
The 42nd iCeMS SEMINAR

Fri 25 Dec 2009
16:00-17:00

Lecturer: **Aya Sato, M.Sc.**
Department of Molecular and Cell Biology
University of California, Berkeley
Life Sciences Division, Lawrence Berkeley National Lab
Howard Hughes Medical Institute

Cytoskeletal Forces Span the Nuclear Envelope to Coordinate Meiotic Chromosome Pairing and Synapsis

Venue: 2nd floor Seminar Room (#A207)
Main Building iCeMS Complex 1, Kyoto University

A mystery of sexual reproduction is how maternal and paternal chromosomes recombine and separate during meiosis to generate haploid gametes. Using genetic and cytological approaches, we are investigating how each chromosome finds and recognizes its unique homologous partner in the nematode *C. elegans*. We provide evidence that special regions on each chromosome, known as "Pairing Centers", establish physical connections across the nuclear envelope to cytoplasmic microtubules and dynein to facilitate homolog pairing. Our results also suggest that generation of force is used to assess homology and to license subsequent chromosome interactions, including synapsis, during meiotic prophase.

Contact: iCeMS Carlton Lab at carlton-g@icems.kyoto-u.ac.jp
Hosted by: iCeMS (Institute for Integrated Cell-Material Sciences), Kyoto University

