

Abstract Submitted
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Variation in the excitability of developed *D. discoideum* cells as a function of agar concentration in the substrate¹ NORIKO OIKAWA, MPI for Dynamics and Self-Organization, Goettingen, ALBERT BAE, LASSP, Cornell University, Ithaca and MPI for Dynamics and Self-Organization, Goettingen, GABRIEL AMSELEM, MPI for Dynamics and Self-Organization, Goettingen, EBERHARD BODENSCHATZ, LASSP, Cornell University, Ithaca and MPI for Dynamics and Self-Organization, Goettingen — In the absence of nutrients, *Dictyostelium discoideum* cells enter a developmental cycle—they signal each other, aggregate, and ultimately form fruiting bodies. During the signaling stage, the cells relay waves of cyclic adenosine 3',5' monophosphate (cAMP). We observed a transition from spiral to circular patterns in the signaling wave, depending on the agar concentration of the substrate. In this talk we will present the changes in the times for the onset of signaling and synchronization versus agar concentration, as measured by spectral entropy. We also will discuss the origin of these effects.

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