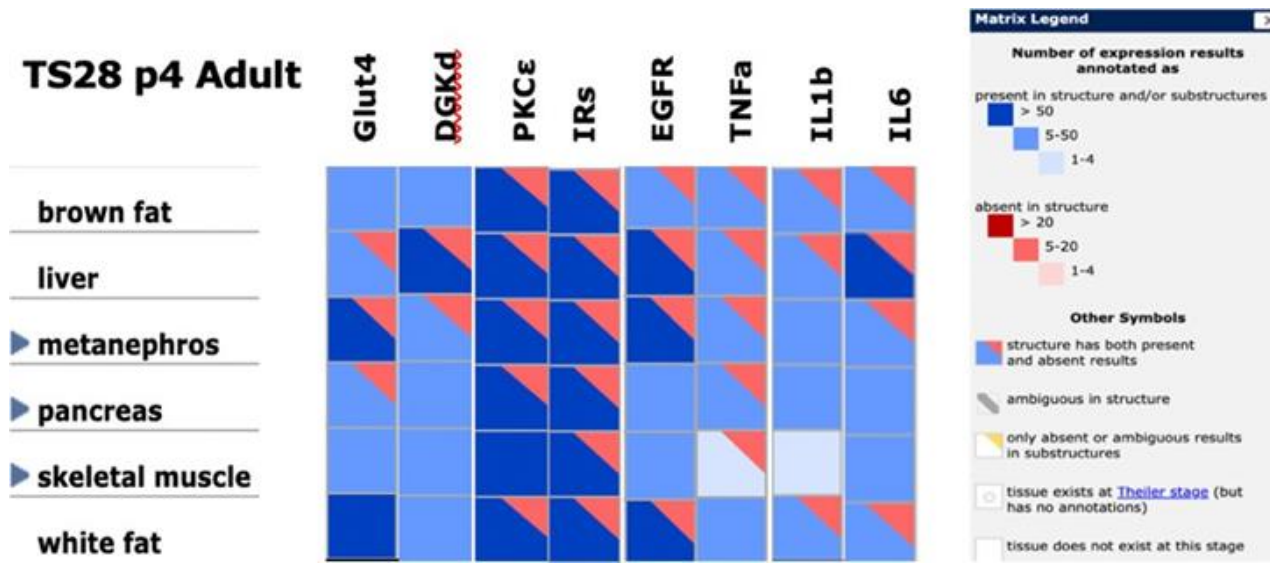


SUPPLEMENTARY DATA

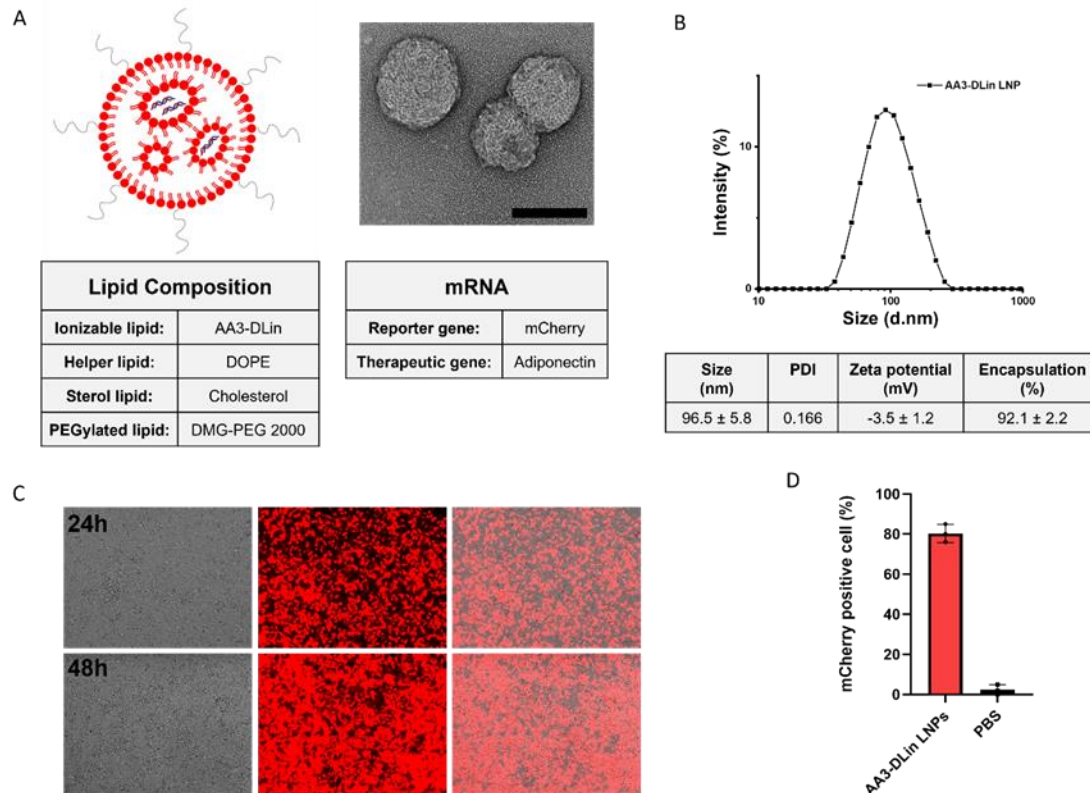
# **Adiponectin mRNA Conjugated with Lipid Nanoparticles Specifically Targets the Pathogenesis of Type 2 Diabetes**

**Rady E. El-Araby, Qisheng Tu, Ying Xie, Tarek Aboushousha, Zhongyu Li, Xiaoyang Xu, Zoe X. Zhu, Lily Q. Dong, Jake Chen**

# SUPPLEMENTARY DATA



**Supplementary Figure 1. Summary of the studied gene expression in the different studied tissues.** The diagram was built based on the data from the Mouse Genome Database (MGD) and the Gene Expression Database (GXD). <https://www.informatics.jax.org>.



**Supplementary Figure 2. Physicochemical properties, transfection evaluations, and intracellular uptake of the nanoparticles. A:** A schematic to present the composition of AA3-DLin LNPs used in this study for mRNA delivery and a representative TEM image of LNPs (Scale bar: 100 nm). **B:** The physicochemical characterization of APN mRNA- LNPs: including size, polydispersity index (PDI), zeta, and mRNA encapsulation efficacy. **C:** The cell transfection efficacy of mCherry mRNA-LNPs, the cell images were captured by

# SUPPLEMENTARY DATA

fluorescence microscope at pre-set time points. D: The population summary of mCherry-positive cells, compared to PBS as an empty control group. All experiments were repeated in triplicate and the results were represented as means  $\pm$  SD.

**Supplementary Table 1.** Primer sequences of the studied genes.

APN	Forward	5'- GCACTGGCAAGTTCTACTGCAA -3'
	Reverse	5'- GTAGGTGAAGAGAACGGCCTTGT -3'
Glut-4	Forward	5'- GTAACTTCATTGTCGGCATGG -3'
	Reverse	5'- AGCTGAGATCTGGTCAAACG -3'
PKC $\epsilon$	Forward	5'-GCAGCAATAGAGTTGGGTTAG-3'
	Reverse	Reverse 5'- CAGGTTGTTCCGGATGTCC-3'
DGK-d	Forward	5'- GTGGTGATCTCATCAGCC -3'
	Reverse	5'- TCTTCTCAGATTCAGAGAGG -3'
EGFR	Forward	5'- GGAGGAAAAGAAAGTCTGCC -3',
	Reverse	5'- ATCG- CACAGCACCA ATCAGG -3'
IR	Forward	5'-GAGAGGATGTGAGACGACG-3'
	Reverse	5'-AAGGTGTTAGGCAAAGGCAG-3'
TNF- $\alpha$	Forward	5'-TCTCATGCACCACCATCAAGGACT-3'
	Reverse	5'-ACCACTCTCCCTTGCAGAACTCA-3'
IL-1b	Forward	5'-AAGGGCTGCTTCCAAACCTTTGAC-3'
	Reverse	5'-ATACTGCCTGCCTGAAGCTCTTGT-3'
IL-6	Forward	5'-ATCCAGTTGCCTTCTTGGGACTGA-3'
	Reverse	5'-TAAGCCTCCGACTTGTGAAGTGGT-3'