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Micropost microenvironments for studying luminal-basal lineage commitment of breast cancer cells ANAND KESAVARAJU, BO QING, ERIC JABART, Department of Bioengineering, Univeristy of California, Berkeley, MARK LABARGE, Lawrence Berkeley National Laboratory, LYDIA SOHN, Department of Mechanical Engineering, Univeristy of California, Berkeley — MCF-7 breast cancer cells were plated onto polydimethylsiloxane (PDMS) microposts in order to examine the effects of the microenvironment on cell lineage. Different stiffnesses and sizes of the microposts are postulated to impact cell surface marker expression levels. We will provide preliminary results analyzing CD271 and focal adhesion markers such as vinculin. 3D shear flow will also be applied to the microposts to study how external mechanical stimuli affect cancer cells within their microenvironment.

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