

Stacked silk-cell monolayers as a biomimetic three dimensional construct for cardiac tissue reconstruction

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Supplementary Section

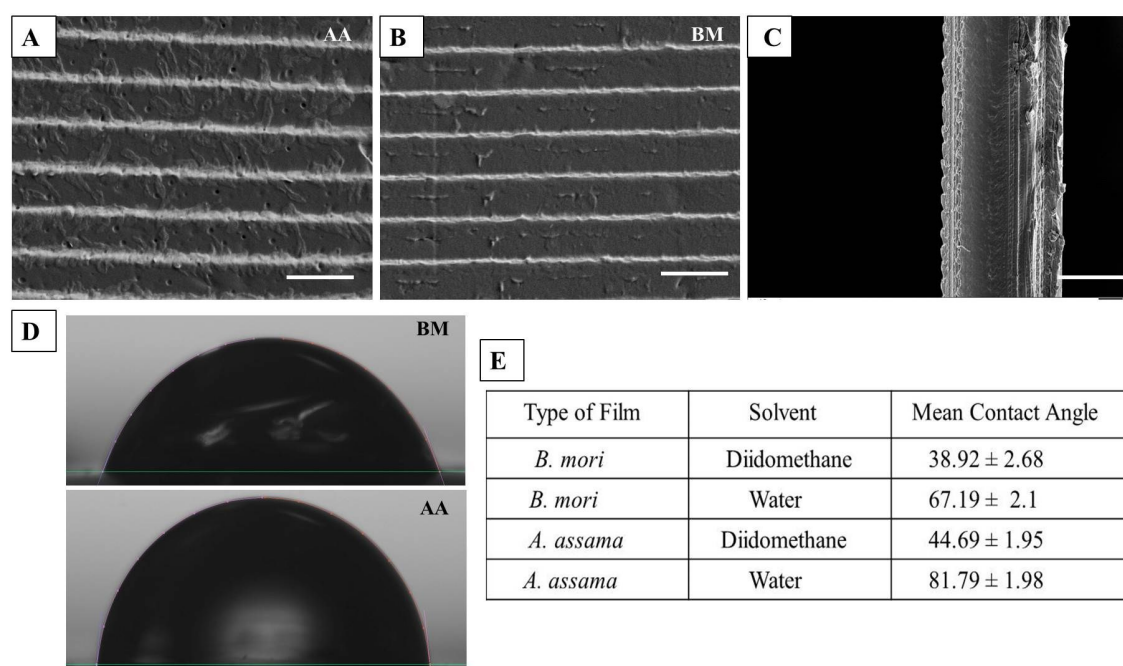


Figure S1. FESEM analysis of water annealed patterned silk films displaying (A, B) surface topography (Scale bar-2μm) and (C) film thickness (Scale bar-10 μm). (D-E) Contact angle measurements on silk films using both polar and non-polar solvents.

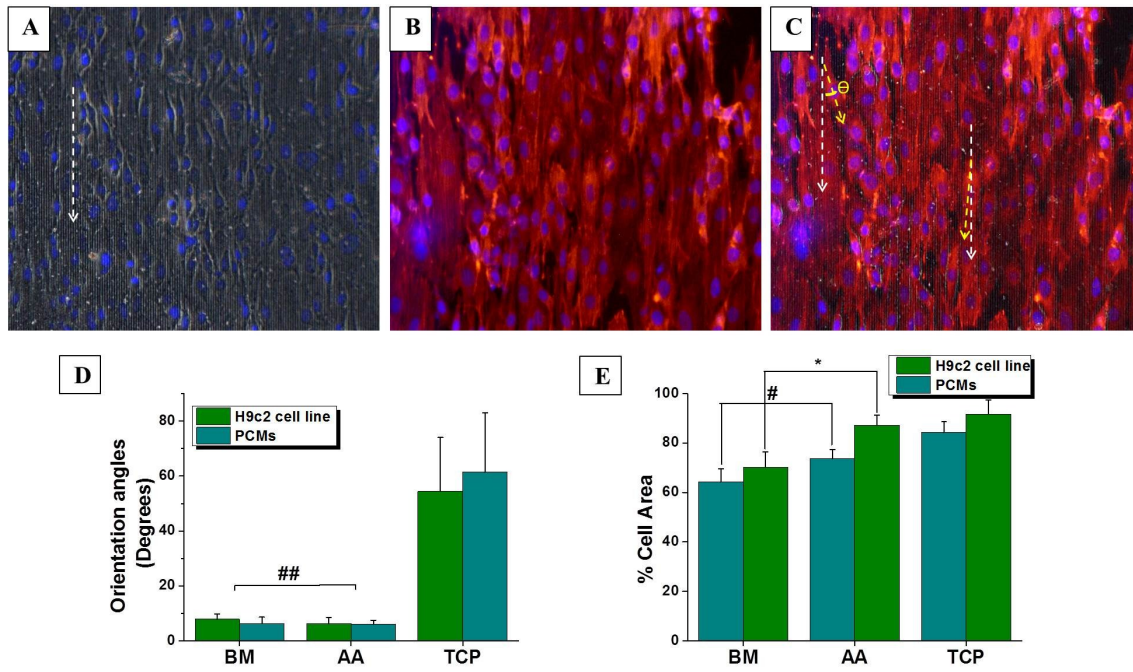


Figure S2. Cardiomyocytes growing on patterned silk films depicted using (A) phase contrast image (B) rhodamine phalloidin image and (C) merged phase contrast-rhodamine stained images (Scale bar-200 μ m). Analysis of (D) cell orientation and (E) cell area on patterned silk films. Statistical significance (## $p \leq 0.01$, # $p \leq 0.05$ and * $p \leq 0.05$).

Table S1. Sequence of primers used for Real Time PCR

Gene	Sequence	Accession No.
Rat GAPDH	F-5'-ATGCTGGTGCTGAGTATGTC-3' R-5'-AGTTGTCATATTTCTCGTGG-3'	NM_017008.4
Rat Connexin 43	F-5'-AGGAGTTCCACCAACTTTGGC-3' R-5-TGGAGTAGGCTTGGACCTTGTC-3'	X06656.1
Rat Myosin heavy chain α	F-5'-CTGCTGGAGAGGTTATTCCTCG-3' R-5-GGAAGAGTGAGCGGCGCATCAAGG-3'	XM_017599641.1
Rat Cardiac Troponin I	F-5'- GATCTCGCCCCTTATCTCAGTGTCCTCA-3' R-5-GATCTGAGGACACTGAGATAAGGGGCGA-3'	U77354.1
Rat ANF	F-5'-GCCCTGAGCGAGCAGACCGA -3' R-5'- CGGAAGCTGTTGCAGCCTA-3'	X00665.1