

# Polycaprolactone Thin-Film Micro- And Nano- Porous Cell-Encapsulation Devices

*AUTHOR NAMES: Crystal E. Nyitray<sup>1</sup>, Ryan Chang<sup>2</sup>, Gaetano Faleo<sup>4</sup>, Kevin D. Lance<sup>2</sup>, Daniel A. Bernards<sup>3</sup>, Qizhi Tang<sup>4</sup>, Tejal A. Desai<sup>3\*</sup>*

*\*Corresponding Author*

## AUTHOR ADDRESS:

<sup>1</sup> Program in Chemistry and Chemical Biology, University of California, San Francisco, 1700 4<sup>th</sup> St. Byers Hall, Box 2520. San Francisco, CA 94158.

<sup>2</sup> UCB/ UCSF Joint Program in Bioengineering, University of California, San Francisco, 1700 4<sup>th</sup> St. Byers Hall, Box 2520. San Francisco, CA 94158.

<sup>3</sup> Department of Bioengineering and Therapeutic Sciences, University of California, San Francisco, 1700 4<sup>th</sup> St. Byers Hall, Box 2520. San Francisco, CA 94158.

<sup>4</sup> Department of Surgery, University of California, San Francisco, 513 Parnassus Ave. HSE520 Box 0780, San Francisco, CA 94143.

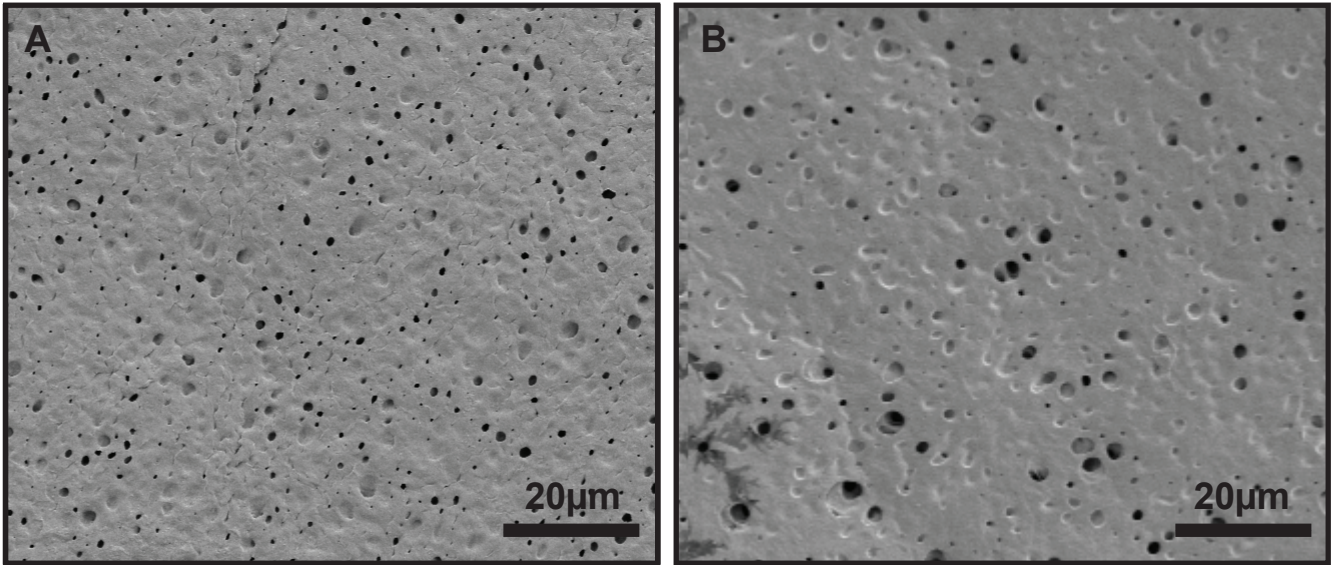


Figure S1. Device exterior SEM. A) Device exterior prior to implantation. B) Device exterior after 2 months in vivo.

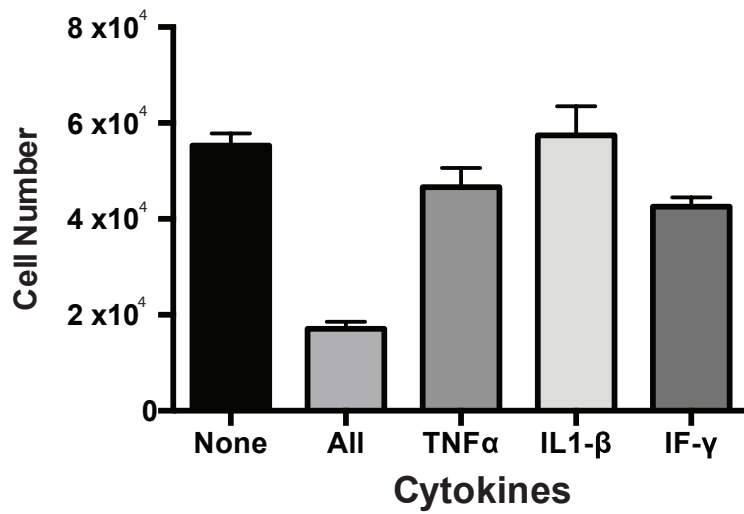


Figure S2. Cytokines affect cell viability. Cell number was quantified by a cyquant assay (none) no cytokine control, (all) a combination of cytokines with TNF alpha, IL1 beta and IF gamma, and (TNF $\alpha$ ), (IL1 $\beta$ ) and (IF $\gamma$ ) individually.

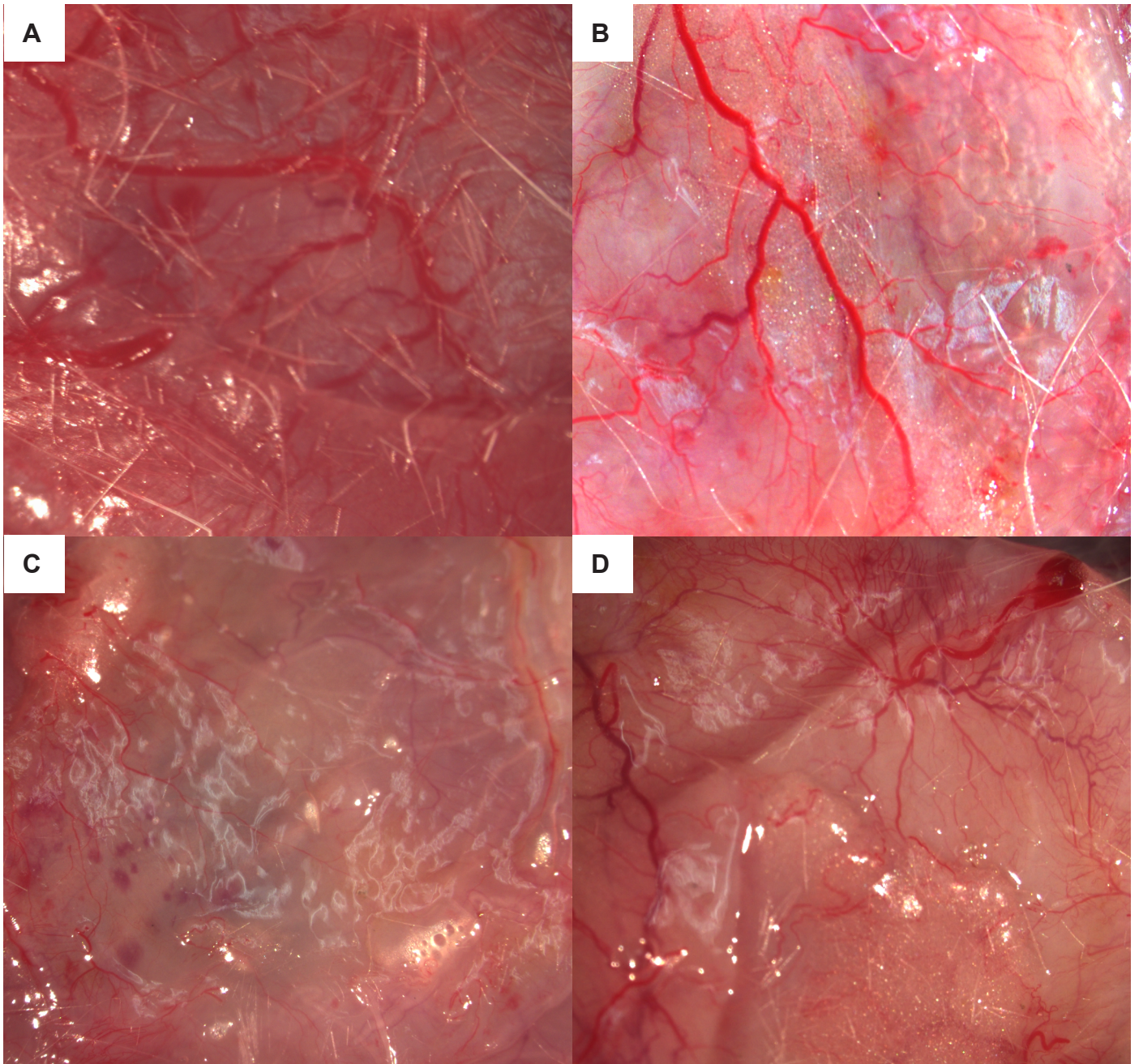


Figure S3. Cell-free device controls for device vascularization. Bright field images of devices implanted after 50 days A) Porous-PCL, B) Non-porous PCL, C) PLGA, and D) PVDF.



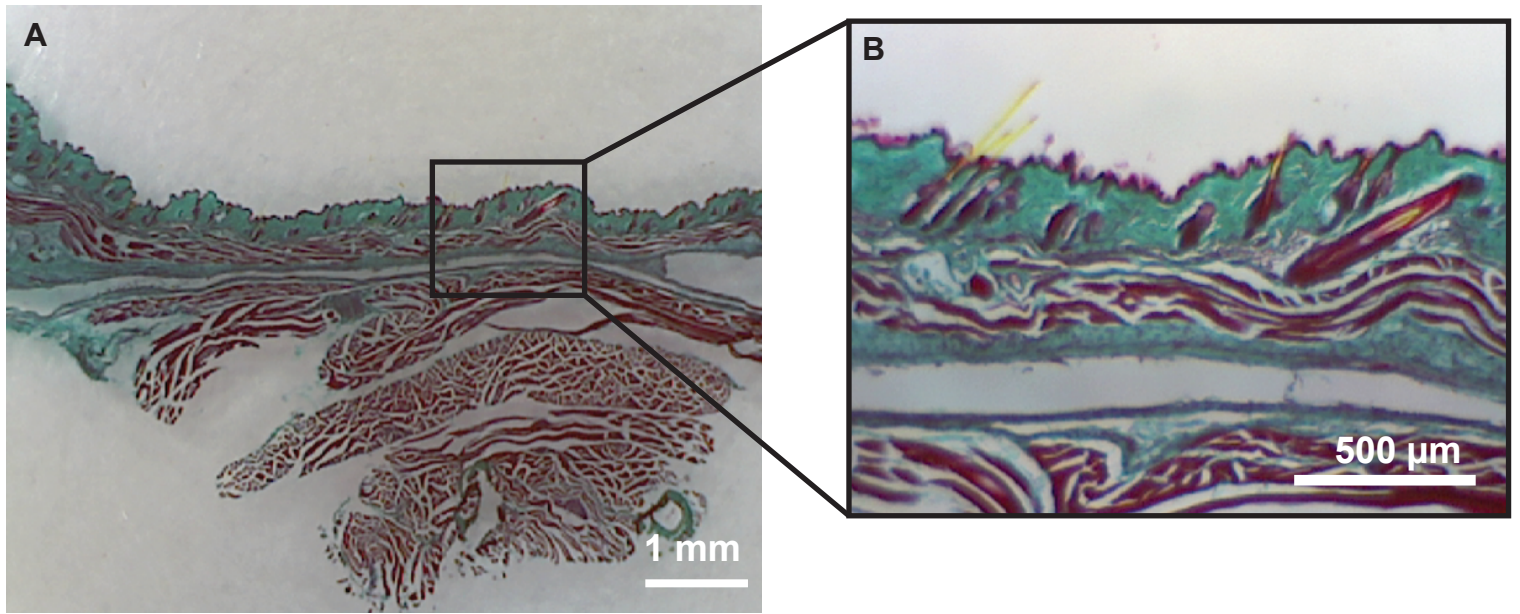


Figure S4. Histology of devices. A) Cross section of a device after 2 months in vivo, with Masson trichrome staining. B) Magnification of device cross-section, demonstrating minimal fibrotic response.