



Department of Cellular and Molecular Pharmacology,
Graduate School of Medicine, University of Tokyo

GLOBAL COE SEMINAR

演者: 井上 尊生 博士 (Ph.D.)

Assistant Professor, Johns Hopkins University School of
Medicine, Department of Cell Biology, Baltimore, MD

演題: Actin Comets versus Membrane Ruffles:
Distinctive Roles of Phosphoinositides in Actin
Reorganization

日時: 平成22年6月2日(水) 14:00~15:00

場所: 医学部教育研究棟13階 第5セミナー室

Complexity in intracellular signaling networks is often derived from co-opting particular sets of molecules for multiple operations. Understanding how cells achieve such sophisticated processing using a finite set of molecules within a confined space is critical to biology and engineering as well as the emerging field of synthetic biology. Phosphoinositides, a small group of lipids found in various cellular membranes, oversee diverse cellular functions including cell proliferation, differentiation, and cell migration. However, the question of how this limited number of lipids can drive multiple cellular functions and differentially contribute to diseases mediated by aberrant phosphoinositide regulation remains unaddressed. Using a recently developed technique to rapidly manipulate the level of specific phosphoinositides, we aim to elucidate how a limited set of phosphoinositides achieves functional diversity at the molecular level.