

Abstract Submitted  
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**Collective Cell Mechanics in 3D Scaffolds** JOLIE BREAUX, STEVEN ZEHNDER, University of Florida, LUCAS OSTERBUR, JENNIFER LEWIS, University of Illinois, Urbana-Champaign, THOMAS ANGELINI, University of Florida — Mechanical cell behavior is influential in tissue health and dynamic cellular processes such as wound healing, and angiogenesis. Traction force microscopy (TFM) is often used to measure cell generated forces while mechanical testing methods such as atomic force microscopy (AFM) are employed to determine materials properties of cells. Extant cell mechanics methods including TFM and AFM are optimal for cells cultured on flat, 2D surfaces. However, the development of new cell mechanics techniques in 3D systems is essential to elucidate the behavior of tissues. In this presentation we introduce results from live-cell time-lapse measurements of mechanical cell behavior in highly ordered 3-D scaffolds. Preliminary data will be presented.

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