



# CHAIRE DE MICROBIOLOGIE ET MALADIES INFECTIEUSES

Année académique 2015-2016

Philippe SANSONETTI, Professeur

*Scientific Committee: Karina Xavier, B Brett Finlay, Jean-Marc Ghigo,  
Philippe Sansonetti*

## Communication among complex microbial populations and their host

International Symposium in English

Monday 30<sup>th</sup> and Tuesday 31<sup>st</sup> May 2016

Amphithéâtre Marguerite de Navarre

### Monday 30<sup>th</sup> May 2016

**8h45** Introduction

Philippe Sansonetti, *Collège de France, Institut Pasteur, France,*  
Brett Finlay, *PWIAS, UBC, Canada*

**Session 1 : Common features among complex microbial communities**

**09h00** Keynote Lecture: Cooperation and competition in bacterial communities: from model systems to the microbiome  
Kevin R Foster, University of Oxford

**09h45** Mucosal immune system and microbiome diversity  
Maria Rescigno, IFOM-IEO, Milan

**10h15** Coffee Break

**10h45** Metabolic adaptation to the community lifestyle  
Jean-Marc Ghigo, Institut Pasteur, Paris

**11h15** Diurnal oscillation and control of microbiota diversity and metabolic homeostasis  
Eran Elinav, Weizmann Institute, Rehovot

**11h45** The plant microbiome, (plant) nutrition and disease  
Cara Haney, University of British Columbia, Vancouver

**12h30** Lunch

**Session 2 : Bacteriophages, bacteriocins, T6SS, antibiotics: do arm race and balance of fear warrant peaceful coexistence ?**

**14h00** Keynote Lecture: What the regulatory network tells us about type VI secretion in *Vibrio cholerae*  
Melanie Blokesch, EPFL, Lausanne

**14h45** Assembly and structure of the Type VI secretion apparatus  
Eric Cascales, CNRS, Marseille

**15h15** Antibiotic resistance in Staphylococcal biofilms via intracolonial competition  
Daniel Lopez, University of Würzburg

**15h45** Coffee Break

**16h15** Phage-mediated dispersal of biofilms and quorum sensing  
Johannes Huebner, Ludwigs-Maximilian University, Munich

**16h45** Virulent bacteriophages as modulators of microbial communities  
Laurent Debarbieux, Institut Pasteur, Paris

**17h15** Antibiotic-Induced Bacteriocin Expression  
Jan-Willem Veening, University of Groningen

### Tuesday 31<sup>st</sup> May 2016

**Session 3 : Metabolic competition, metabolites and autoinducers as drivers of composition, stability and resilience of microbial communities**

**09h00** Keynote Lecture: On the characteristics and utility of bacterial nanotubes

Sigal Ben-Yehuda, Hebrew University, Jerusalem

**09h45** AI-2 and homeostasis of gut microbiota

Karina B Xavier, Gulbenkian Institute, Oïeras

**10h15** Coffee Break

**10h45** Cell biology of bacterial sensory modules  
Emilia Mauriello, CNRS, Marseille

**11h15** From strings of nucleotides to collective behavior  
Lessons from *Vibrio cholerae*

Kai Papenfort, Ludwig-Maximilians-University, Munich

**11h45** The biogeography of infection: how microcolonies spatially organize in vivo

Marvin Whiteley, University of Texas, Austin

**12h30** Lunch

**Session 4 : Barrier effect of the microbiome, mechanisms of microbiome control or stimulation of pathogens at mucosal surfaces**

**14h00** Keynote Lecture: Ecology of the gut microbiome

Joao B Xavier, Memorial Sloan Kettering Cancer Center, New York

**14h45** Battle of the bugs: Interactions between the gut microbiota and attaching and effacing pathogens

Stefanie Vogt, University of British Columbia, Vancouver

**15h15** The pyromaniac inside you: Salmonella metabolism in the host gut

Andreas Baumler, University of California, Davis

**15h45** Coffee Break

**16h15** Microbiota-mediated pathogen resistance

Bärbel Stecher, Max von Pettenkofer-Institute, Munich

**16h45** Salmonella single-cell dynamics in complex host tissues  
Dirk Bumann, Biozentrum, University of Basel

**17h15** Central role of *Shigella sonnei* T6SS in niche occupancy, fitness and invasion

Mark Anderson, Institut Pasteur, Paris

**17h45** Conclusion

Philippe J. Sansonetti

