

Abstract Submitted  
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**The mechanics of cell crawling over a flat surface** BALDOMERO ALONSO-LATORRE, JAVIER RODRIGUEZ-RODRIGUEZ, ALBERTO ALISEDA, RUDOLF MEILI, RICHARD FIRTEL, JUAN LASHERAS, UC San Diego — The chemotaxis of different strains of the amoeba *Dictyostelium Dicoideum* when exposed to a wide range of concentrations and gradients of chemoattractant has been studied experimentally. First, the time evolution of the velocity as well as the shape of the cell have been measured from microscopy images for a large number of individuals. Secondly, the force that the amoebas exert over the substrate in order to propel themselves has also been measured. Some insights into the physical mechanism by which cells crawl over the surface are obtained by comparing the time evolution of those magnitudes for the different strains under study.

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