Supporting Information

Glutamine-Chitosan Modified Calcium Phosphate Nanoparticles for Efficient siRNA Delivery and Osteogenic Differentiation

Bogyu Choi[a,†], Zhong-Kai Cui [a,†], Soyon Kim[b], Jiabing Fan[a], Benjamin Wu[a,b], and Min Lee[a,b,*]

Division of Advanced Prosthodontics, University of California Los Angeles, 10833 Le Conte Avenue, Los Angeles, California 90095, USA

Department of Bioengineering, University of California Los Angeles, 410 Westwood Plaza, Los Angeles, California 90095, USA

[†]Co-first author: These authors contributed equally to this work.

*Corresponding author: Min Lee, PhD
UCLA School of Dentistry
10833 Le Conte Avenue, CHS 23-088F
Los Angeles, CA 90095-1668
Telephone: (310) 825-6674
Fax: (310) 825-6345
Email: leemin@ucla.edu

Table S1. Size and zeta potential of siRNA loaded Chitosan based NPs.

	Diameter (nm)	**PDI**	**Zeta potential (mV)**
OChi/siRNA	125 ± 11	0.235	+27 ± 0.9
GOChi/siRNA	144 ± 8	0.205	+29 ± 1.1

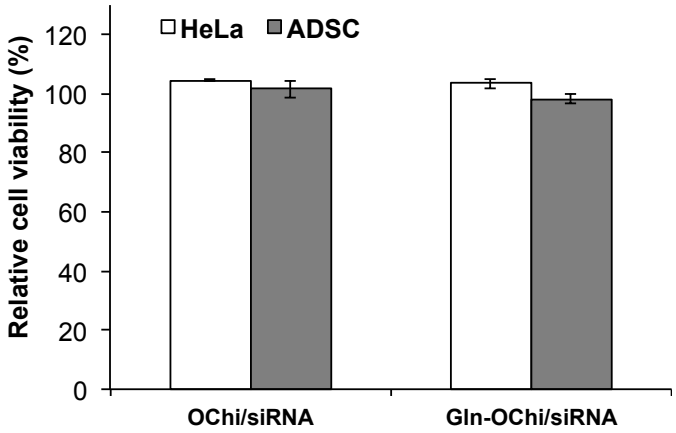

Figure S1. Cytotoxicity assay for siRNA-loaded chitosan based NPs (OChi/siRNA and Gln-OChi/siRNA) evaluated in HeLa cell line and primarily harvested ADSCs using an alamarBlue assay.

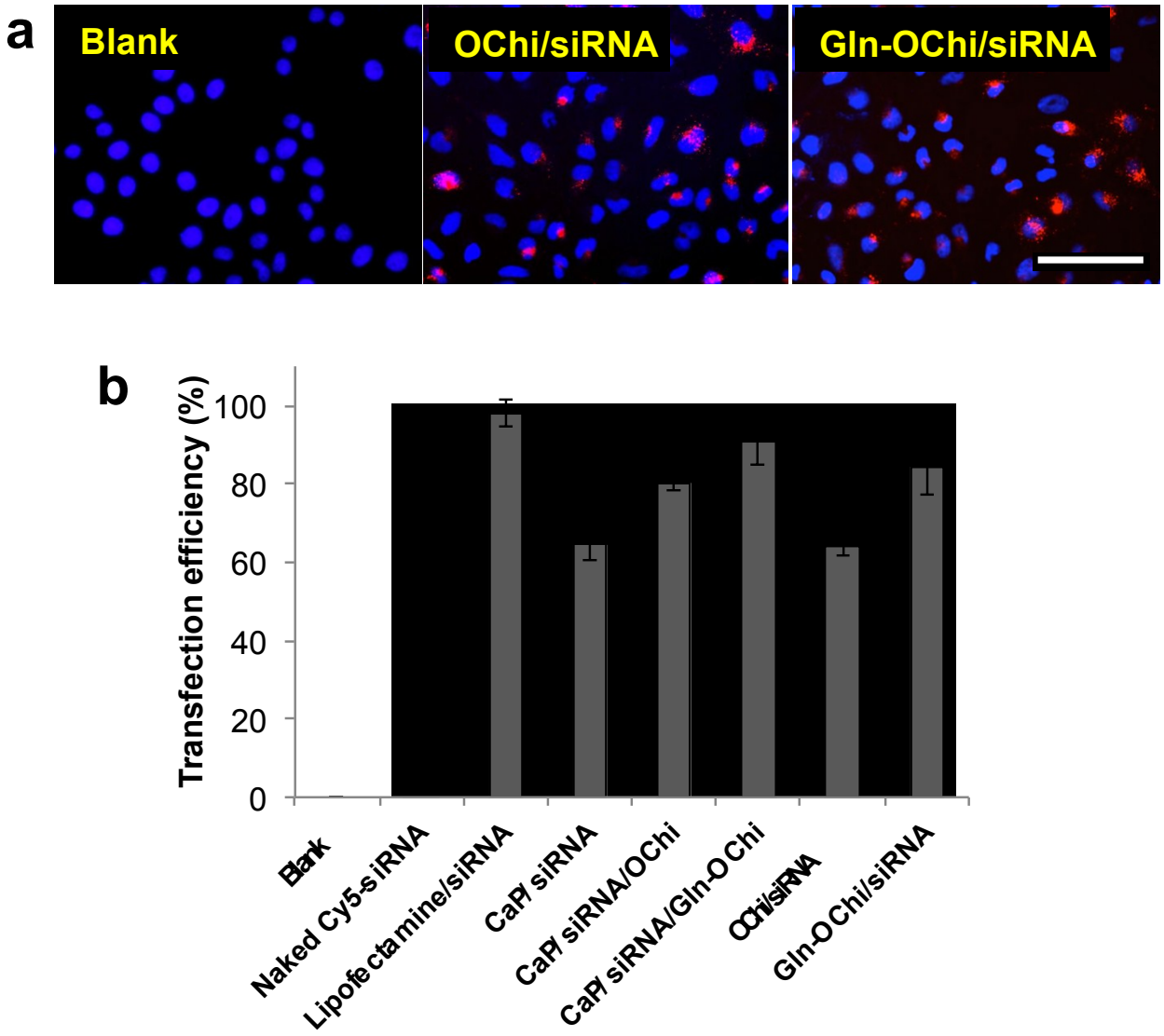

Figure S2. a) Cellular uptake of Cy3-siRNA-loaded OChi and Gln-OChi NPs. Scale bar is 50 μm. b) Transfection efficiency (%) of NPs into HeLa cell line (n = 5).

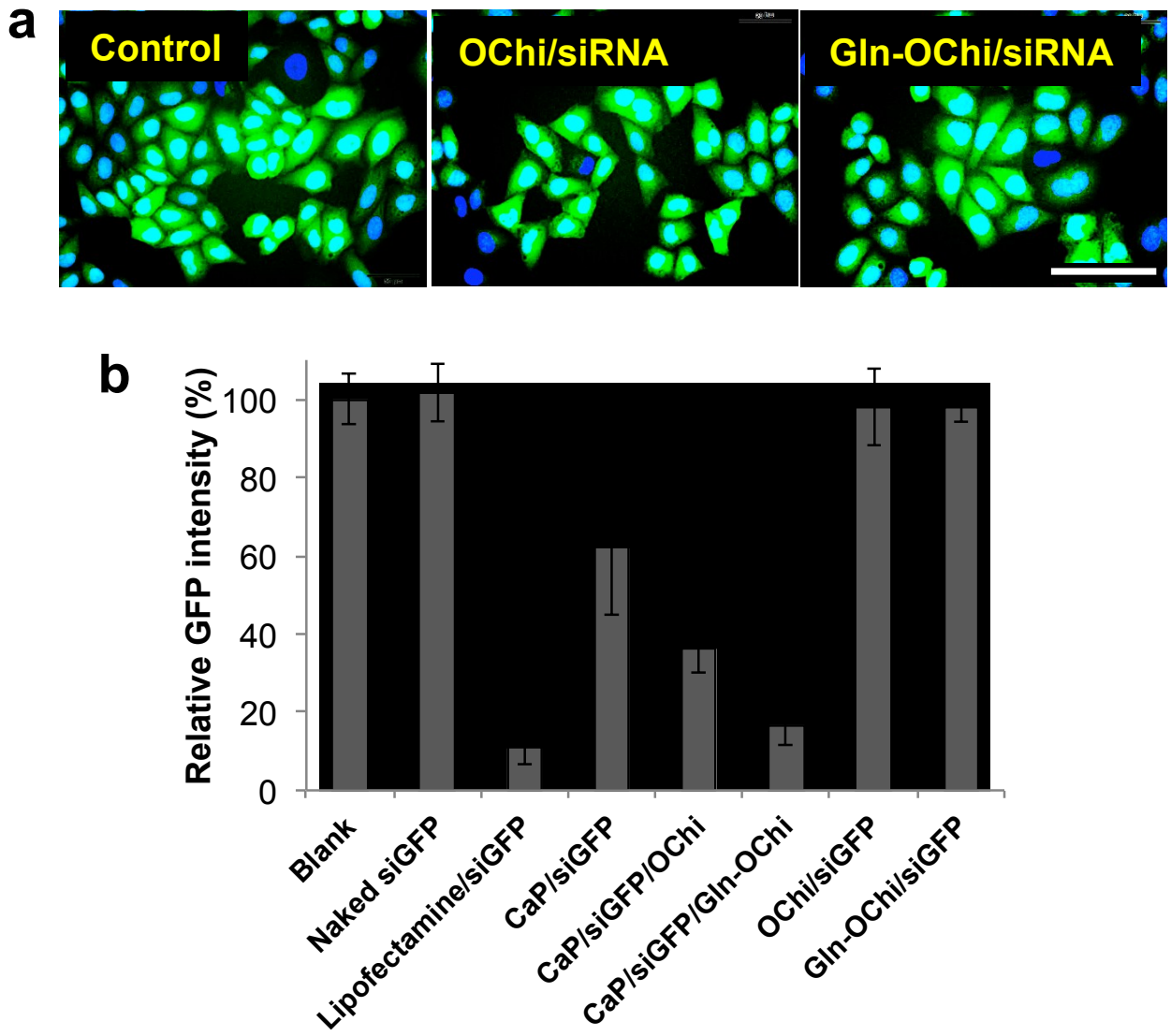

Figure S3. a) GFP expression silencing in HeLa-GFP. b) Relative GFP silencing efficacy of NPs in HeLa-GFP analyzed using ImageJ. Images are representative of a total analysis five samples. Scale bar is 100 μm.