13.71	21	2.3	1.6	24	90	76
HPMA-HB-20	200	13.71	21	2.3	1.2	18	93	74
HPMA-HB-40	200	13.71	21	2.3	0.8	14	97	82

Table S2 Details of physical properties of different batches of the hyperbranched polymers.

	HB-HPMA-7			**HB-HPMA-20**			**HB-HPMA-40**	
	Batch 1	Batch 2	Batch 3	Batch 1	Batch 2	Batch 3	Batch 1	Batch 2
M_n GPC (g/mol)	1.8×10^4	2.4×10^4	1.5×10^4	1.1×10^5	9.4×10^4	1.6×10^5	1.8×10^6	1.1×10^6
Đ	2.1	2.2	2.1	2.5	1.3	2.0	3.1	3.9
Size DLS (nm)	7	7	7	20	20	19	40	39

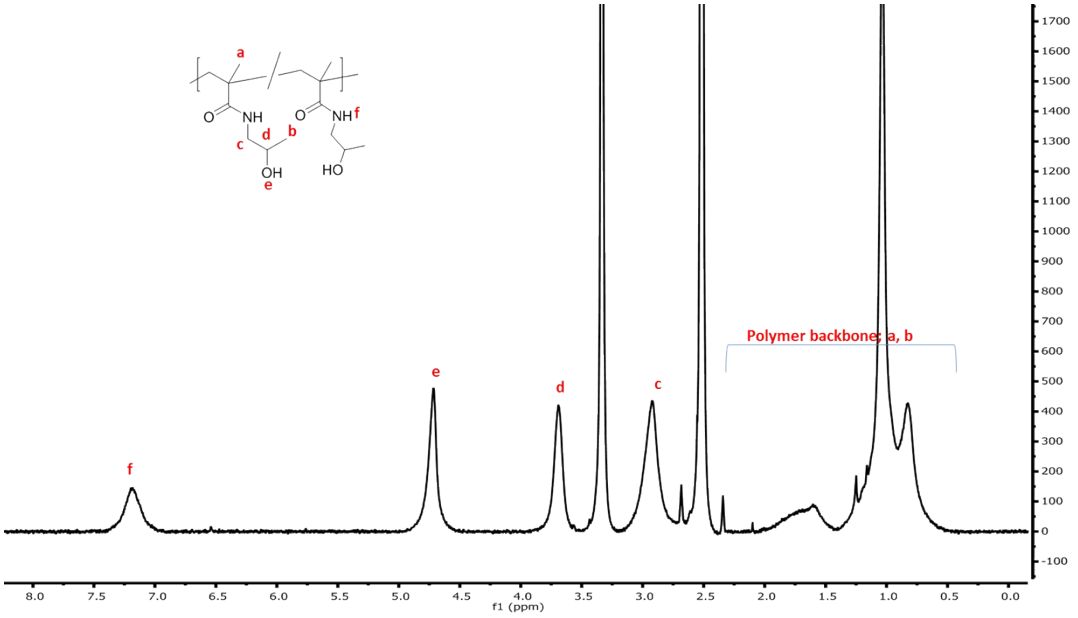
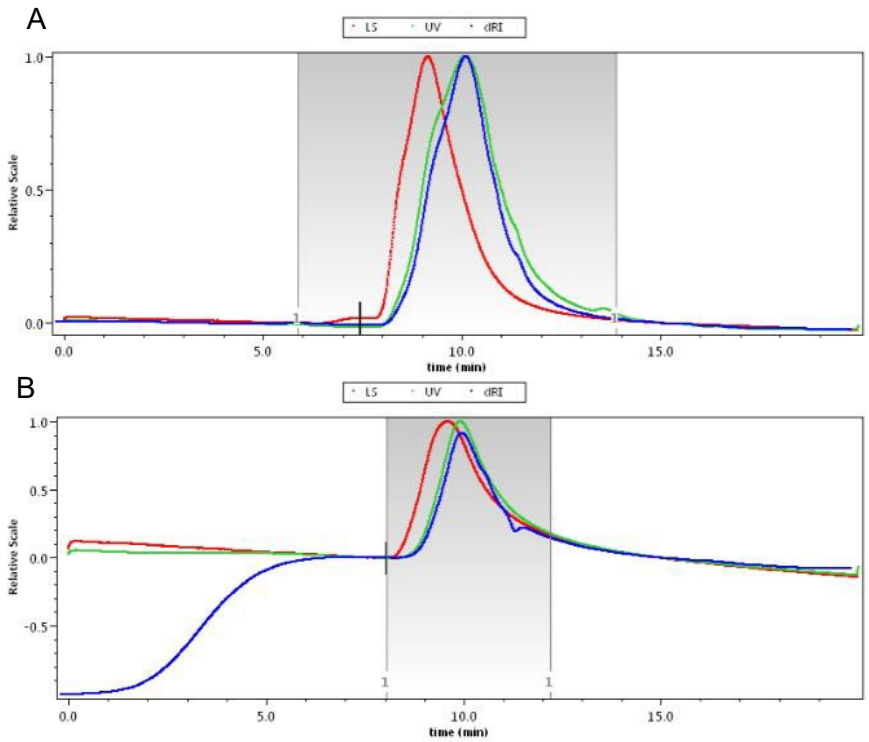


Figure S1 Representative ^{1}H NMR spectrum of hyperbranced HPMA polymer (HB-HPMA) in DMSO-d6.



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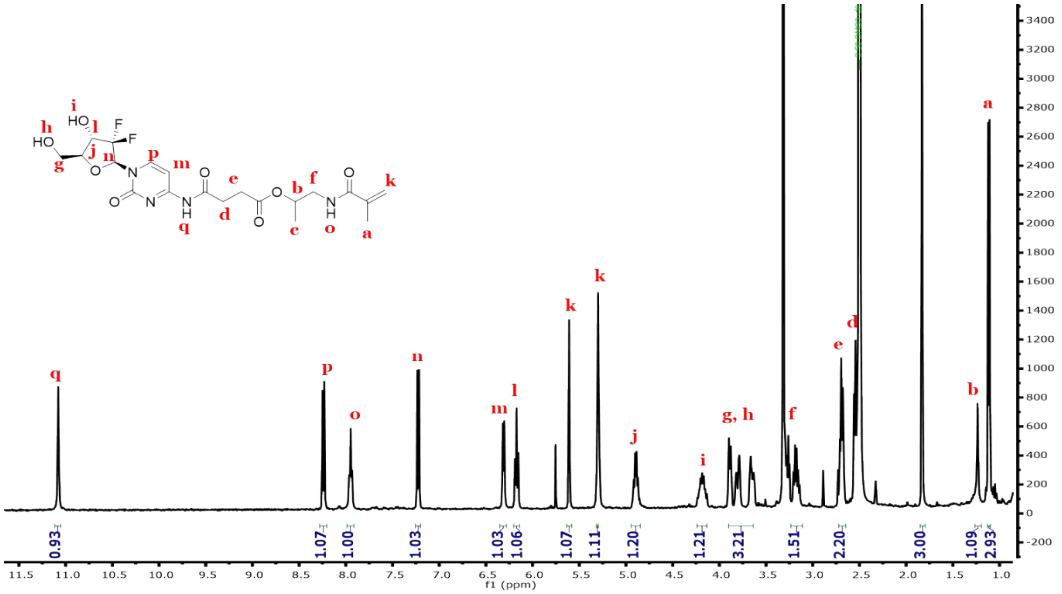
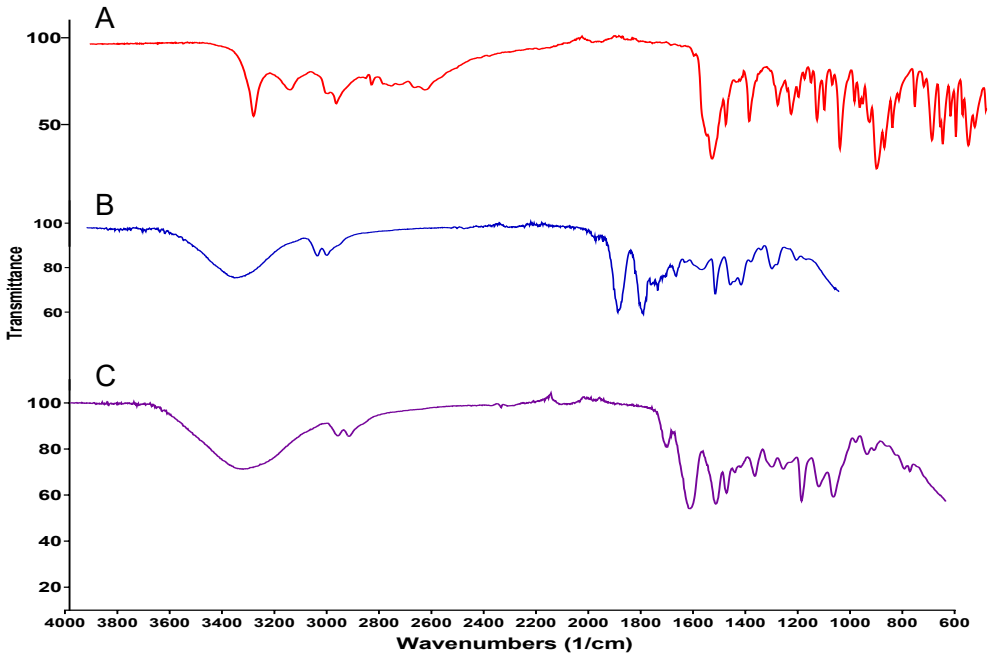


Figure S3 ^{1}H NMR spectrum of HPMA-GEM monomer in DMSO-d_6



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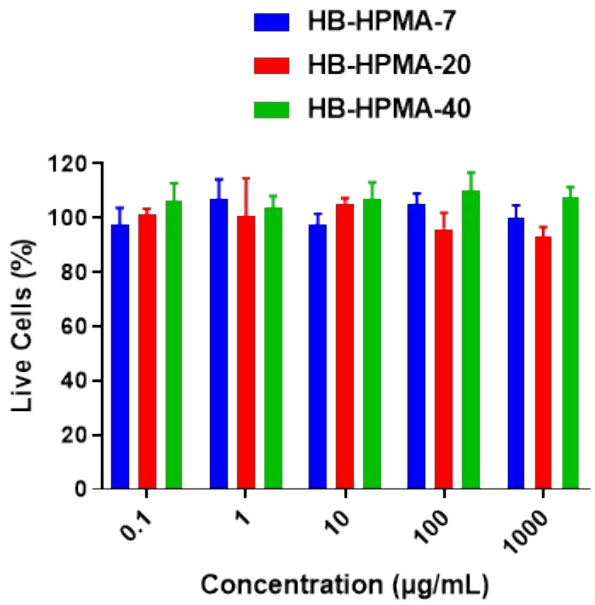

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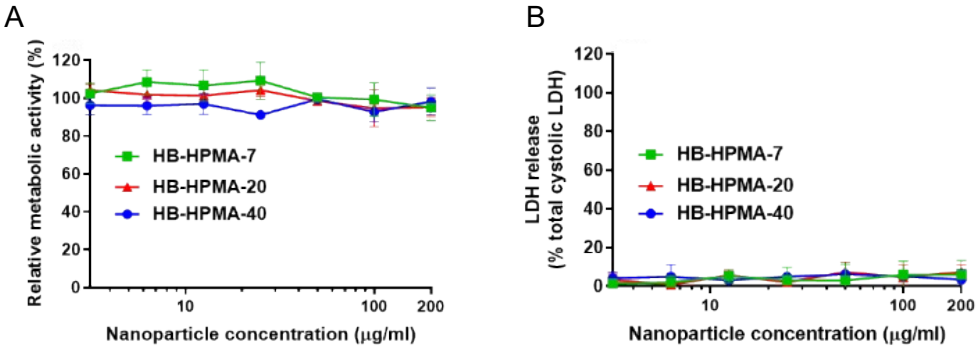

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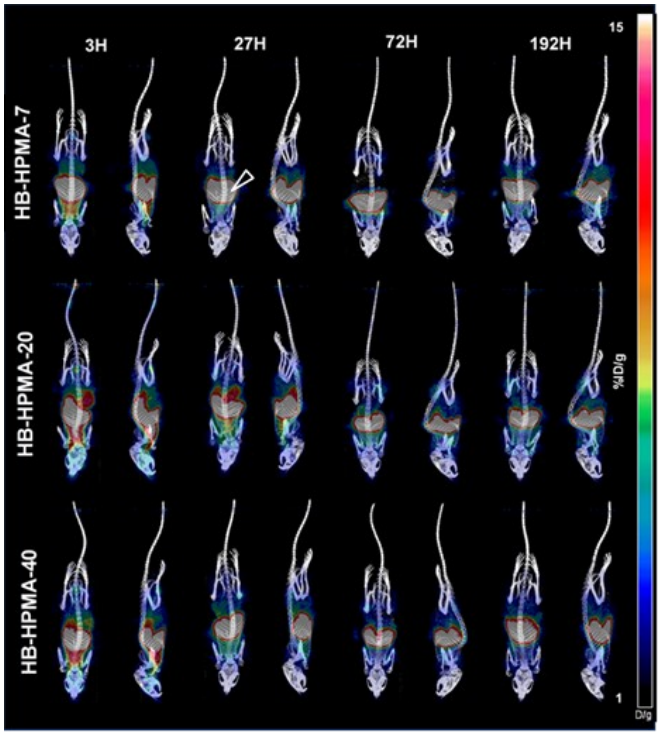

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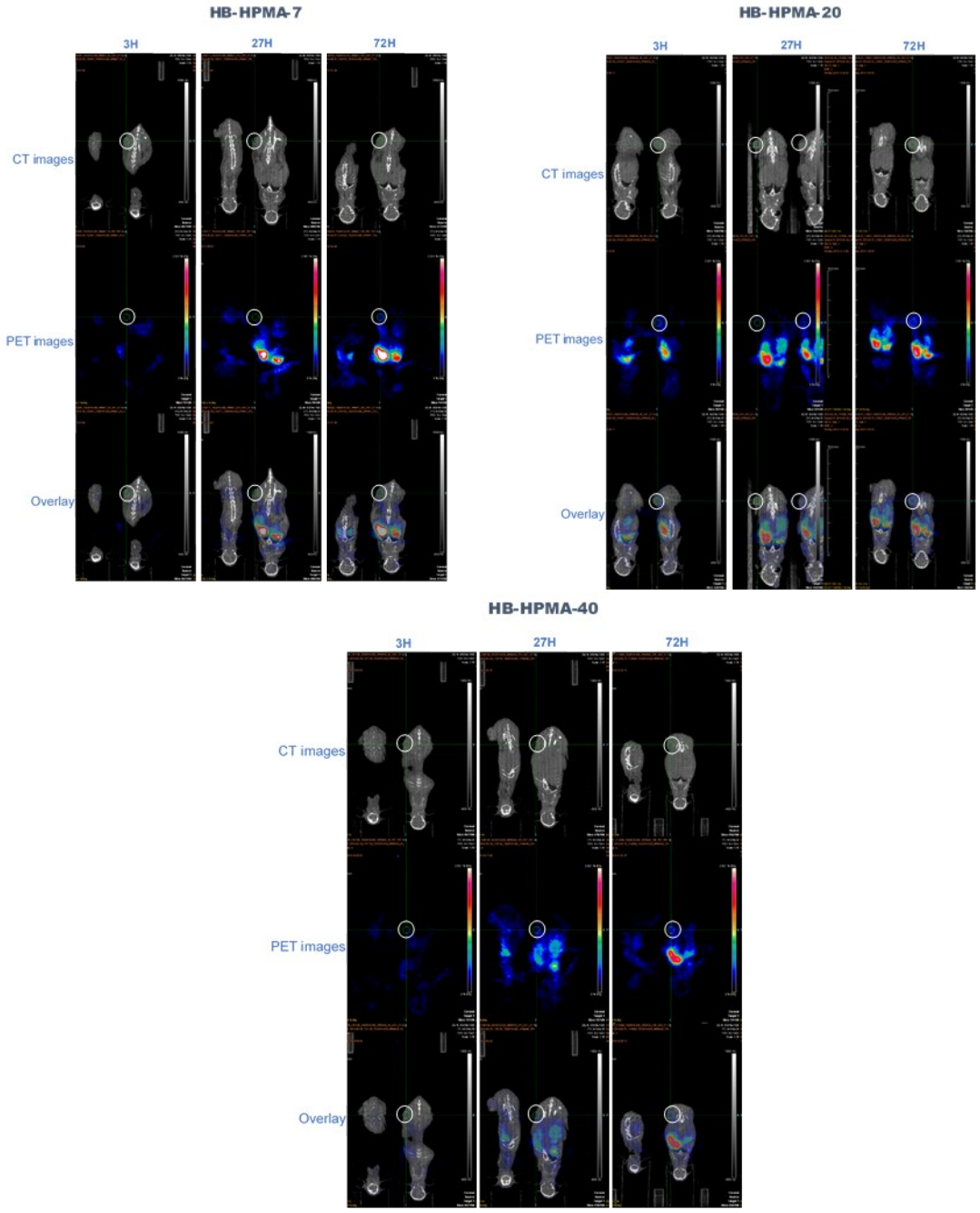

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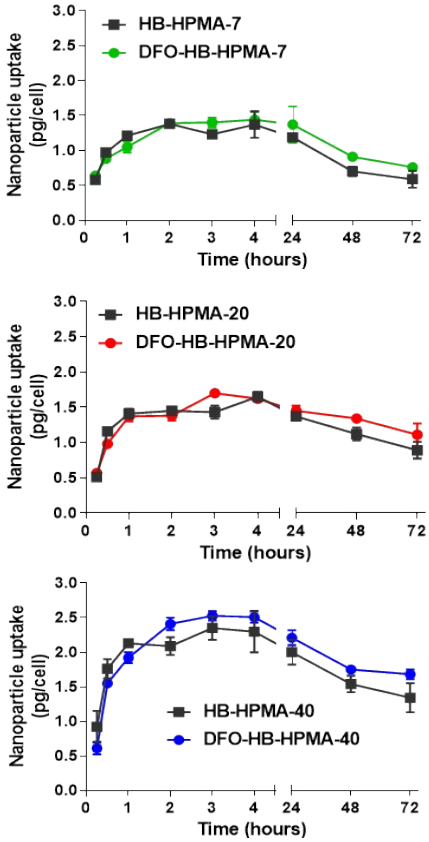

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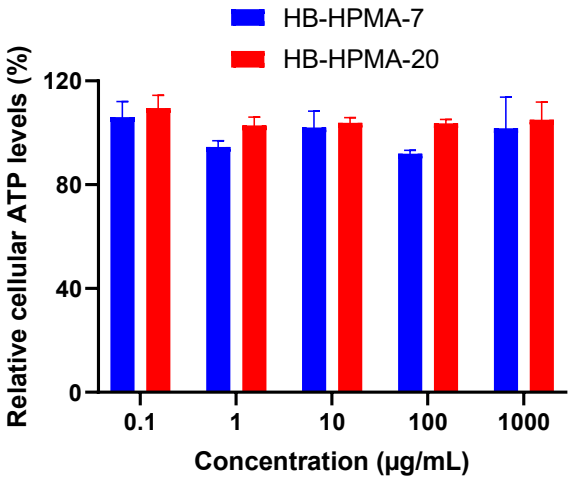


Figure S10 In vitro CellTiter-Glo® 3D cell viability assay for HB-HPMA-7 and HB-HPMA-20 polymers in MIA PaCa-2 pancreatic cancer cell line, (N = 4).

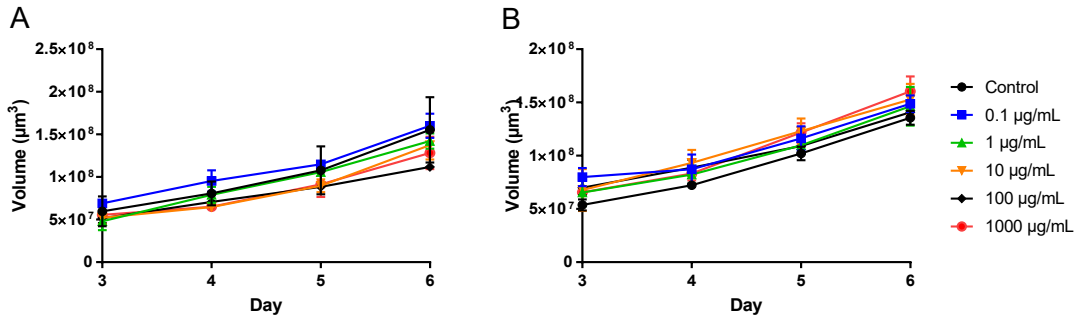


Figure S11 Graphs showing changes in spheroid volume over the 72 hours of incubation with: (A) HB-HPMA-7 and (B) HB-HPMA-20 polymers, (N = 4).

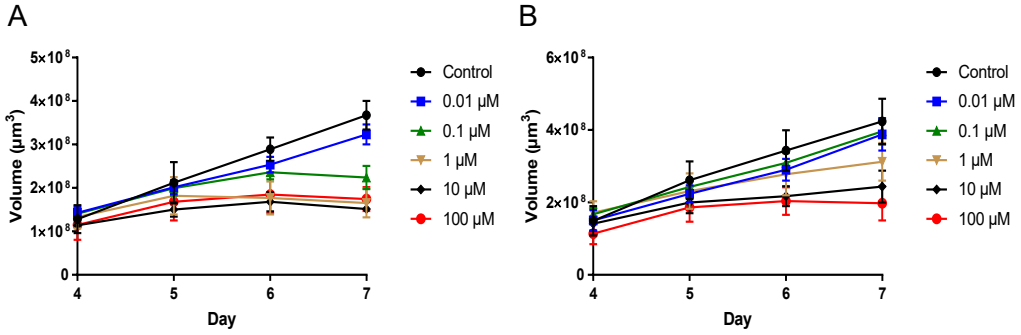


Figure S12 Graphs showing changes in spheroid volume over the 72 hours of incubation with: (A) Free GEM and (B) HB-HPMA GEM with monoculture MIA PaCa-2 pancreatic cancer cell line, (N = 4).

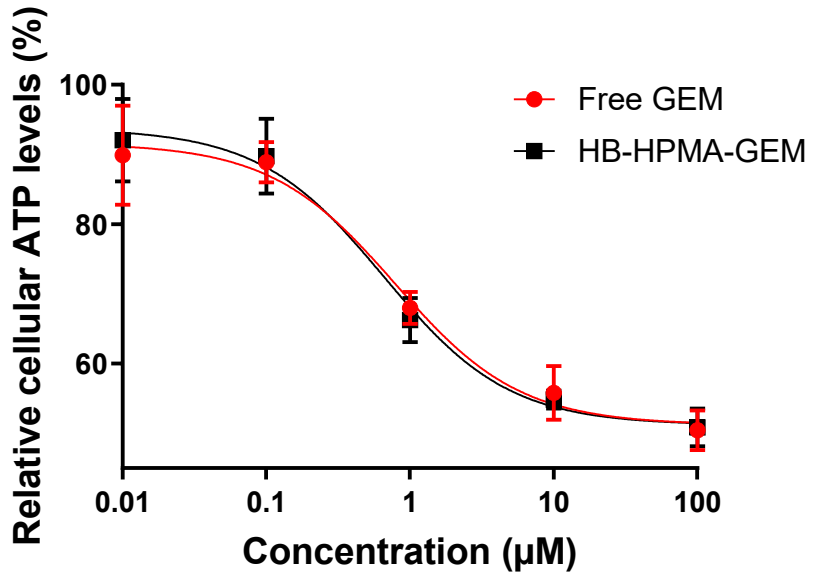
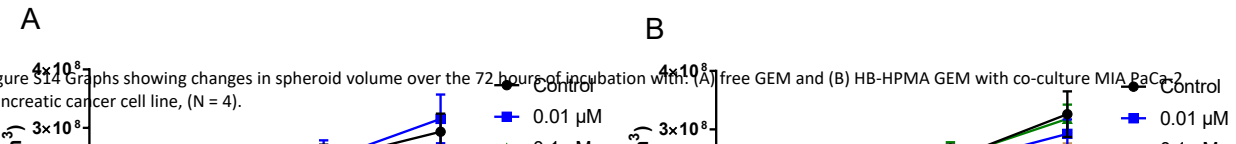


Figure S13 *In vitro* CellTiter-Glo® 3D cell viability assay for free GEM and HB-HPMA-GEM in monoculture MIA PaCa-2 pancreatic cancer cell line, (N = 4)



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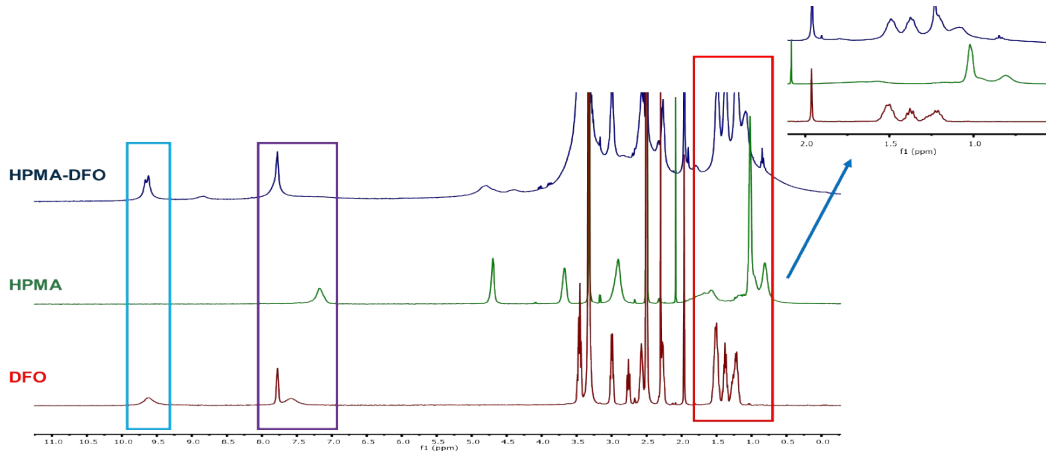

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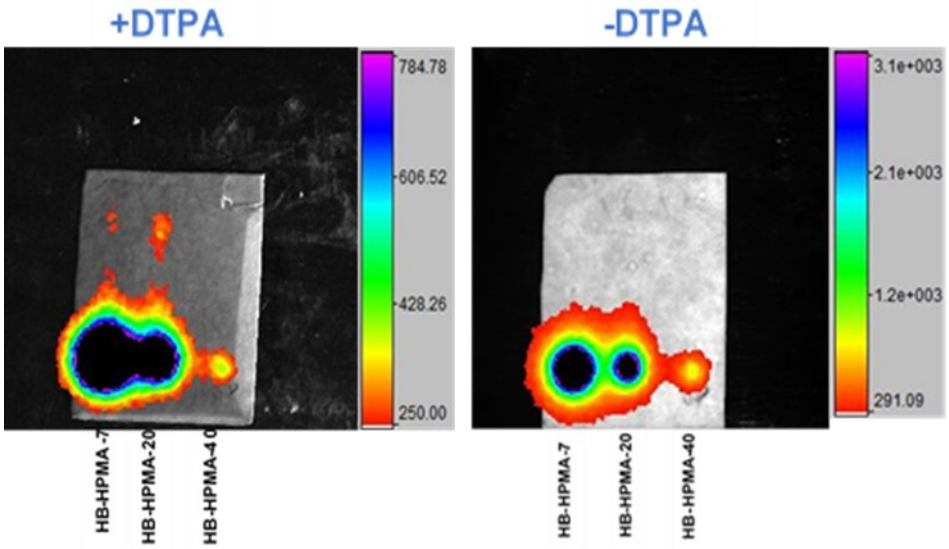


Figure S17 ^{1}H NMR spectrum of HPMA monomer in CDCl3.

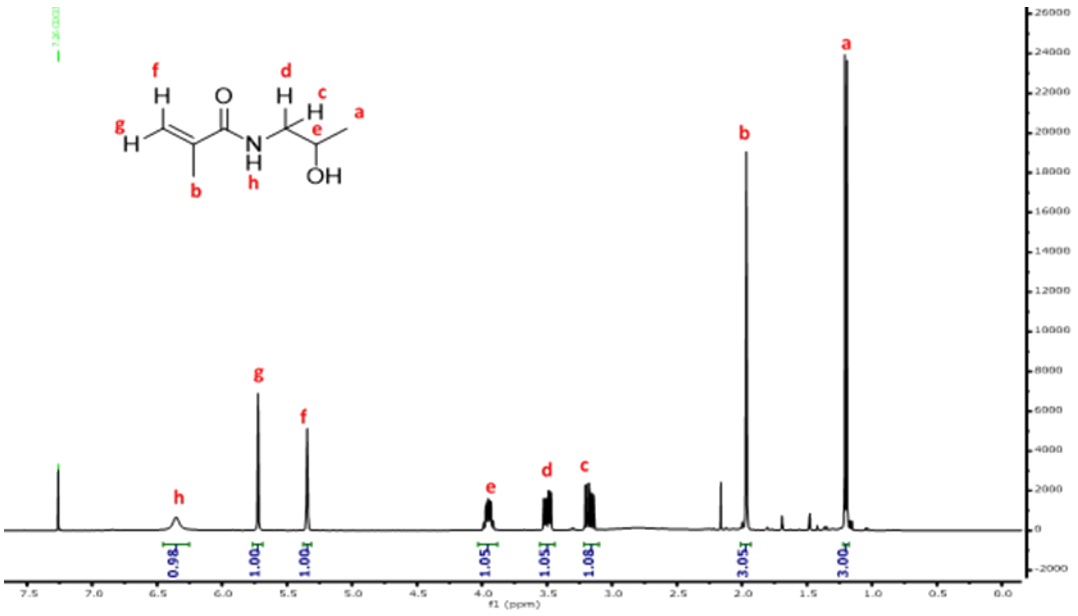


Figure S18 13C NMR spectrum of HPMA monomer in $CDCl_3$.

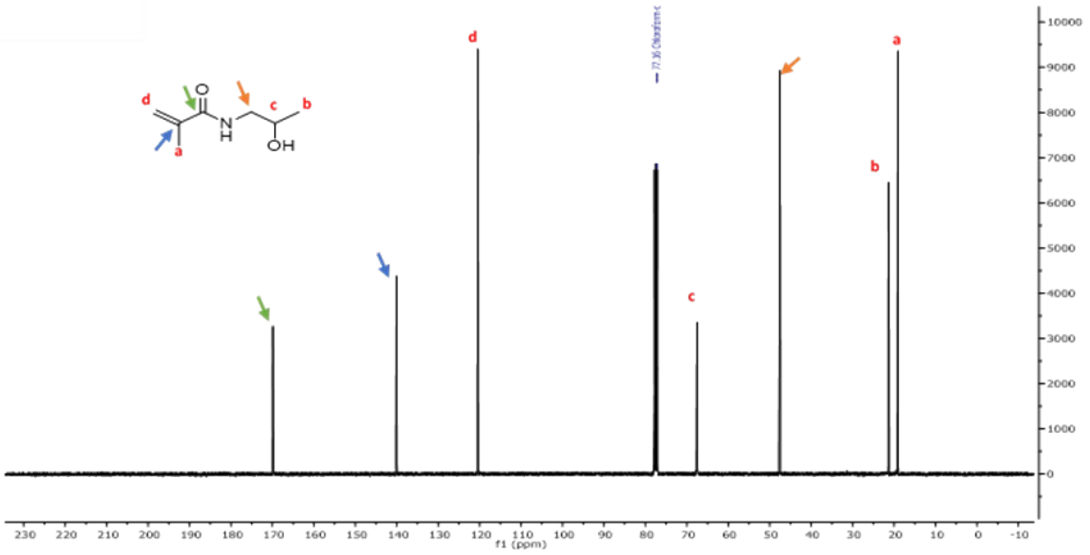


Figure S19 ^{1}H NMR spectrum of EDMA in $CDCl_3$.

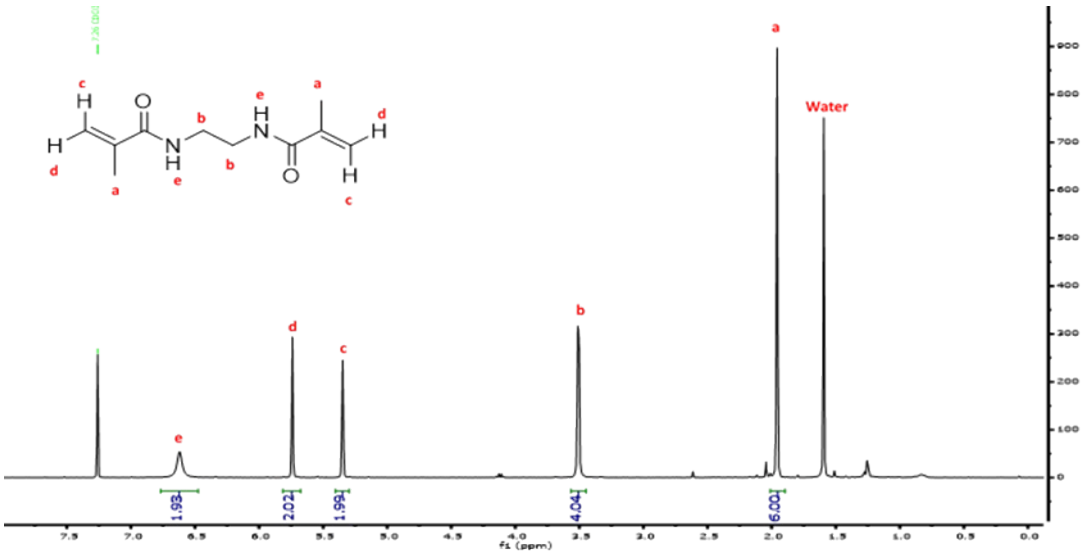


Figure S20 ^{13}C NMR spectrum of EDMA in $CDCl_3$.

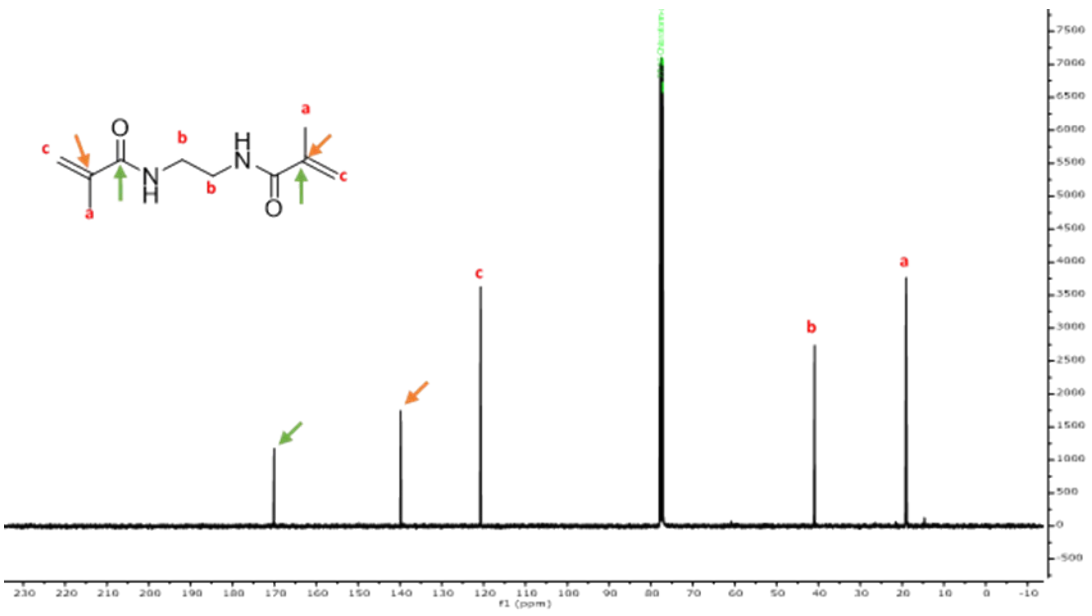
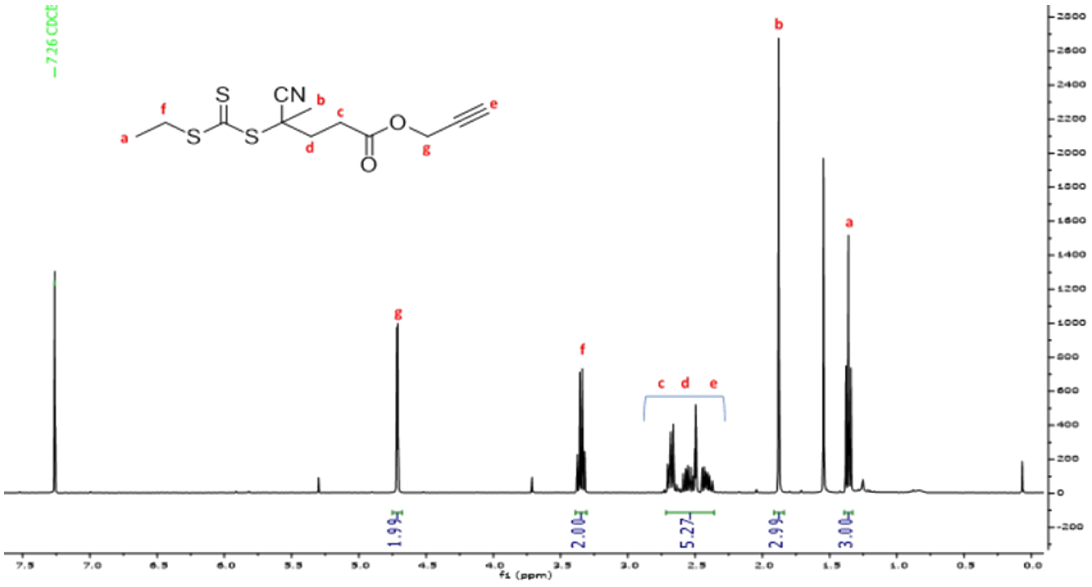


Figure S21 ^{1}H NMR spectrum of Alkyne-CTA in $CDCl_3$.



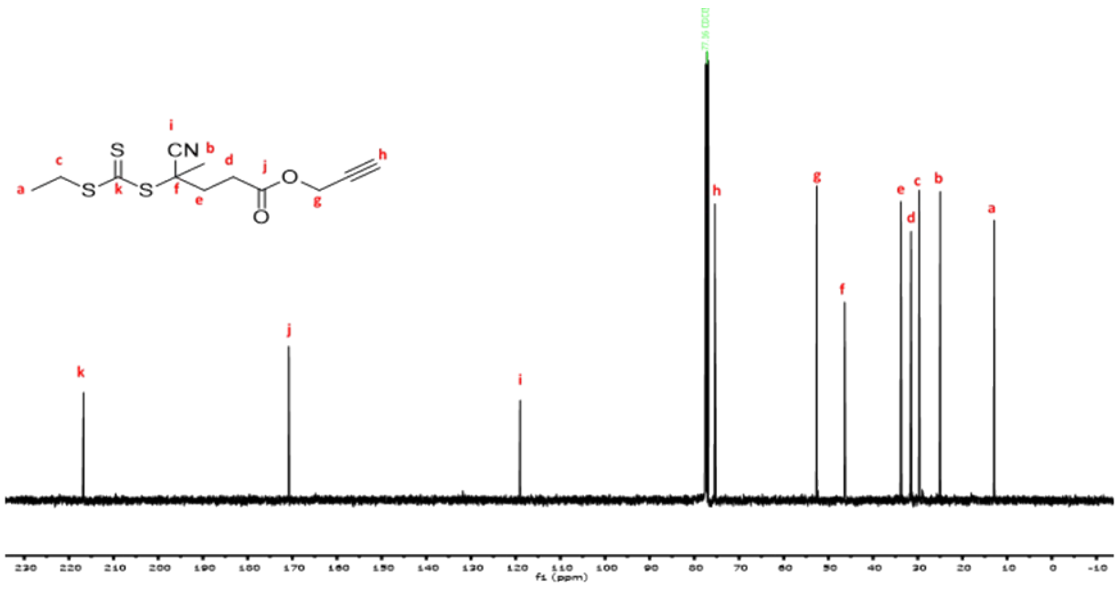


Figure S22 ^{13}C NMR spectrum of Alkyne-CTA in $CDCl_3$.