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Wave transmission through cell-cell coupling CHENLU WANG, MEGHAN DRISCOLL, SAGAR CHOWDHURY, S.K. GUPTA, WOLFGANG LOSERT, University of Maryland-College Park — We previously found that waves of high boundary curvature travel from the front to the back of individual *D. discoideum* cells. We investigated the behavior of curvature waves in small groups of adherent cells, in particular, we investigated the transmission of the waves through cell-cell coupling. We analyzed the motion of individual cells in short streams of varying length, which are cells that follow one other. Furthermore, we developed a technique that uses holographic optical tweezers to grip cells indirectly and push them into one another, thereby forming artificial cell-cell contacts. Using that technique, we observed the affect of waves in coupled cells. We also compared the shape dynamics of groups of cells to the shape dynamics of cells within those groups. We extended these methods to suspended cells, which exhibit different wave dynamics.

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