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Collective cell migration in a periodic potential THOMAS ANGELINI, JOLIE BREAUX, STEVEN ZEHNDER, University of Florida — The strength of cell-substrate adhesion can be modulated by the elasticity of substrate material. Thus, a cell culture surface with periodically varying elasticity is analogous to a periodic potential for cell adhesion. Rich collective dynamics emerge in systems of adatoms on crystal lattice surfaces due to the mismatch between the preferred spacing of adatoms and the periodic potential associated with the crystal lattice. Here we explore a biological analog of atoms in a periodic potential; we study the collective dynamics of cells on a substrate with periodically patterned elasticity. Preliminary results will be presented.

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