# Tissue-Equivalent ECM Characterization Using SEM

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*NNIN Facility utilized: Characterization Facility*

- DESCRIPTION OF WORK
  - Purpose: To identify spatial and temporal changes to the ECM in cell-seeded fibrin constructs ("tissue-equivalents") during remodeling.
  - Methods: Conventional SEM with and without immunogold labeling to identify specific proteins. Cryo-SEM for optimal preservation.
  - Results: Significant changes in the ECM occur over a 4-week period, which requires further refinement of our preparation techniques.

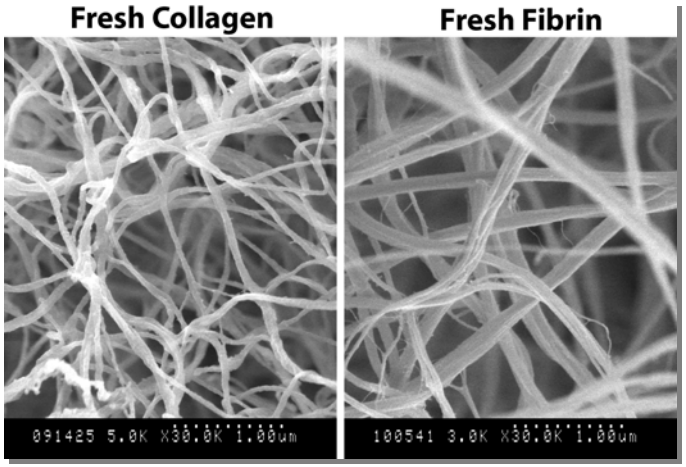


**Figure 1.** Conventional SEM Images of Freshly Formed Acellular Collagen and Fibrin gels.

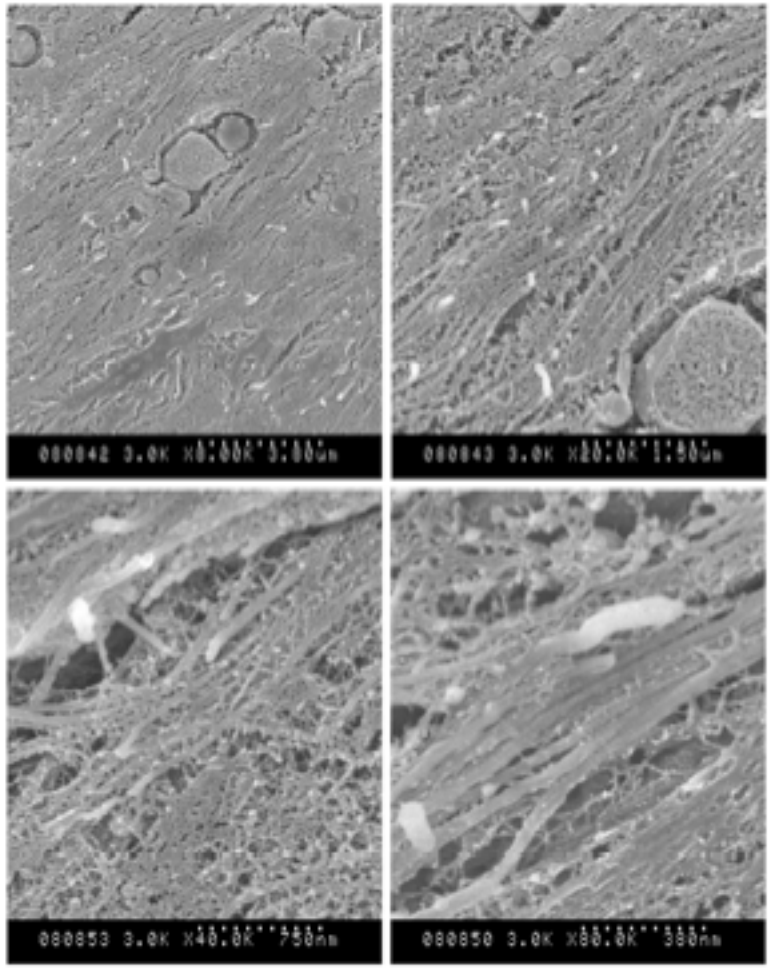

**Figure 2.** Cyro-SEM Images of a Region of Increasing Magnification in a 4-Week Cell-Remodeled Fibrin Construct Formed as a Disk Adherent to a Surface.