

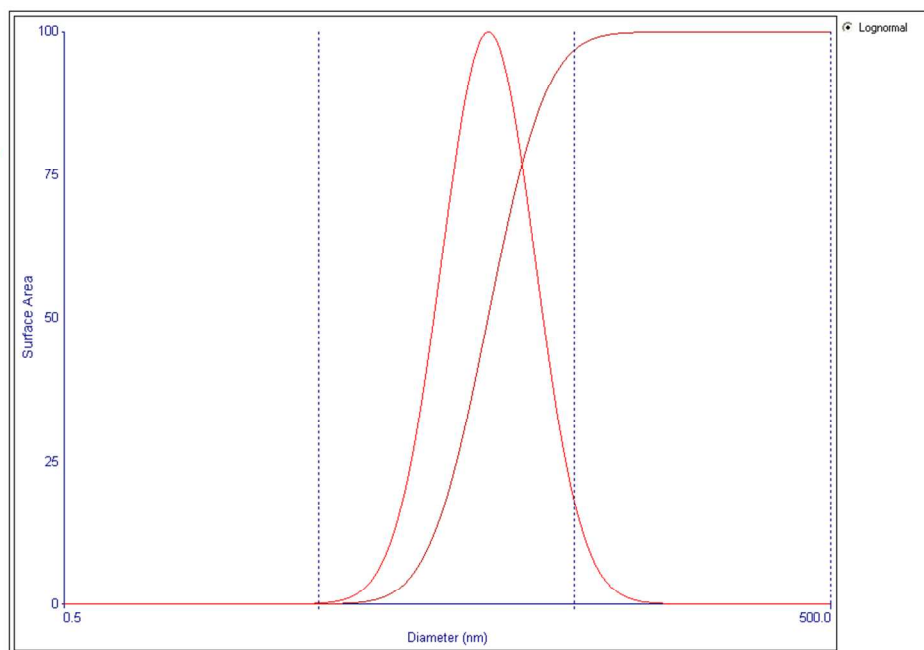
**Supporting Information “Intracellular Delivery of DNA and Enzyme in  
Active Form using Degradable Carbohydrate Based Nanogels”**

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4411-37deg (Combined)  
Oct 28, 2011 11:14:46

Effective Diameter: 42.3 nm  
Polydispersity: 0.210  
Avg. Count Rate: 1.6 Mcps  
Baseline Index: 0.0/100.00%  
Elapsed Time: 00:01:40



Run	Eff. Diam. (nm)	Half Width (nm)	Polydispersity	Baseline Index
1	48.7	24.1	0.245	1.7/100.00%
2	44.8	21.6	0.232	0.0/100.00%
3	42.6	18.4	0.187	6.9/100.00%
4	40.8	17.8	0.189	7.3/100.00%
5	39.8	18.2	0.210	8.1/100.00%
Mean	43.3	20.0	0.213	4.8/100.00%
Std. Error	1.6	1.2	0.011	1.6/0.00%
Combined	42.3	19.4	0.210	0.0/100.00%

Figure S1: DLS analysis of size and size distribution of NG-GAPMA-CL-10 at 37 °C.

4511-37deg (Combined)

Oct 28, 2011 11:12:04

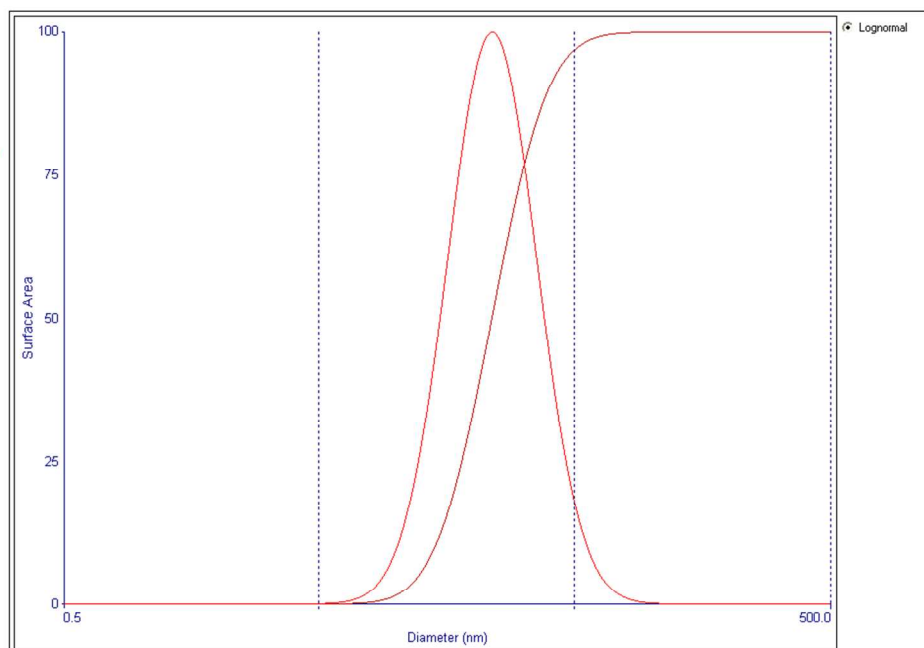
Effective Diameter: 41.5 nm

Polydispersity: 0.193

Avg. Count Rate: 1.0 Mcps

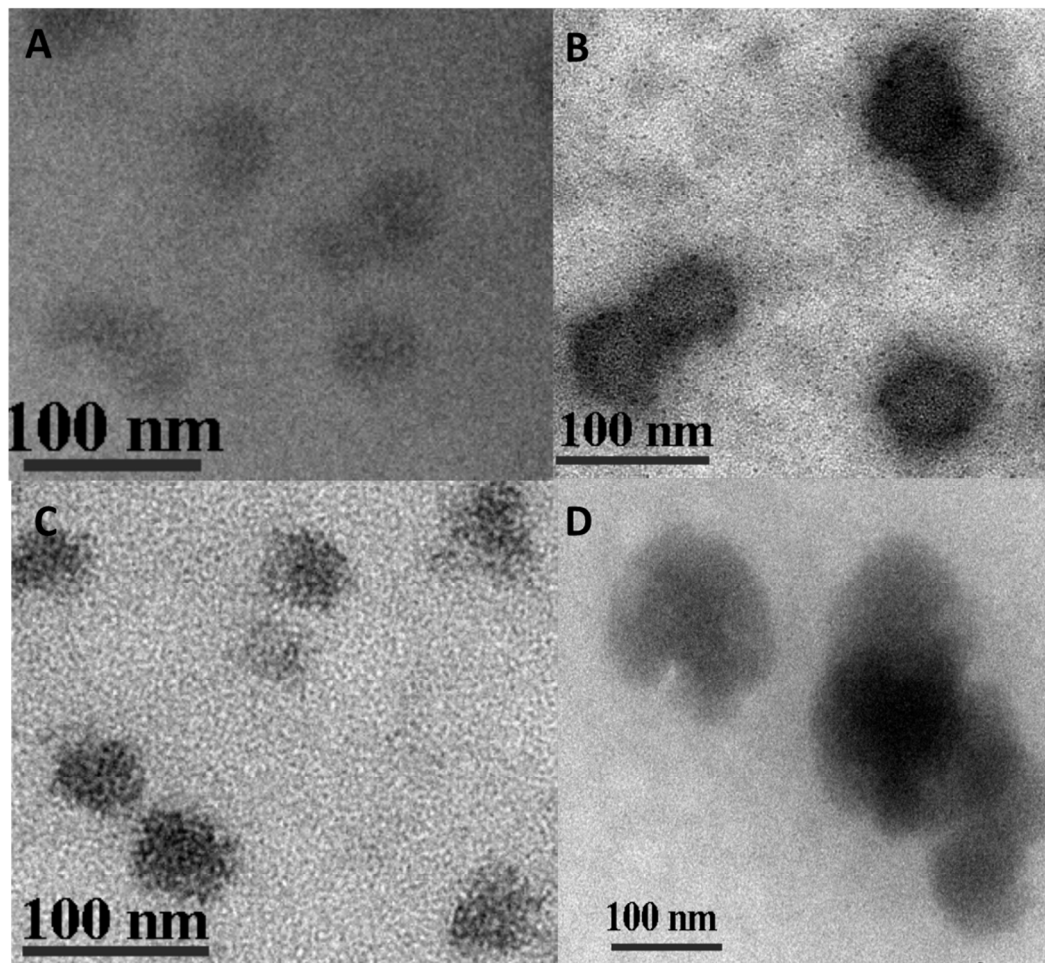
Baseline Index: 0.0/100.00%

Elapsed Time: 00:01:40

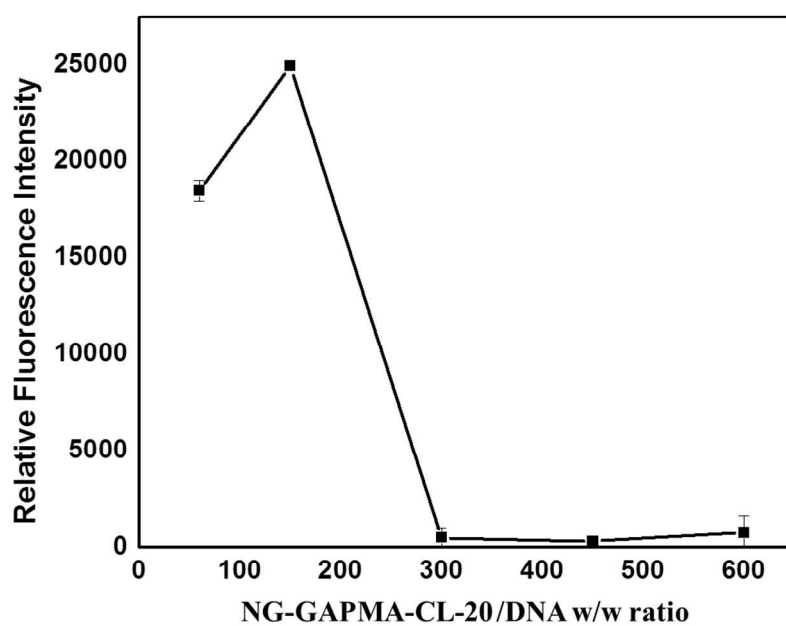
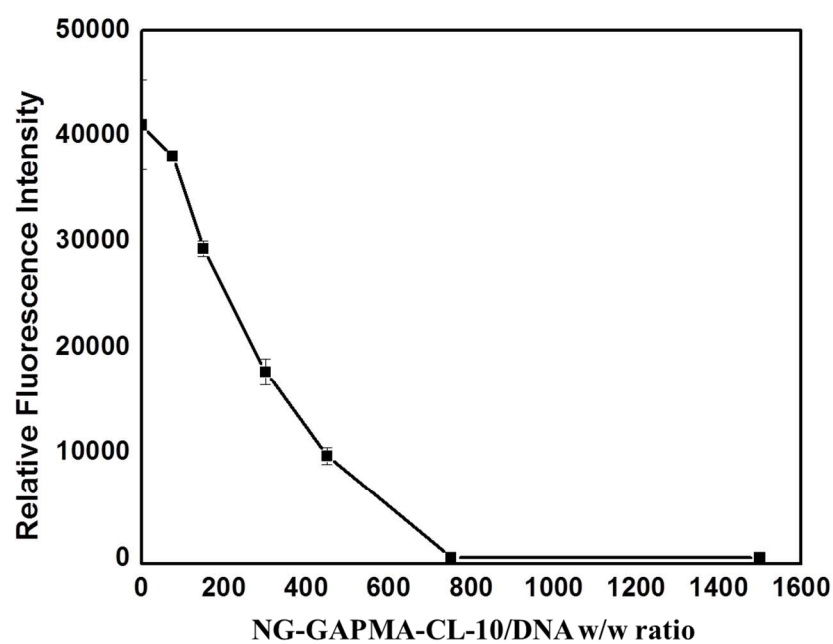


Run	Eff. Diam. (nm)	Half Width (nm)	Polydispersity	Baseline Index
1	44.6	21.0	0.222	1.7/100.00%
2	41.6	19.2	0.212	6.6/100.00%
3	43.6	17.9	0.169	0.0/100.00%
4	40.7	17.3	0.181	8.2/100.00%
5	39.0	17.4	0.199	7.2/100.00%
Mean	41.9	18.6	0.197	4.7/100.00%
Std. Error	1.0	0.7	0.010	1.6/0.00
Combined	41.5	18.2	0.193	0.0/100.00%

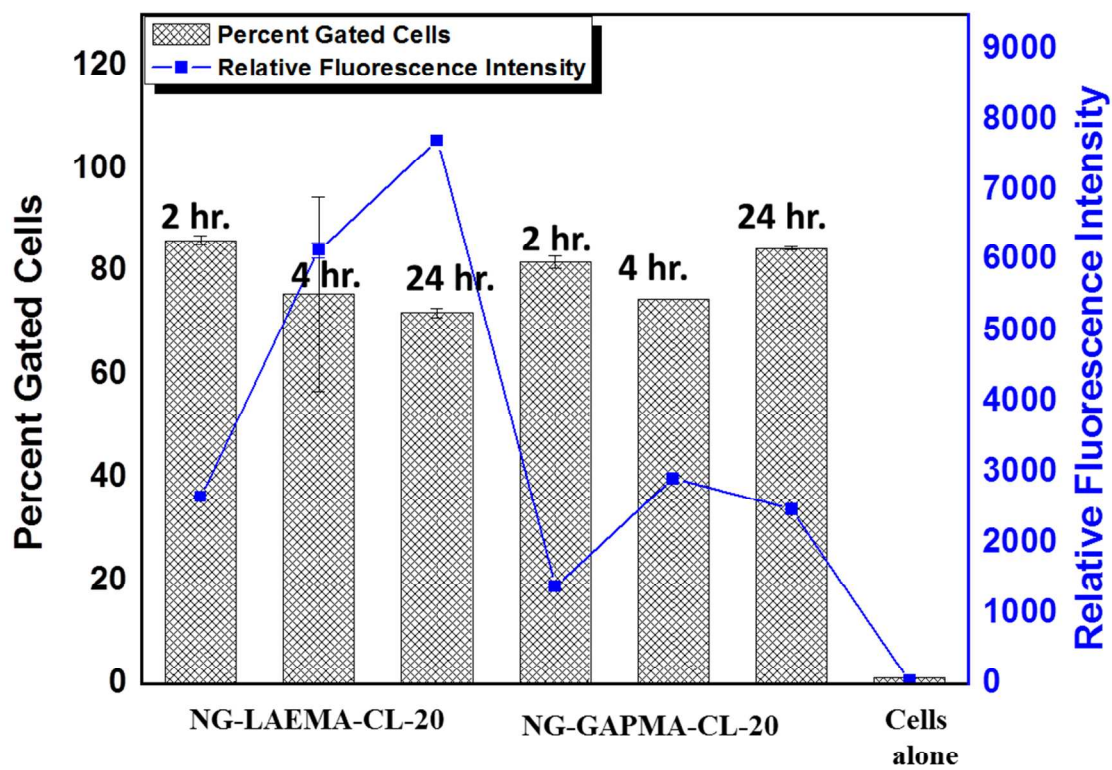
Figure S2: DLS analysis of size and size distribution of NG-LAEMA-CL-10 at 37 °C.



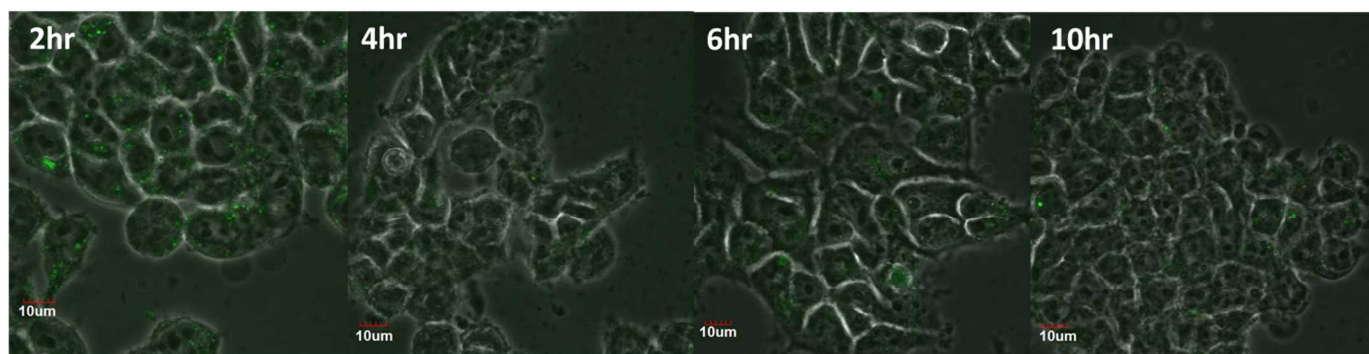
**Figure S3:** TEM images of A) GAPMA-NG-CL-20, B) GAPMA-NG-CL-20-DNA, C) LAEMA-NG-CL-20, D) LAEMA-NG-CL-20-DNA.



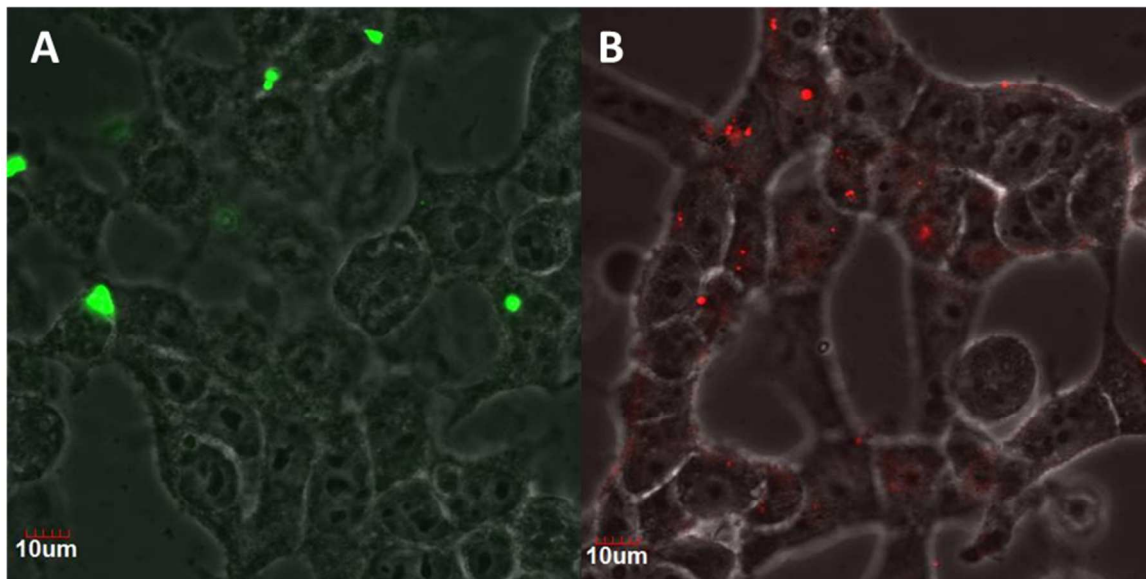
**Figure S4.** Quantit IT Picogreen assay showing  $\beta$ -galactosidase plasmid DNA condensation efficacy of glucose derived nanogels as a function of cross-linker concentration.



**Figure S5.** Flowcytometer analysis showing the uptake of FITC labelled nanogels in Hep G2 cells as a function of time, as shown in figure.



**Figure S6.** Confocal images of FITC-BSA encapsulated NG-LAEMA-CL-10 in hepatocytes at varying time intervals as shown in figure.



**Figure S7.** Confocal Images of FITC-protamine encapsulated NG-LAEMA-CL-10 in Hep G2 and B) protamine encapsulated NG-LAEMA-CL-10 complexed with Cy-3 labelled DNA.