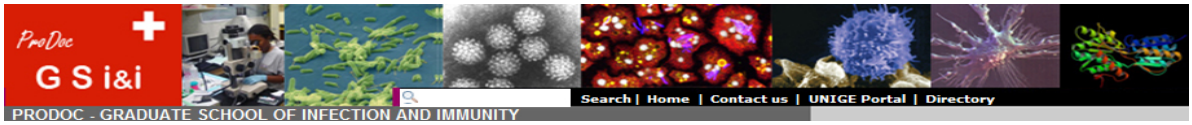

Graduate Schools
Infection Immunity and Cancer, UniGe & UniL: CUS
Biology & Medicine, CMU

Seminar in Microbiology

Monday, January 12, 2015

Salle de séminaire 7172, CMU

11:30 – 12:30

Frédéric Boccard

CGM, CNRS
Gif sur Yvette, France

Conformation of the bacterial chromosome: the situation in *E. coli* and in *Pseudomonas* species

Circular bacterial chromosomes are highly compacted and show a defined orientation within the cell. This orientation can be transversal for *E. coli* or longitudinal for *P. aeruginosa*. This orientation is important to allow efficient chromosome segregation and this arrangement is highly complex, particularly in bacteria that have a doubling time shorter than the replication time, resulting in chromosomes with multiple origins and replication forks. The laboratory of Frédéric Boccard uses fluorescence microscopy and genetic tools to analyse the orientation, dynamics, localisation, and the faithful segregation of chromosomes in *P. aeruginosa* and *E. coli*.

References:

Vallet-Gely I, Boccard F. Chromosomal organization and segregation in Pseudomonas aeruginosa. PLoS Genet. 2013 May;9(5):e1003492.
Lesterlin et al., Sister chromatid interactions in bacteria revealed by a site-specific recombination assay. EMBO J. 2012 Aug 15;31(16):3468-79.
Espéli et al., A MatP-divisome interaction coordinates chromosome segregation with cell division in E. coli. EMBO J. 2012 May 11;31(14):3198-211
Thiel et al., Long-range chromosome organization in E. coli: a site-specific system isolates the Ter macrodomain. PLoS Genet. 2012;8(4):e1002672.

Contact: P. Linder
Sandwiches will be offered after the seminar