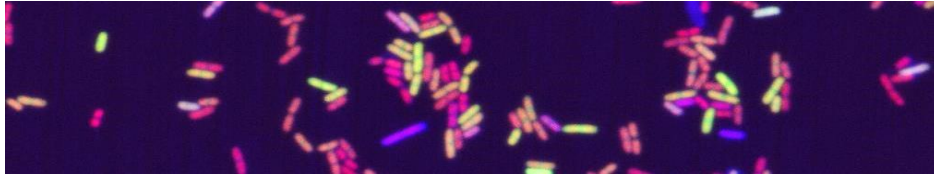




Training School

“Imaging microbial response to low pH”

May 22nd – 26th, 2023



Description

[EuroMicropH](#) and the Center for Interdisciplinary Research in Biology (CIRB) at the Collège de France in Paris are organizing a one-week long practical school of microscopy. The school will address the theory and practical application of the basics of observing microorganism populations. Participants should have background in microbiology but no or limited expertise in microscopy.

The training will include a series of lectures by experts in the field and practical teaching that will illustrate methods available to analyze bacterial adaptation to low pH environments at the single bacterium level. Every afternoon will be dedicated to the practical trainings by group of three students on the different systems (Epifluorescence microscope, Confocal microscope, Structured Illumination Microscope and fluorescence microplate reader). Students will have time to initiate the analysis of their images and movies under the supervision of the team.

Output

After completing and passing the training school, participants will be able to:

- Prepare bacteria with appropriate biosensors for pH stress
- Identify macrophages infection with bacteria with biosensor
- Immunostaining of infected macrophage revealing acidification of the bacterial compartment
- Imaging of bacteria grown in the bacterial compartment
- Identify biosensor expression in the whole population (fluorimetry).
- Operating the basic functions of *Image J*
- Analysing images with a custom *Image J* plugin for bacteria (*Microbe J*).

Application procedure and deadline

If you are interested in applying for this Training School, please fill out this [form](#)

Deadline for application: 28th February 2023

Successful applicants will be informed by 20th March 2023

Training School Program

Date	Session	Lecture Title	Lecturer	Affiliation
22 May	14:00-18:00	Image J and Microbe J teaching	Adrien Ducret	MMSB CNRS - Lyon University
23 May	09:00-10:30	Samples preparation	Team supervision	CIRB - Collège de France, PSL
	10:30-11:00	Break		
	11:00-13:00	Basics of microscopy	Julien Dumont	CIRB - Collège de France, PSL
	13:00-14:00	Break		
	14:00-17:00	Three-student groups for practical training	Team supervision	CIRB - Collège de France, PSL
24 May	09:00-10:30	Samples preparation	Team supervision	CIRB - Collège de France, PSL
	10:30-11:00	Break		
	11:00-13:00	Imaging infectious bacteria in human cells	Olivier Espéli	CIRB - Collège de France, PSL
	13:00-14:00	Break		
	13:30-17:00	Three-student groups for practical training	Team supervision	CIRB - Collège de France, PSL
25 May	09:00-10:30	Samples preparation	Team supervision	CIRB - Collège de France, PSL
	10:30-11:00	Break		
	11:00-13:00	Imaging bacterial phenotypes at the single cell level	Manuel Campos	LMGM - Toulouse University
	13:00-14:00	Break		
	14:00-17:00	Three-student groups for practical training	Team supervision	CIRB - Collège de France, PSL
26 May	09:00-10:30	Samples preparation	Team supervision	CIRB - Collège de France, PSL
	10:30-11:00	Break		
	11:00-13:00	Imaging bacterial biofilms	Romain Briandet	Micalis Institut UPSaclay
	13:00-14:00	Break		
	14:00-17:00	Three-student groups for practical training	Team supervision	CIRB - Collège de France, PSL

COST Action financial support to trainees

As approved by the COST Action CA18113 Management Committee and according to the Action Work and Budget Plan for GP4, for the whole duration of the Training School we will support each accepted trainee with a **Daily Allowance** of **150 EUR** per day (or proportionally for parts of days) for accommodation and meals, and will cover **travel expenses** up to a **maximum** of **400 EUR**. In accordance with the [COST Annotated Rules](#), the claim for reimbursement may be sent via e-Cost at the end of the Training School.

Practical information

The Training School will take place at the [CIRB](#) in the Collège de France (Address: 11 place Marcelin Berthelot, 75005 Paris France) and will benefit from the support of the CIRB imaging facility [Orion](#). For further information, please do not hesitate to contact: euromicroph@college-de-france.fr