ACCSCIENCE PUBLISHING

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RESEARCH ARTICLE

Digital light processing-printed macroencapsulated human liver organoids preserve hepatic stellate cell quiescence for transplantation in immunocompetent mice

Supplementary Files

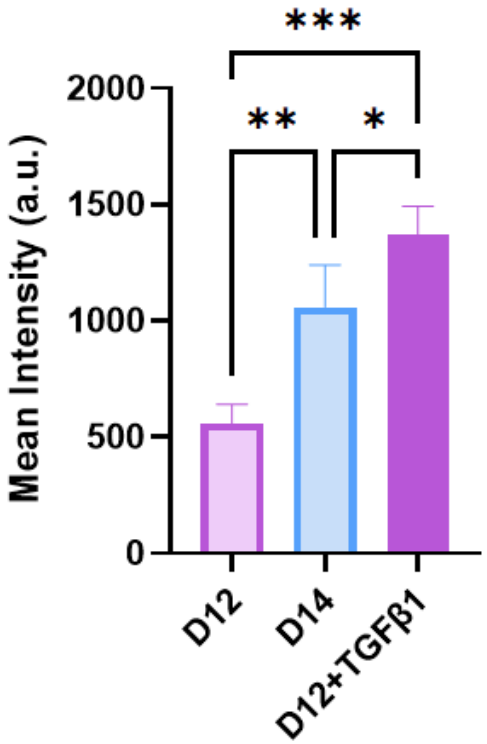

Figure S1. Quantitative analysis of immunofluorescence intensity of α-SMA staining for HSCs at different days
Notes: Data are mean ± SD. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
Abbreviations: α-SMA: Alpha-smooth muscle actin; HSC: Hepatic stellate cell; TGF-β1: Transforming growth factor-beta 1.

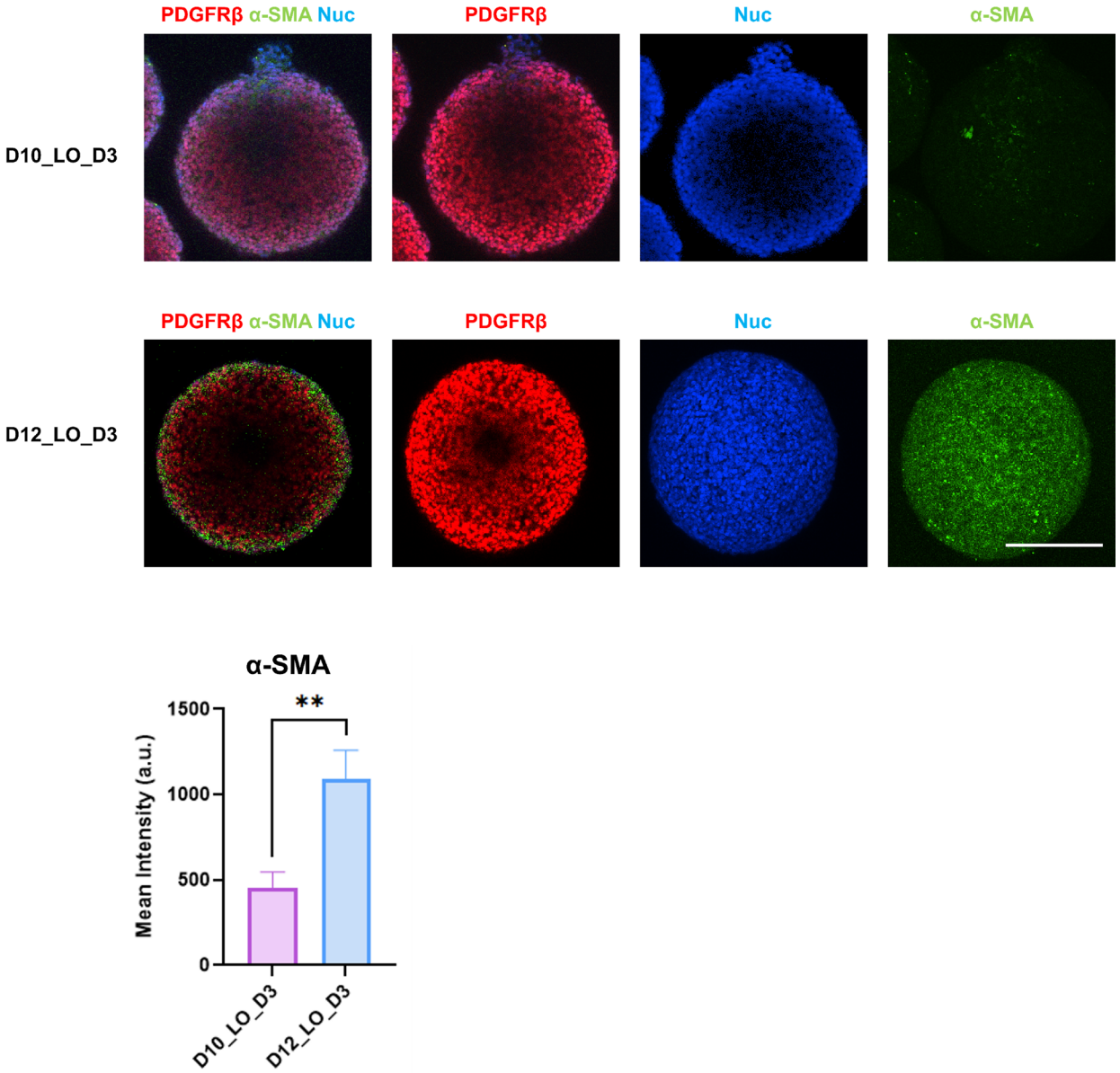

Figure S2. Quantitative analysis of immunofluorescence intensity of α-SMA staining for HSCs at different days. (A) Single immunofluorescence images of Figure 2B. Scale bars: 50 μm; magnifications: 40×. (B) α-SMA fluorescence quantification.
Notes: Data are mean ± SD. **$p < 0.01$.
Abbreviations: α-SMA: Alpha-smooth muscle actin; HSC: Hepatic stellate cell; LO: Liver organoid; Nuc: Nucleus; PDGFRβ: Platelet-derived growth factor receptor beta.

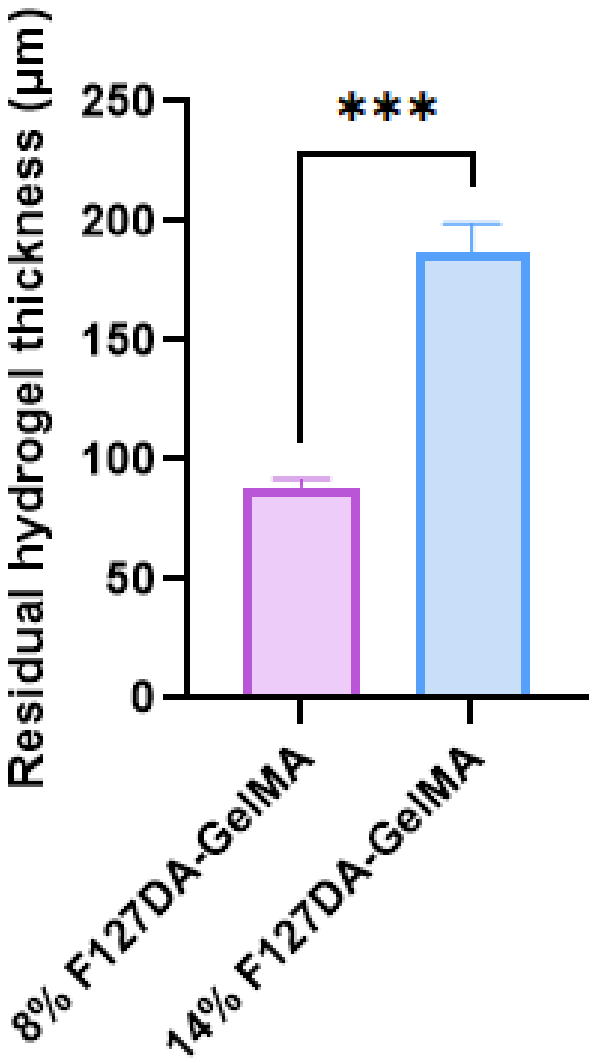

Figure S3. Quantitative analysis of the residual hydrogel scaffolds after in vivo implantation
Notes: Data are mean ± SD. ***$p < 0.001$.
Abbreviations: GelMA: Gelatin methacryloyl; F127DA: Pluronic F127 diacrylate.

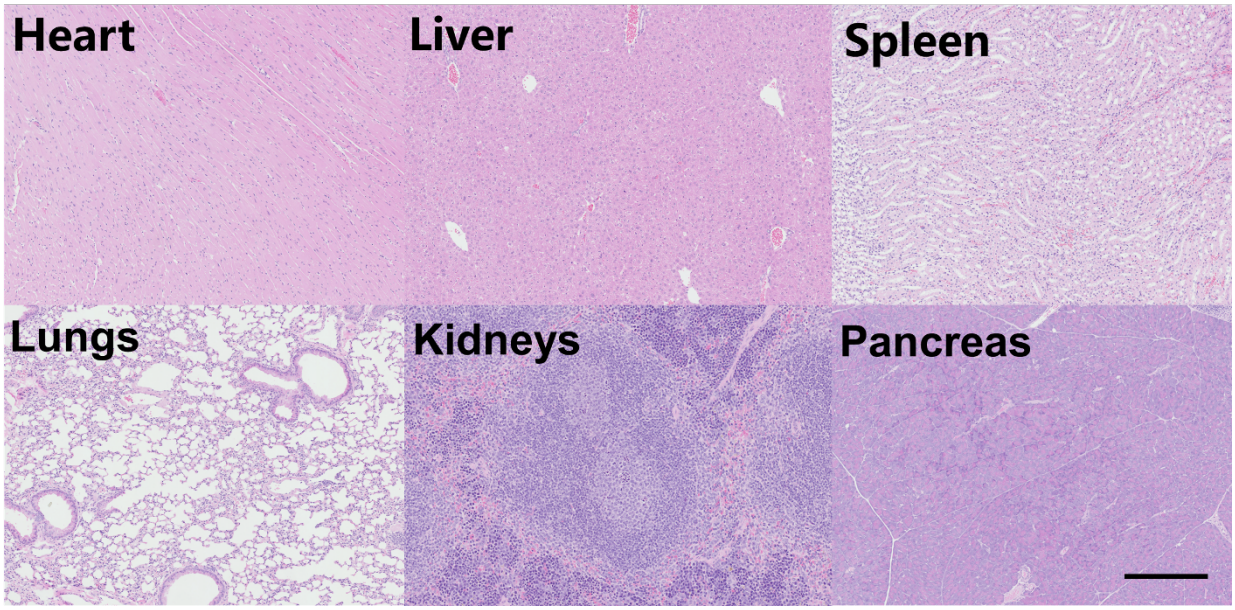

Figure S4. Images of the representative histological HE staining of major tissues after in vivo implantation of F127DA. Scale bars: 200 μm; magnifications: 4×.

Table S1. Primer list

Symbol	Forward sequence (5'–3')	Reverse sequence (5'–3')
KDR	GGAACCTCACTATCCGCAGAGT	CCAAGTTCGTCTTTTCCTGGGC
ACTA2	CTATGCCTCTGGACGCACAACT	CAGATCCAGACGCATGATGGCA
VIM	AGGCAAAGCAGGAGTCCACTGA	ATCTGGCGTTCCAGGGACTCAT
PDGFRB	TGCAGACATCGAGTCCTCCAAC	GCTTAGCACTGGAGACTCGTTG
NGFR	CCTCATCCCTGTCTATTGCTCC	GTTGGCTCCTTGCTTGTTCTGC
ALCAM	TCCAGAACACGATGAGGCAGAC	GTAGACGACACCAGCAACAAGG
RELN	GTCTACCTTCCACTCTCCACCA	GTCCAGCATCACAAATCCCTCG
HGF	GAGAGTTGGGTTCTTACTGCACG	CTCATCTCCTCTTCCGTGGACA
COL1A1	GATTCCCTGGACCTAAAGGTGC	AGCCTCTCCATCTTTGCCAGCA
PPARG	AGCCTGCGAAAGCCTTTTGGTG	GGCTTCACATTCAGCAAACCTGG
LOXL2	TGACTGCAAGCACACGGAGGAT	TCCGAATGTCCTCCACCTGGAT
NCAM1	CATCACCTGGAGGACTTCTACC	CAGTGTACTGGATGCTCTTCAGG
TIMP1	GGAGAGTGTCTGCGGATACTTC	GCAGGTAGTGATGTGCAAGAGTC
GFAP	CTGGAGAGGAAGATTGAGTCGC	ACGTCAAGCTCCACATGGACCT
PCDH7	GAGGAGTCAGAAACACCAAGCAG	TCAGGGCTACATCTGGAAGAGG
GAPDH	GTCTCCTCTGACTTCAACAGCG	ACCACCCTGTTGCTGTAGCCAA
P75NTR	CCTCATCCCTGTCTATTGCTCC	GTTGGCTCCTTGCTTGTTCTGC