

Bacterial Genetic : from Evolution to Engineering

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Location : Room 1505 1st floor, Institut Cochin, Bâtiment faculté de Médecine 24 rue du faubourg Saint Jacques 75014 Paris

The goal of the module is to give a broad view of the field of microbial genetics today, through talks of scientists working on diverse subjects. The idea is to focus on novel and recent themes of the field. Days are organized to get the big picture through an introductory class summarizing the main concepts on a specific topic and then dive into recent work through researchers presenting in depth their work. The main themes include phages, evolution, synthetic biology, single cell heterogeneity and ancient DNA. Researchers both from academia and the private sector will give seminars, allowing students to also discover research outside the academic world. Students will be evaluated on providing a written synthesis of the week (similar to what could be asked by a PI after a student attends a conference) that will be written on the last afternoon.

Monday October 6th:

9h00-12h Matthieu Haudiquet - General concept on bacterial Evolution
13h30-15h Hugo Barreto - bacterial evolution in mice gut
15h30-17h Ernest Mordret - NLP models for genomics

Tuesday October 7th:

9h00-10h30 Paul Lubrano - Applied Omics
10h30-12h Alba Herrero - microscopy as a new technology
13h-14h30 André Brigy - Evolution of antibiotic resistance
14h45-17h30 Helena Shomar - natural product

Wednesday October 8th:

9h30-12h30 Natalie Bechon - The immune system of bacteria
13h30-15h Fabienne Benz - Mobile Genetic elements
15h30-17h Beatriz Beamud - Phage Bacteria Interactions

Thursday October 9th:

9h00-12h Arnaud Gutierrez - General concepts in synthetic biology
13h-14h Baptiste Faussurier - New molecules discovery
14h15- 16h Antoine Decrulle - Eligo Biotech

Friday October 10th

9h00h-12h Nicolas Rascovan - DNA as a time travel machine

14h-17h Test