



## FBS Seminar

January 19 (Thu), 2017  
13:30 - 14:30

2F Seminar room, BioSystems Building

**Daniele Fachinetti**

**Molecular Mechanisms of Chromosome Dynamics,  
Institut Curie, Paris**

**“The molecular pathways that specify centromeres and contribute to their function and integrity”**

Faithful chromosome segregation during cell division depends on the centromere, a complex DNA/protein structure that links chromosomes to the spindle microtubules. From fission yeast to human, centromeres are established on a series of repetitive DNA sequences and on a specialized centromeric chromatin. This chromatin is enriched with the histone H3 variant, identified in human and named CENP-A, that was demonstrated to be the epigenetic mark that maintains centromere identity and function indefinitely. However, the presence in the majority of eukaryotes of specific DNA sequences suggests that they might play a fundamental role in centromere biology. Using genome editing and inducible protein degradation, we recently demonstrated a reciprocal interdependency of CENP-A chromatin and the underlying repetitive centromere DNA sequences bound by CENP-B in the maintenance of human chromosome segregation. We are currently investigating how this interconnection between genetic and epigenetic controls centromere formation, function and integrity to prevent the occurrence of genome instability.

Chairperson: Tatsuo Fukagawa

If you want to speak Dr. Fachinetti in person, please let me know. I will arrange the Interview with him. (He is available from morning until 15:30 on the day.)

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セミナー終了前、後に、Fachinetti博士と個別のdiscussionを行います。面談希望者は、深川までご連絡ください (この日の朝から 15:30 くらいまで可能です)。