

Supplementary Information for

3D PCL/Gelatin/Genipin Nanofiber Sponge as Scaffold for Regenerative Medicine

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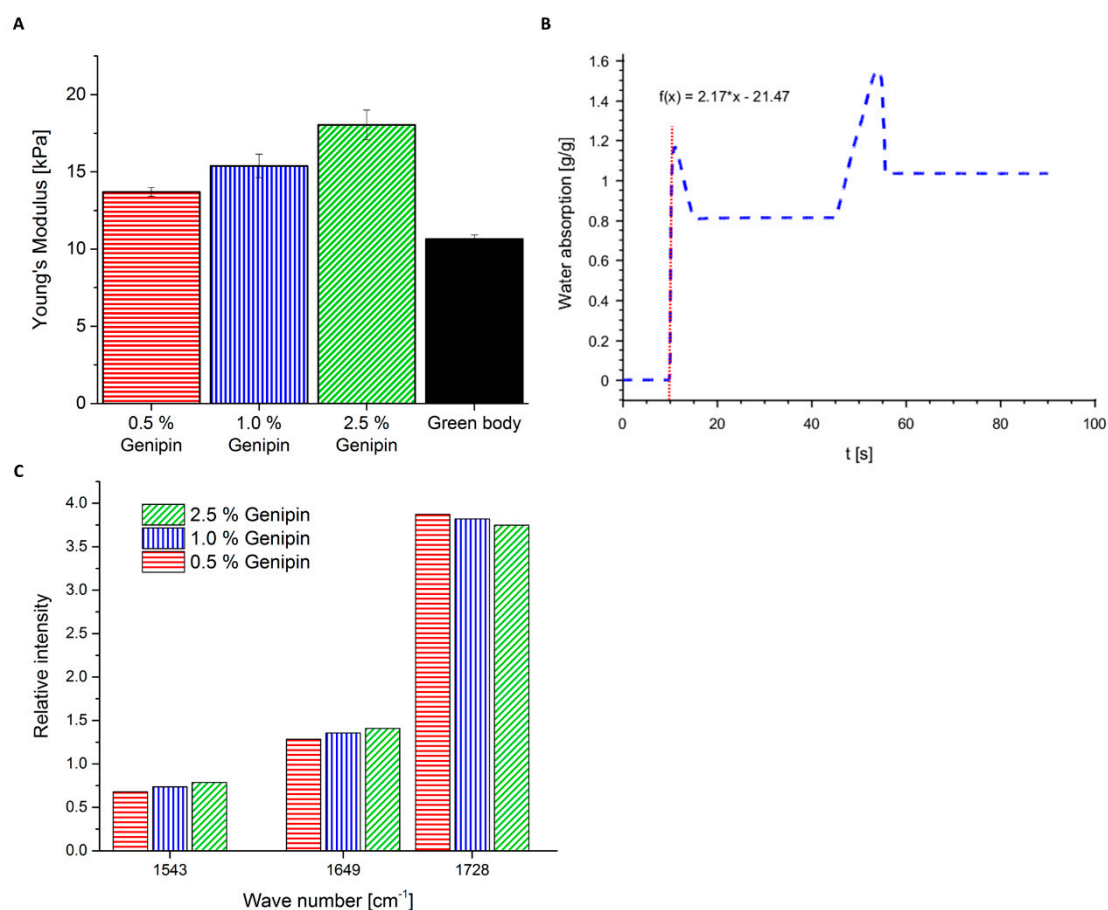


Figure S1: Characterization of different 3D scaffolds. (A) Young's moduli of 3D PCL/gelatin scaffolds cross-linked with either 0.5 %, 1.0 % or 2.5 % genipin and before cross-linking (green body). (B) Representative plot of the water absorption analysis, showing a scaffold cross-linked with 1 % genipin. Red dotted line indicates the applied linear regression for the water absorption rate measurements. (C) FTIR quantification of the cross-linked scaffolds. Wave number 1543 cm⁻¹ and 1649 cm⁻¹ correspond to the amide I and II bonds, respectively, and wave number 1728 cm⁻¹ corresponds to an ester bond.

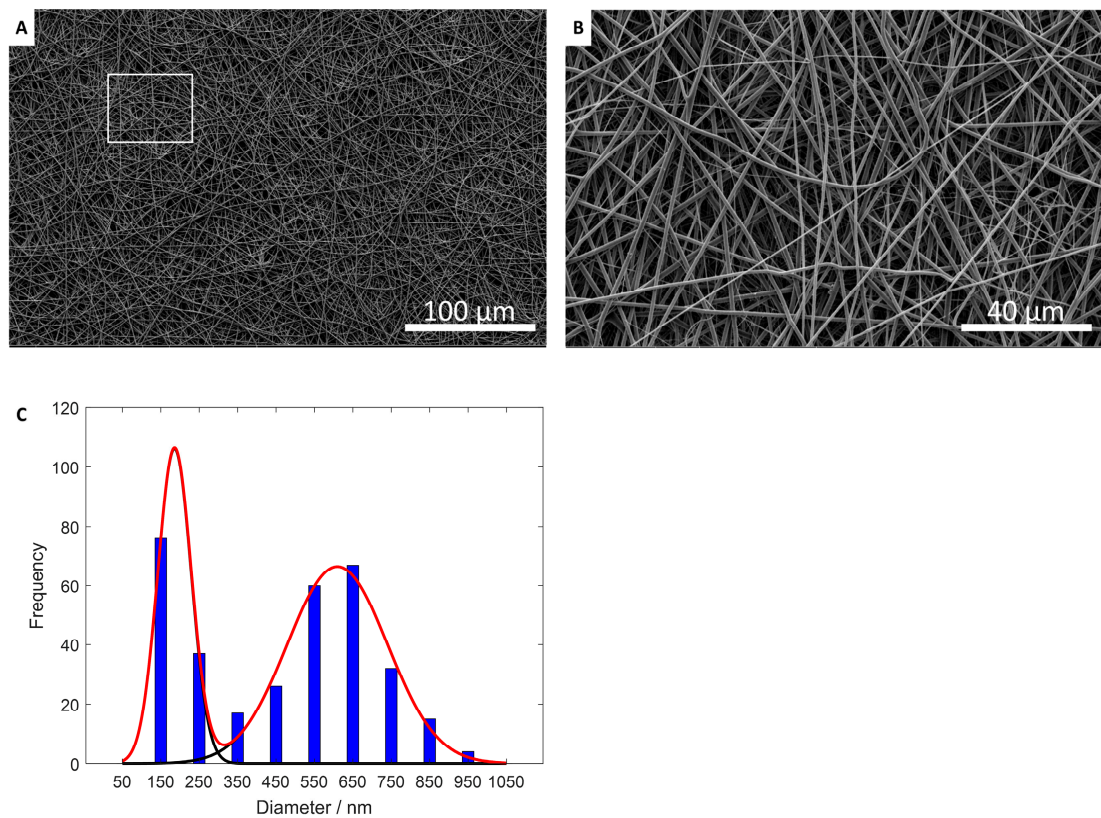


Figure S2: SEM image of electrospun 2D PCL/gelatin nanofiber mat (A) Composite fibers with a PCL to gelatin ratio of 2:1, scale bar = 100 μm. (B) Magnification of white insert in figure A, scale bar = 40 μm. (C) Fiber diameter distribution of electrospun nanofibers.

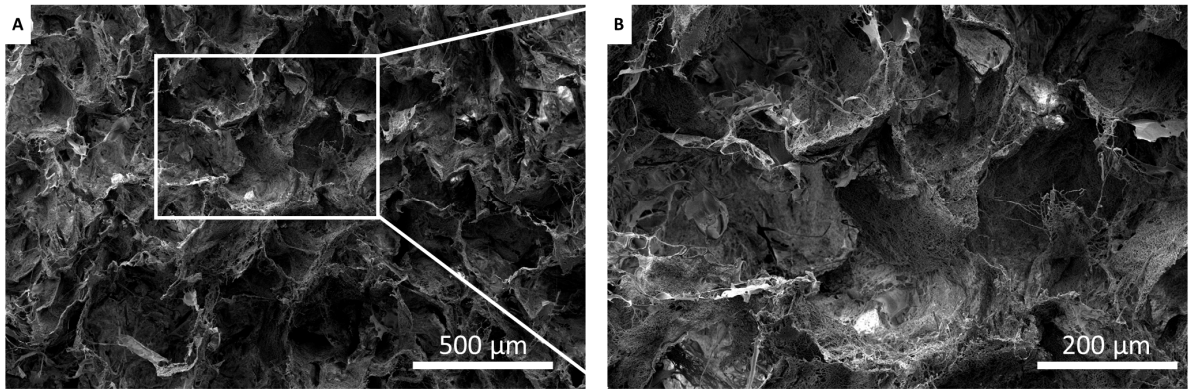


Figure S3: SEM image of 3D PCL/gelatin scaffolds. (A) Samples before cross-linking with genipin (green body), scale bar = 500 μm . (B) Magnification of white insert in figure A, scale bar = 200 μm .

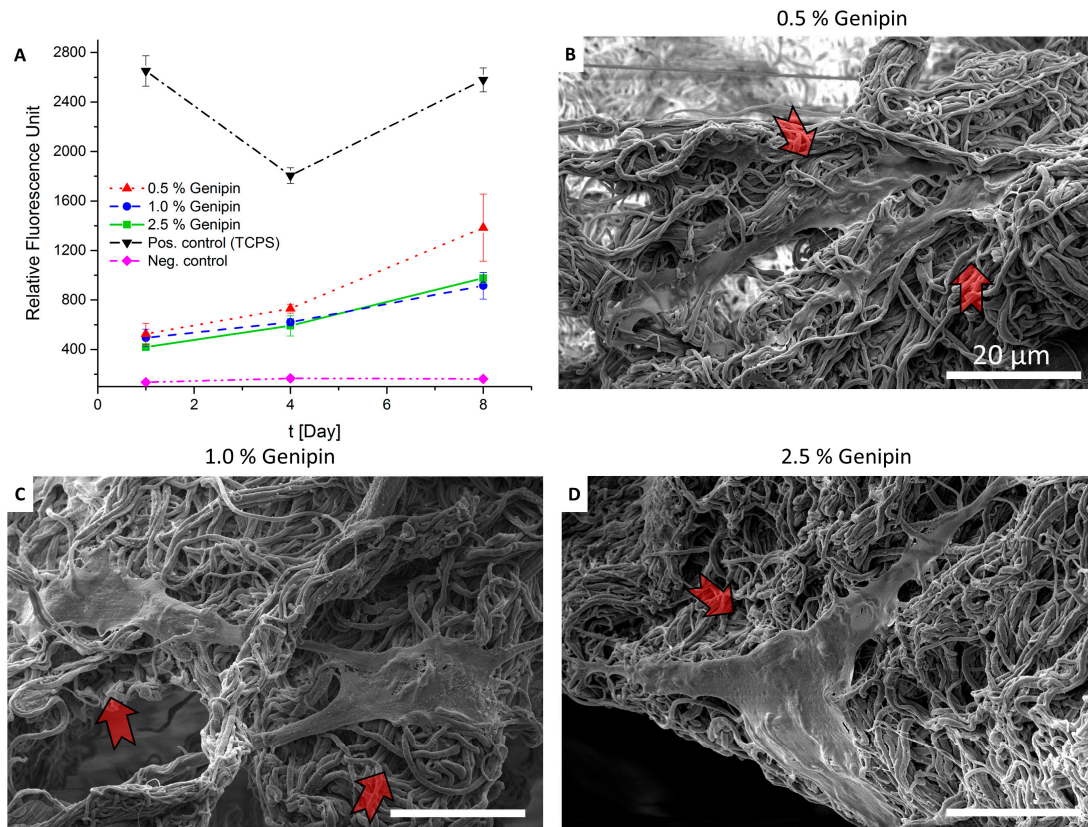


Figure S4: Short-term in vitro cell compatibility study using human dermal fibroblasts (HDF). (A) Metabolic activity measurements using the PrestoBlue assay. (B-D) SEM image of the cultured scaffolds after 8 days in culture. Red arrows indicate adhering and proliferating HDFs. (B) Scaffolds cross-linked with 0.5 % genipin. (C) Scaffolds cross-linked with 1.0 % genipin. (D) Scaffolds cross-linked with 2.5 % genipin. (B-D) Scale bar = 20 μ m.