

# The 115th iCeMS SEMINAR

CeMI Seminar Series 31

**Sat 25 Aug 2012**

**10:30-12:00**

## **Navigating the cellular landscape with new optical probes, imaging strategies and technical innovation**

Lecturer: **Dr. Jennifer Lippincott-Schwartz**

National Institute of Child Health and Human Development,  
National Institutes of Health

Venue: 2nd floor Seminar Room (#A207)  
iCeMS Main Building (#71), Kyoto University

Emerging visualization technologies are playing an increasingly important role in the study of numerous aspects of cell biology, capturing processes at the level of whole organisms down to single molecules. Photoactivatable fluorescent proteins (PA-FPs) have been particularly fruitful in this regard. They become bright and visible upon being exposed to a pulse of UV light. This allows selected populations of proteins to be pulse-labeled and tracked over time. PA-FPs have further permitted the development of single molecule-based superresolution imaging, which dramatically improves the spatial resolution of light microscopy by over an order of magnitude (~10-20 nm resolution), providing molecule scale information on biological events occurring at variable time scales. Here, Dr. Lippincott-Schwartz will discuss the new fluorescent imaging techniques and the ways they are helping researchers navigate through the cell to unravel long-standing biological questions.

After the seminar, an informal meet-the-speaker reception will take place at the Lounge, next to the seminar room. Please join us for more discussions with Dr. Lippincott-Schwartz.

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**Hosted by:** iCeMS (Institute for Integrated Cell-Material Sciences), Kyoto University  
**Co-hosted by:** Center for Frontier Medicine, Global COE Program, Kyoto University

