Electronic Supplementary Materials:

3D GelMA-Printing of Pancreatic Endocrine Constructs via Magnetic Chitosan Nanoparticle-Mediated CRISPR/dCas9a Delivery: A Proof-of-Concept Study

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Table S1. The target sequence of crRNAs for Human NEUROG3, NKX6.1, MAFA, PDX1. Adapted with permission from Ref. [10] (Supporting Information). Copyright [2023] Royal Society of Chemistry.

crRNA	Target Sequence
NGN3	CACAGCTGGATTCCGGACAA
NKX6.1	GCTGCCGCCTCCCGCGTGGA
MAFA	GCCCAGCTGTCAATCTCCTG
PDX1	CGGGCCGGCCGCCGCACCAT

Table S2. The sequence (5'- 3') of primers for GAPDH, PKA, PI3k, AKT1, mTOR, Casp3. Adapted with permission from Ref. [10] (Supporting Information). Copyright [2023] Royal Society of Chemistry.

mRNA	Forward/Reverse	Sequence (5'- 3')
GAPDH	forward	CTTTTGCGTCGCCAG
	reverse	TTGATGGCAACAATATCCAC
PKA	forward	CTGAGATTATCCTGAGCAAAG
	reverse	GCCATTTCATAGATAAGAACCC
PI3k	forward	CAGATTCTACGAATCATGGAG
	reverse	TCCTATTTTGTCACCAGTTG
AKT1	forward	AAGTACTCTTTCCAGACCC
	reverse	TTCTCCAGCTTGAGGTC
mTOR	forward	GGAGGAGAAATTTGATCAGG
	reverse	GGGCAACAAATTAACGATTG
Casp3	forward	AAAGCACTGGAATGACATC
	reverse	CGCATCAATTCCACAATTTC

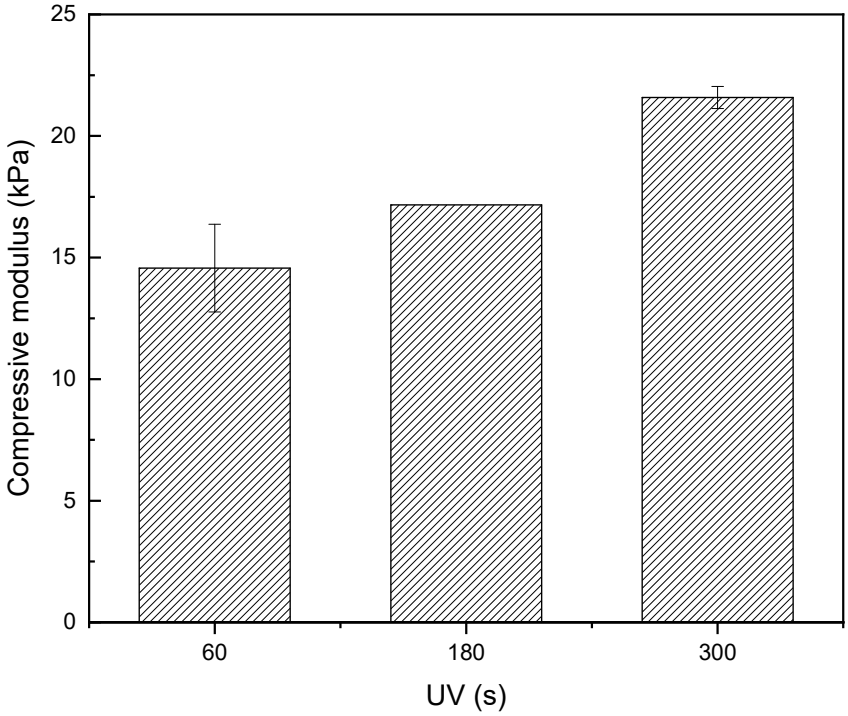

Figure S1. The mechanical properties of GelMA bioink under different UV exposure times for 60, 180 and 300 s.

References:

10. Lee, M.-H.; Thomas, J.L.; Lin, C.-Y.; Li, Y.-C.E.; Lin, H.-Y. Nanoparticle-mediated CRISPR/dCas9a activation of multiple tran-scription factors to engineer insulin-producing cells. J. Mater. Chem. B 2023, 11, 1866–1870.