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Research Theme in This Project: Construction of a molecular engine to equip the artificial amoeba adopting natural molecular motors such as myosins and actin cytoskeletons.

Main Research Results: Cytoskeleton and molecular motor are involved in morphogenesis and movement of living cells. We revealed that cytoskeletons, actin, microtubule, and septin, show various types of self-organization in collaboration with associating proteins, molecular motors and lipid bilayer membranes, and thus they can generate various motions needed for cells, such as contraction, elongation or bending. We also found that F-BAR domain proteins or amphiphilic peptides such as melittin induce morphological changes into liposomes via the unique various processes.

Publications:

Current Biology, 19, 140–145 (2009)

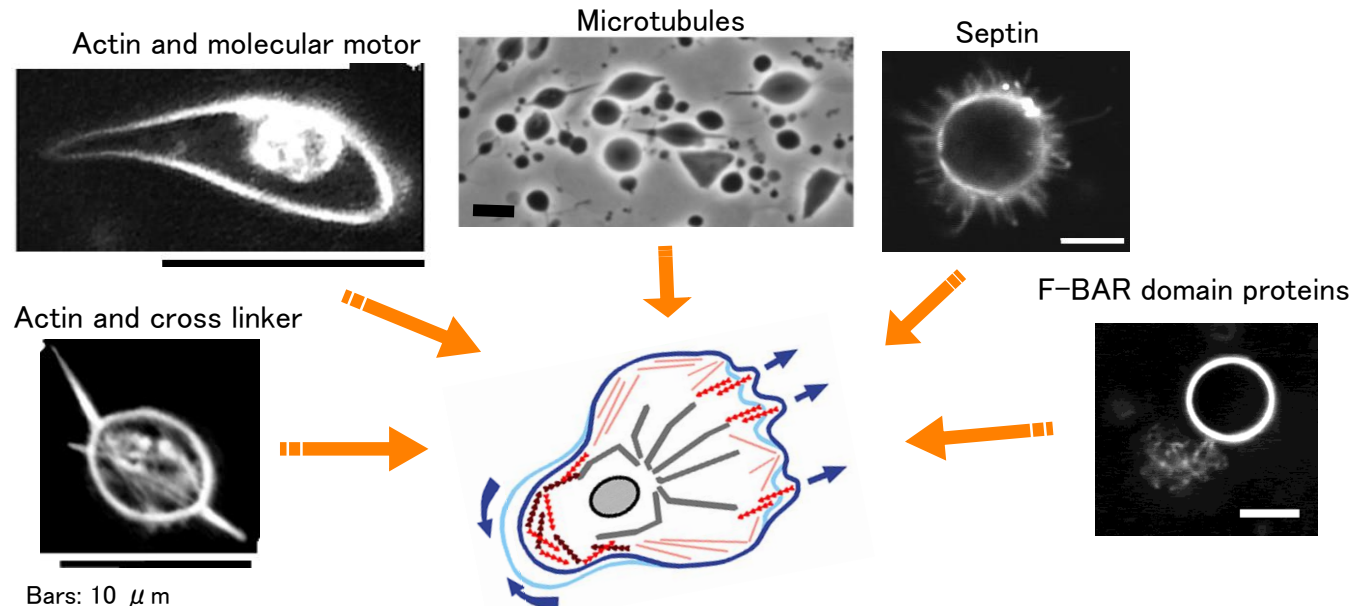
Langmuir, 27, 11528–11535 (2011)

Langmuir, 29, 328–336 (2013)

Toxins, 5, 637–664 (2013)

Origins of Life and Evolution of Biospheres, 44, 325–329 (2014)

Membranes, 5, 22–47 (2015)



Recent Activities (hobbies, etc.): Playing igo game & japanese chess, watching football games