Supplementary Information

Pre-seeding of Mesenchymal Stem Cells Increases Integration of iPSC-derived CM Sheet

into Cardiac Matrix

Pawan KC, ¹ Mickey Shah, ^{1,2} Rubia Shaik, ¹ Yi Hong, ³ Ge Zhang ^{1, *}

¹ Department of Biomedical Engineering, The University of Akron, Akron, OH 44325

² Department of Integrated Bioscience, The University of Akron, Akron, OH 44325

³ Department of Bioengineering, University of Texas at Arlington, Arlington, TX 76019

*Correspondence should be addressed to ge10@uakron,edu

This document contains the following additional information:

Table S1. List of human growth factors detected by antibody array C1 (RayBiotech)

Abbreviation	Full protein name
VEGF-A	Vascular endothelial growth factor-A
VEGFR2	Vascular endothelial growth factor receptor 2
VEGFR3	Vascular endothelial growth factor receptor 3
VEGF-D	Vascular endothelial growth factor-D
TGF α	Transforming growth factor- α
TGF β1	Transforming growth factor-β1
TGF β2	Transforming growth factor- $\beta 2$
TGF β3	Transforming growth factor- β 3
bFGF	Basic fibroblast growth factor
FGF-4	Fibroblast growth factor 4
FGF-6	Fibroblast growth factor 6
FGF-7 (KGF)	Fibroblast growth factor 7
PDGF Ra	Platelet-derived growth factor receptor α
PDGF-AA	Platelet-derived growth factor-AA
PDGF-BB	Platelet-derived growth factor-BB
PIGF	Placental growth factor
GCSF	Granulocyte colony-stimulating factor
GDNF	Glial cell line-derived neurotrophic factor
GM-CSF	Granulocyte-macrophage colony-stimulating factor
HB-EGF	Heparin-binding EGF-like growth factor
IGFBP-1	Insulin-like growth factor-binding protein 1
IGFBP-3	Insulin-like growth factor-binding protein 3
IGFBP-4	Insulin-like growth factor-binding protein 4
IGFBP-6	Insulin-like growth factor-binding protein 6
IGF-1	Insulin-like growth factor I
IGF-1 R	Insulin-like growth factor 1 receptor
IGF-2	Insulin-like growth factor II
M-CSF	Macrophage colony-stimulating factor 1
M-CSF R	Macrophage colony-stimulating factor 1 receptor
NT-3	Neurotrophin-3
NT-4	Neurotrophin-4
AR	Amphiregulin
β-NGF	Beta nerve growth factor
SCF	Stem cell factor (KIT Ligand)
SCF R (CD117)	Stem cell factor receptor
EGFR	Epidermal growth factor receptor
EGF	Epidermal growth factor
HGF	Hepatocyte growth factor
IGFBP-2	Insulin-like growth factor-binding protein 2
PDGF Rβ	Platelet-derived growth factor receptor β
PDGF-AB	Platelet-derived growth factor-AB

Table S1. List of human growth factors detected by antibody array C1 (RayBiotech)