INTRACELLULAR MOTION OF SILICON MICRORODS

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Phagocytosis and intracellular transport of phagocytosed objects is an essential mechanism for the biological function of cells. In human pathogenic *Acanthamoeba castellanii*, intracellular motion is important for their pathogenicity, although their cytoplasm is supercrowded by dense packing of vesicles and granules. We have recently shown using high-speed live cell imaging in combination with single-particle tracking analysis, that the superdiffusive intracellular motion in *Acanthamoeba castellanii* is dominated by active transport through molecular motors, cell locomotion, and cytoskeletal elements. In order to investigate how phagocytosed external particles move in the supercrowded intracellular space of *Acanthamoeba castellanii* and how the motion of endogenous particles is changed by the phagocytosed particles, we added silicon microrods to *Acanthamoeba castellanii*. Although the silicon microrods have a length of at least one third of an *Acanthamoeba castellanii* diameter, they were internalized and moved inside the cytoplasm. We will show data of the motion of these particles and the surrounding endogenous particles, in order to investigate the impact of the silicon microrods on *Acanthamoeba castellanii* function.

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