ELSP Biofunct. Mater.

Article | Received 3 September 2025; Revised 30 September 2025; Accepted 23 October 2025; Published 30 October 2025 https://doi.org/10.55092/bm20250015

Supplementary data

Chitosan nanoparticles for non-viral gene delivery: efficacy in immune cell transfection and *in vivo* studies

Mamatha Muraleedharan Pillai, Hemavathi Dhandapani, Manasa Srinivasan, Armaan Siddiqui and Prakriti Tayalia*

Department of Biosciences and Bioengineering, Indian Institute of Technology Bombay, Mumbai 400076, India

* Correspondence author; E-mail: prakriti@iitb.ac.in.

Supplementary figures

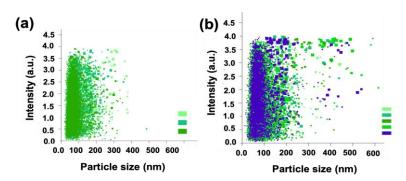


Figure S1. Nanoparticle size distribution of **(a)** CSNP and **(b)** pCSNP as measured using NTA (colour code indicates number of sample runs).

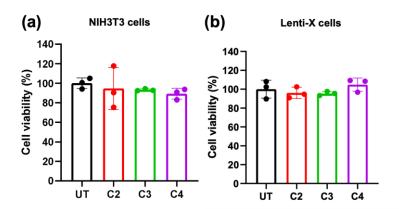


Figure S2. *In vitro* cytocompatibility of chitosan nanoparticles. Bar graphs showing cell viability quantification of **(a)** NIH3T3 and **(b)** Lenti-X cells treated with varying concentrations of pCSNP (Concentration of plasmid (C): C1-3 μg, C2-6 μg and C3-12 μg).



Copyright©2025 by the authors. Published by ELSP. This work is licensed under Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium provided the original work is properly cited.

Biofunct. Mater. Article

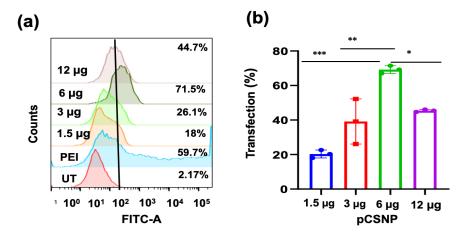


Figure S3. Optimization of transfection efficiency of CSNP assessed through flow cytometry showing (a) Histograms of cell count vs. GFP intensity distribution of transfected cells, and corresponding (b) Bar graph quantifying the percentage transfection obtained for varying concentrations of pCSNPs when incubated with Lenti-X cells.