Diffusion vs. locomotion ERIC LAUGA, UCSD — In this talk we consider small organisms self-propelling in viscous fluids. We address theoretically and numerically the interplay between fluid-based locomotion and Brownian motion. Interesting dynamics occurs on time scales close to, or larger than, the inverse rotational diffusion constant for the organism, where the cells transition from swimming to diffusing. We derive results valid for all types of swimmers, including a new diffusion constant.

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