

Supplementary Materials

**SYSTEMIC DELIVERY OF THE TUMOR NECROSIS FACTOR GENE TO TUMORS BY A
NOVEL DUAL DNA-NANOCOMPLEX IN A NANOPARTICLE SYSTEM**

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Supplemental Tables S1-S3

Supplemental Table S1.

Physical characterization of NCs and NPs.

Samples	Particle Size (nm)	PDI
pDNA-NCs	80 ± 4	0.08
NPs	170 ± 2	0.21
pDNA-NC/NPs	250 ± 7	0.11

Supplemental Table S2.

Hematologic parameters of mice treated with pTNF-NCs or pTNF-NC/NPs were assessed on day 21.

Parameters	Control	pTNF-NCs		pTNF-NC/NPs	
		IT	IP	IT	IP
Hemoglobin (gm/dl)	14.1	16.4	14.8	13.4	14.8
Neutrophil (%)	60	55	47	30	53
Lymphocyte (%)	38	36	35	35	29
Eosinophil (%)	4	6	4	2	4
Monocyte (%)	6	7	9	6	3
RBC (millions/mm ³)	5.8	5.0	5.1	6.83	4.17
Platelet counts (lakh/mm ³)	4.2	2.38	2.6	3.19	2.86

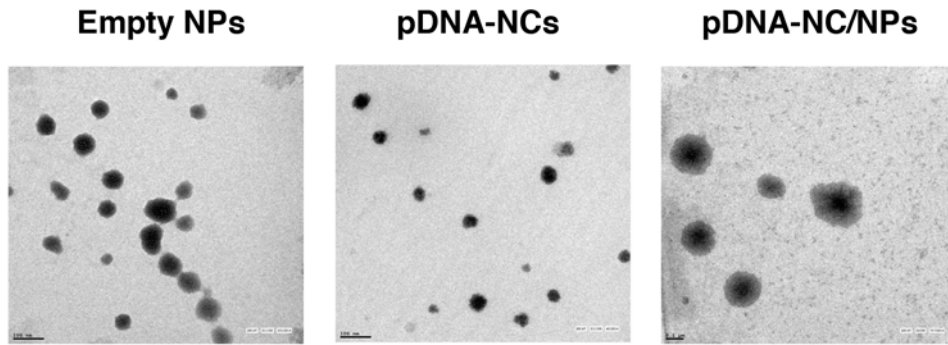
Supplemental Table S3.

Blood chemistry parameters of mice treated with pTNF-NCs or pTNF-NC/NPs were assessed on day 21.

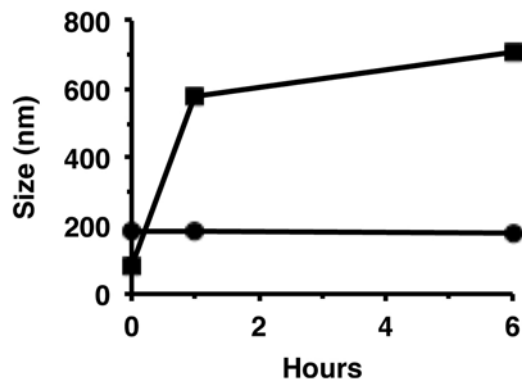
Parameters	Control	pTNF-NCs		pTNF-NC/NPs	
		IT	IP	IT	IP
Blood Urea (mg/dl)	28.3	23.8	24.1	32.4	44
Serum Creatinine (mg/dl)	0.6	0.6	0.5	1.1	0.99
Blood Urea Nitrogen (BUN) (mg/dl)	13.6	11	12	13	12.5
SGOT (IU/L)	39	15	18	29	36
SGPT (IU/L)	22	44	38	40	39
Alkaline Phosphatase (U/L at 37° C)	64	83	88	64	78

Supplemental Figures S1-S2

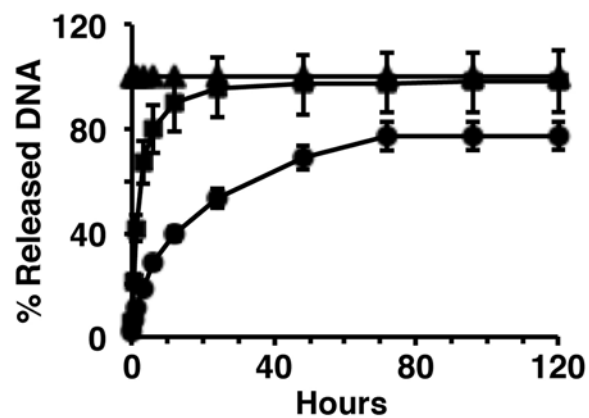
A.



B.



Supplemental Figure S1. Characterization of pDNA-NCs and pDNA-NC/NPs. A. Transmission Electron Microscopic (TEM) images of empty NPs, pDNA-NCs and pDNA-NC/NPs. B. Hydrodynamic diameter (nm) by DLS of pDNA-NCs (squares) or pDNA-NC/NPs (circles) incubated in the presence of serum for the indicated times.



Supplemental Figure S2. Kinetics of pDNA release. Release of pDNA from pDNA-NCs (squares) or pDNA-NC/NPs (circles) in the presence of PBS (pH 7.4) at the indicated times. As a control, free pDNA was added separately and measured in PBS (triangles). The results represent mean \pm SD of triplicate measurements.