

Abstract Submitted
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Intracellular dynamics during directional sensing of chemotactic cells GABRIEL AMSELEM, EBERHARD BODENSCHATZ, CARSTEN BETA, MPI for Dynamics and Self-Organization, Goettingen — We use an experimental approach based on the photo-chemical release of signaling molecules in microfluidic environments to expose chemotactic cells to well controlled chemoattractant stimuli. We apply this technique to study intracellular translocation of fluorescently labeled PH-domain proteins in the social ameba *Dictyostelium discoideum*. Single chemotactic *Dictyostelium* cells are exposed to localized, well defined gradients in the chemoattractant cAMP and their translocation response is quantified as a function of the external gradient.

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