

【Biological Sciences】

Title of Project	Molecular Mechanisms of Protein Sorting in Membrane Traffic and Roles in Higher Plants
Principal Investigator Name	Akihiko Nakano, The University of Tokyo, Graduate School of Science, Professor
Abstract of Research Project	Membrane traffic is a process of protein transport between organelles mediated by small membrane vesicles. Complex sets of machinery sort and convey proteins through multiple rounds of vesicle budding and fusion. Many questions remain to be answered, which will be approached in this project by the combination of genetics, biochemistry (complete cell-free reconstitution) and state-of-the-art imaging. Live cell imaging using our custom-made high-speed confocal microscope will be particularly powerful to solve problems that have been otherwise unable to attack. Elucidation of molecular mechanisms of membrane traffic will then be extended to understanding of their roles in higher plants from the viewpoints of development, physiology, and responses to environments.
Number of Researchers : 8	
Term of Project: 2008-2012	