

SUPPLEMENTARY INFORMATION

Blended Nanostructured Degradable Mesh with Endometrial Mesenchymal Stem Cells Promotes Tissue Integration and Anti-Inflammatory Response *in Vivo* for Pelvic Floor Application

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Supporting Figures



Figure S1: Electrospun nanofiber mesh that appear like tissue paper

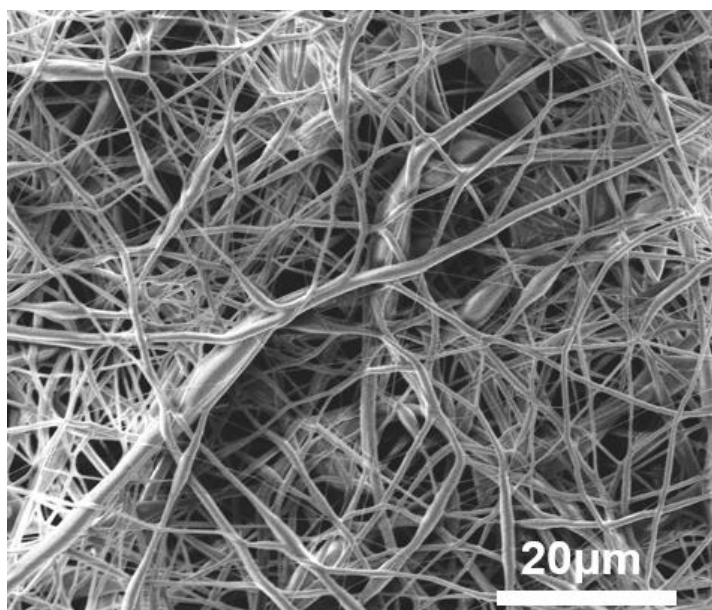


Figure S2: Scanning electron micrograph of beaded PLACL nanofiber mesh

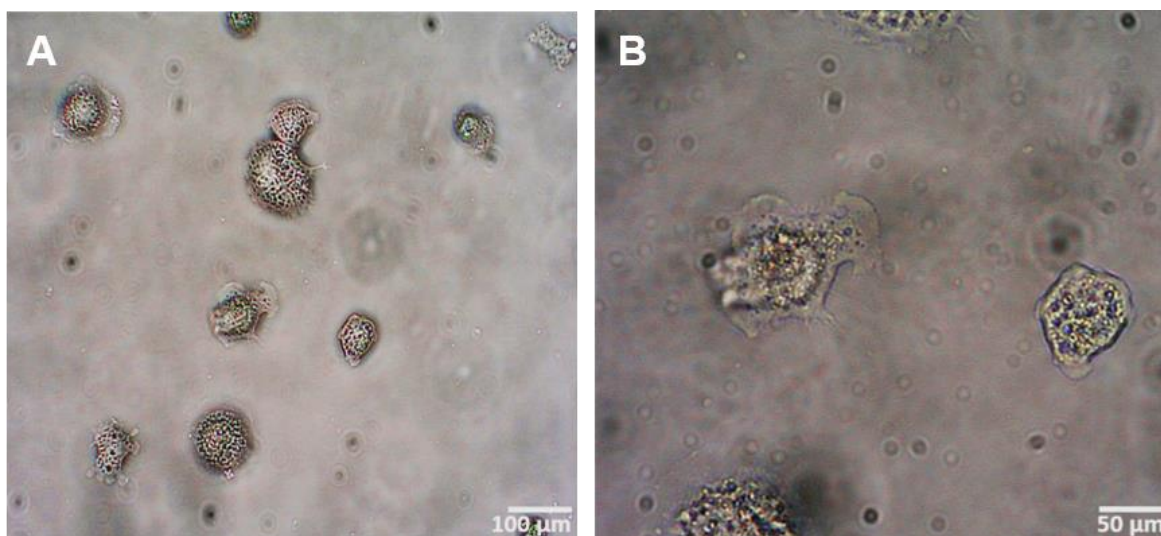


Figure S3: Bright field images of eMSC prior to seeding on nanofibers. Images at (A) 20x and (B) 40X show that eMSC diameter may be smaller than some top layer pores of PLACL+G in Fig 4C that leads to cellular infiltration soon after seeding

In vitro 3D Imaging of eMSC Penetration on PLACL+G

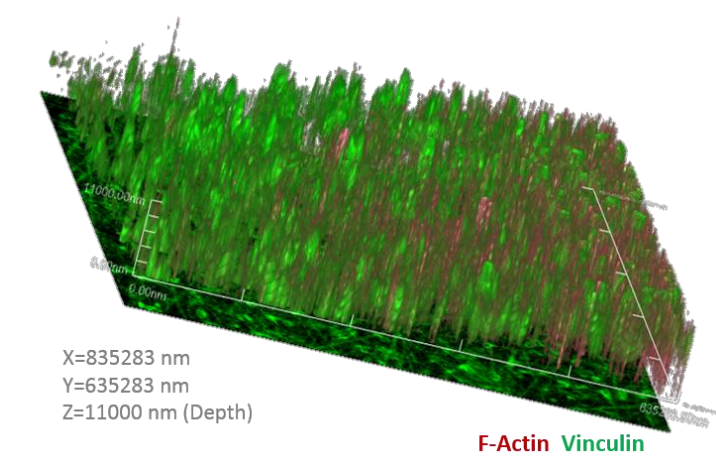


Figure S4: Depth Measurement of eMSCs penetrating PLACL+G at 14 days showing numerous cells (red: F-Actin and green: Vinculin) have penetrated the NF mesh

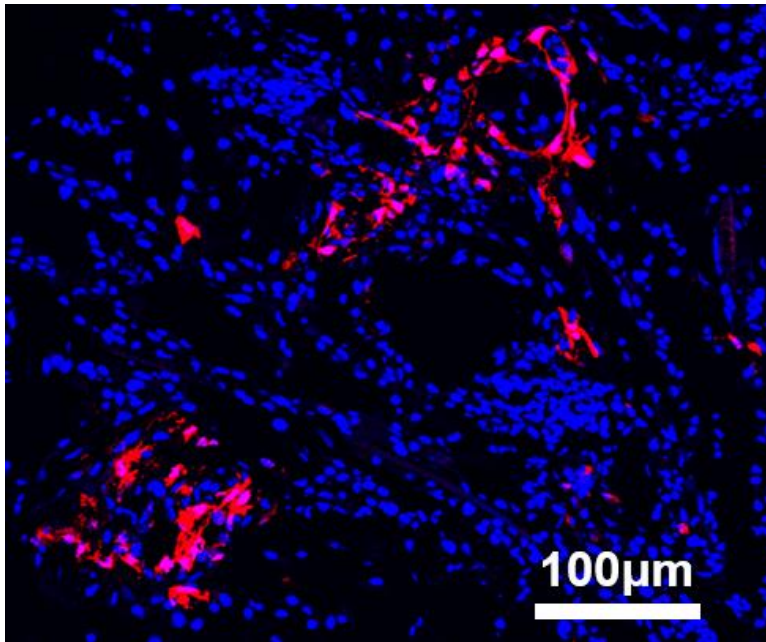


Figure S5: Fluorescence of m-Cherry eMSCs at 1 week detected in host tissue further away from implantation site of PLACL+G.

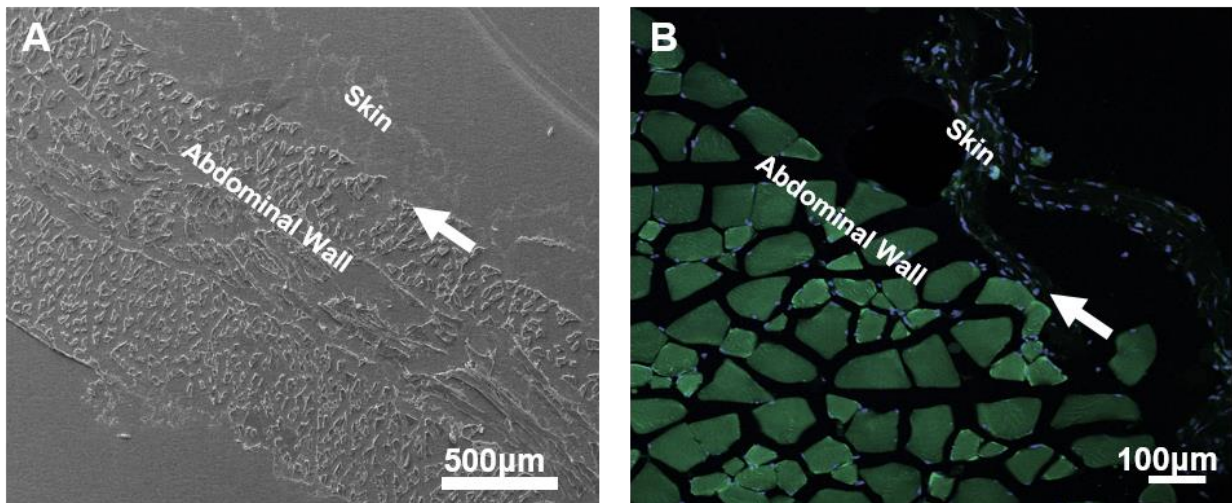


Figure S6: Sham control show loosely packed skin abdominal wall. Mesh was inserted at between these tissues indicated by white arrow

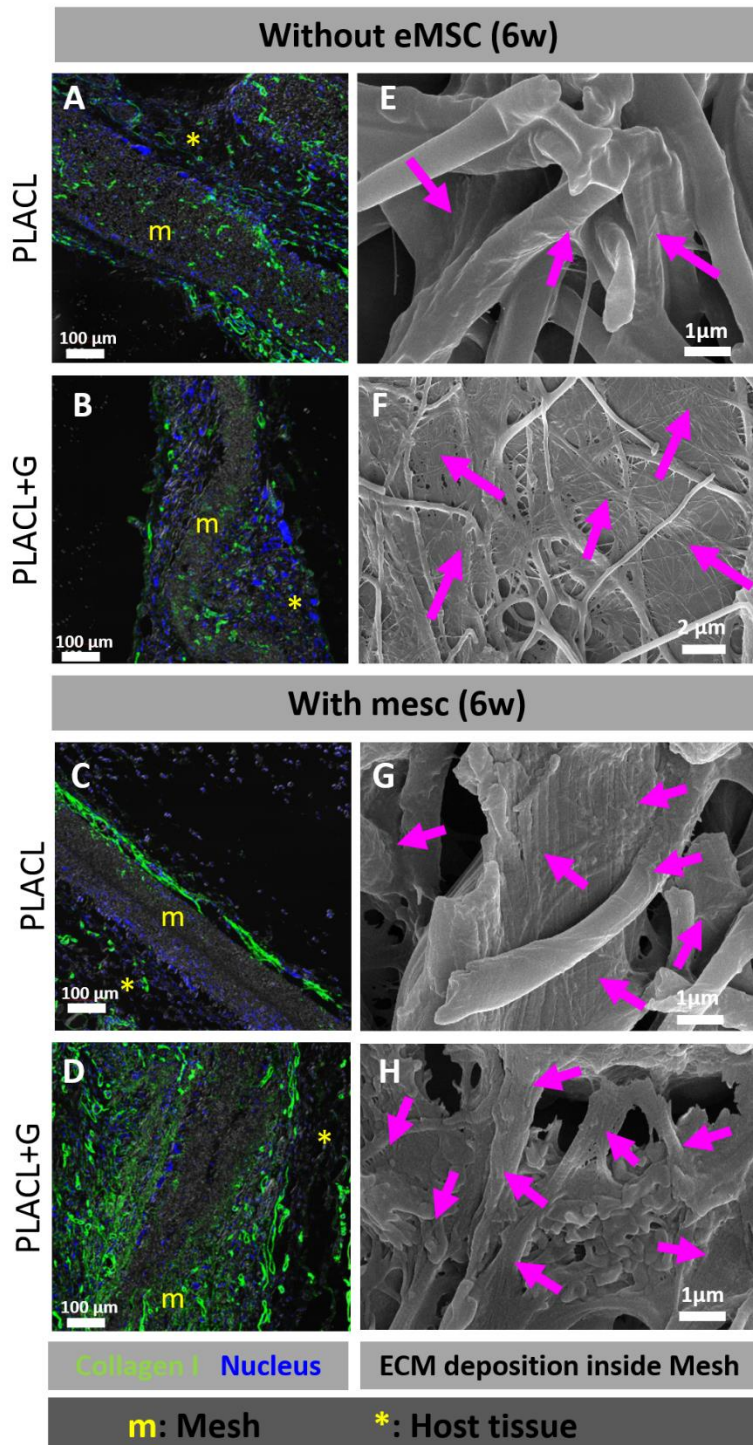


Figure S7: Collagen Deposition and ECM formation on nanofiber mesh-eMSC constructs *in vivo* at 6 weeks. (A-D) immunofluorescence showing Collagen I (green) in and around meshes (E-H) SEM micrographs detailing Collagen structures in the deposited matrix (pink arrows) on nanofibers inside meshes.

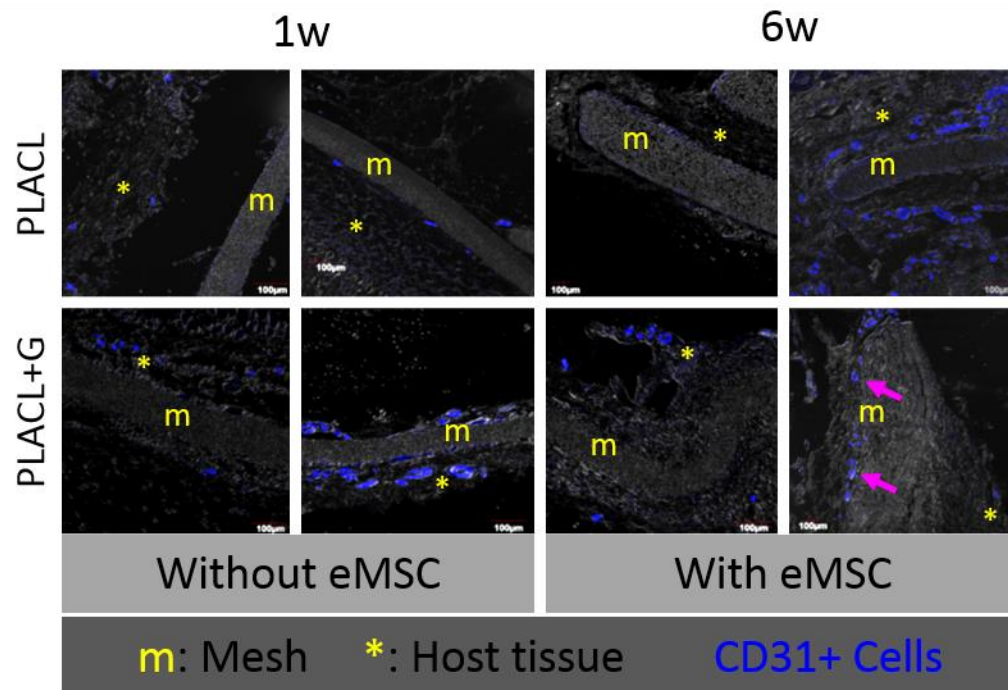


Figure S8: Neovascularization of nanofiber mesh-eMSC constructs. Immunofluorescence of CD31⁺ endothelial cells (blue) in vivo in and around implanted meshes at 1 week and 6 weeks. Only PLACL+G+eMSC at 6 weeks shows CD31⁺ cells inside the mesh area (pink arrow).