Supporting Information

Bioprinting 3D Microfibrous Scaffolds for Engineering Endothelialized Myocardium and Heart-on-a-Chip

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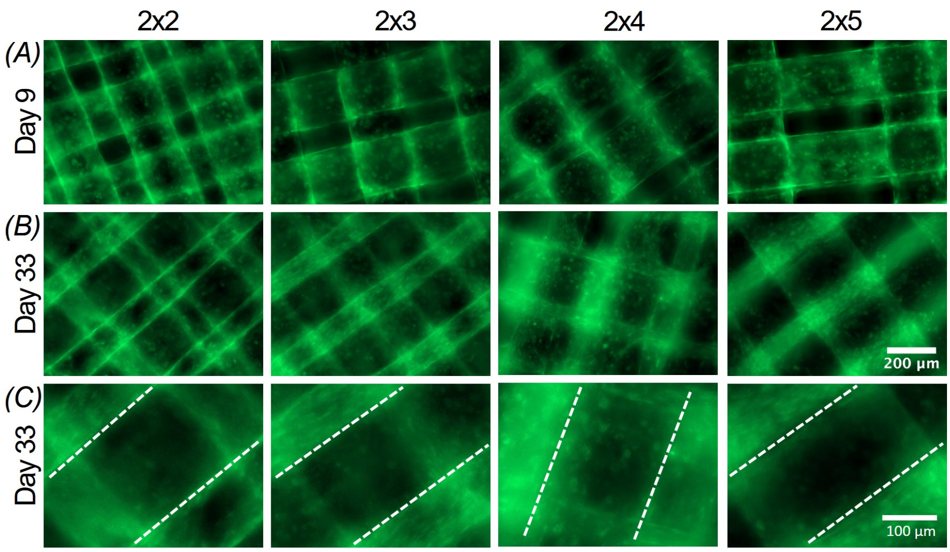


Figure S1. (A, B) Fluorescence micrographs showing the spreading of GFP-HUVECs in the bioprinted microfibrous scaffolds with different aspect ratios of unit grids at Day 9 and Day 33. (C) High-magnification fluorescence micrographs showing the spreading of GFP-HUVECs in the bioprinted microfibrous scaffolds with different aspect ratios of unit grids at Day 33. The dotted lines in each panel represent a microfiber in between, showing the outward migrated HUVECs at the bottom of the culture well.

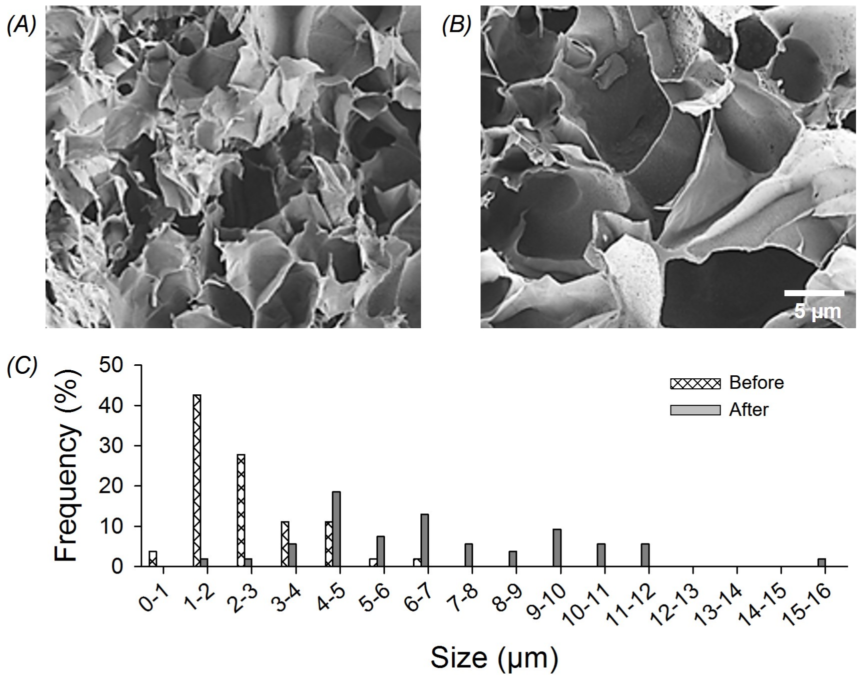
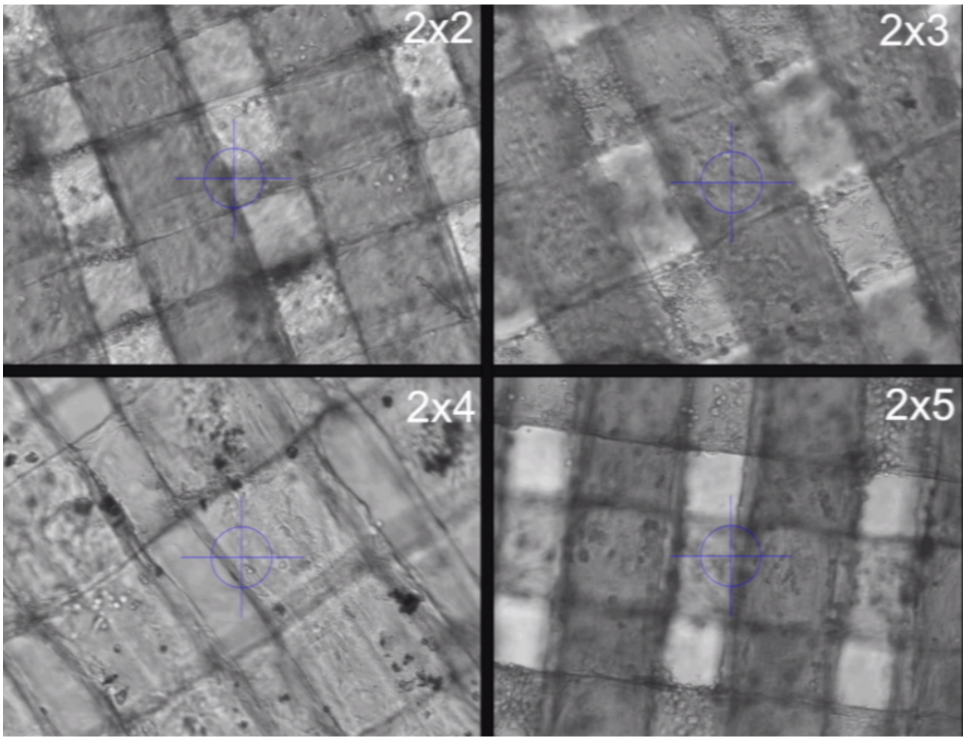
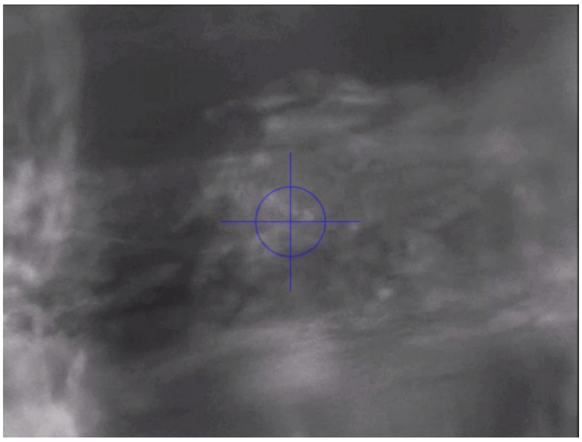


Figure S2. (A, B) SEM images showing the change in pore size of the bioprinted microfibers in regions close to the peripheries, (A) before and (B) after alginate removal. (C) Pore size distribution for the microfibers before and after alginate removal.



Movie S1. Videos showing the beating of the myocardial tissues on bioprinted microfibrous scaffolds with different aspect ratios of unit cells.



Movie S2. Video taken in fluorescence mode showing the beating of the endothelialized myocardial tissue construct. The HUVECs forming the endothelium inside the microfibers were GFP-fluorescent.