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Force transmission through intercellular fluid transfer STEVEN ZEHNDER, JOLIE BREAUX, ALISON DUNN, GREGORY SAWYER, THOMAS ANGELINI, University of Florida — Cell force generation and transmission play a vital role in controlling cell-to-cell interactions and cell locomotion. Contraction of the cell's cytoskeletal network generates forces that can be transmitted directly to other cells by cell-cell adherens junctions or through a substrate by traction forces. Within monolayers, cytosolic fluid is transferred between cells through gap junctions. The coupling between intercellular fluid movement and contraction can give rise to a different type of cell-cell force transmission. Here we present preliminary results investigating the role of intercellular force transmission through fluid motion across gap junctions.

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