

Frontiers in Microbial Systems 2024

Classes will take place at the Collège de France, 11 place Marcelin Berthelot, **room D2, 2nd floor, building D**.

The exam of Friday afternoon will take place in the ENS biology department, room 324.

Monday September 23rd — Welcome at the frontiers — room D2

- 9h – 10h30 **Olivier Espéli**, CIRB — Introduction to bacterial cell physiology.
- 11h – 12h30 **Alice Lebreton**, IBENS — Introduction to infection biology.
- 14h – 16h **Olivier Cunrath**, Université de Strasbourg — Microbial infection ecology and metals: *Salmonella*, the microbiome and the host.
- 16h15 – 17h30 Animated group discussions on a selection of topics related to the course.

Tuesday September 24th — Mobile genetic elements — room D2

- 9h – 10h Flash group chalk presentations on the selected topics — *Session 1*.
- 10h – 11h **Stephan Gruber**, University of Lausanne — Hide & seek: Bacterial strategies against selfish DNA.
- 11h30 – 12h30 **Stephan Gruber**, University of Lausanne — *Seminar at CIRB*: SMC complexes: masters of genome control & defence.
- 14h30 – 16h30 **Nathalie Leblond-Bourget**, Université de Nancy — Conjugation: a long-established mechanism with new horizons to discover.

Wednesday September 25th — Phages — room D2

- 8h30 – 10h **Milan Gerovac**, University of Würzburg / UCSD — Jumbo phage versatility and occupied niches (*hybrid conference*).
- 10h30 – 11h45 Flash group chalk presentations on the selected topics — *Session 2*.
- 13h – 14h30 **Anne Chevallereau**, MMSB, Lyon — Ecology and evolution of bacterial defences and phage counter-defences.
- 15h – 16h30 **Martial Marbouty**, Institut Pasteur — Phage-bacteria network of interaction in the environment.

Thursday September 26th — Cross-species interactions — room D2

- 9h – 10h30 **François Blanquart**, CIRB — The evolution of bacterial pangenomes and of virulence.
- 11h – 12h30 **Javier Pizarro-Cerda**, Institut Pasteur — *Yersinia* species as model bacteria to study host/pathogen interactions & evolution.
- 14h – 16h **Géraldine Laloux**, UCLouvain — Of predators, vampires, and ghosts: insights into the cell biology of predatory bacteria.

Friday September 27^h — Life on the inside — room D2/room 324

- 10h – 12h **Olivier Espéli**, CIRB — Strategies allowing bacteria to survive within immune cells.
- 14h – 16h **Evaluation** — ENS, Biology Department, room 324

