

INSTITUT PASTEUR & INSTITUT CURIE COURSE - EDUCATION CENTER

Molecular Biology of the Cell

Institut Pasteur, Paris, January 13 - February 14, 2025

This is an intensive laboratory and lecture course devoted to new experimental techniques and current concepts in the study of cellular function.

Lectures will provide an overview of key research areas, from vesicular trafficking to cell division, mitochondrial biology in health and disease, autophagy, host-pathogen interactions, cell biomechanical properties and their interplay with cell migration and tumor invasion.

Practicum I will study collective behavior of cells in epithelial sheets or in complex tissues formed of mixed cell populations (normal/cancer) facing different substrates (extracellular matrix chemistry, rigidity, and geometry), and how cells segregate and/or auto assemble (To be confirmed).

Practicum II will study the mechanical and geometrical inputs affecting epithelial cell survival *in vivo* using optogenetics, deep learning and quantitative image analysis in *Drosophila* (To be confirmed).

Faculty (To be confirmed)

Renata Basto (Paris), Thibaut Brunet (Paris), Roberto Bruzzone (Italy), Philippe Chavrier (Paris), Francis Corson (Paris), Costas Demetriades (Germany), Arnaud Echard (Paris), Robert Grosse (Germany), Max Gutierrez (UK), Christophe Lamaze (Paris), Romain Levayer (Paris), Musa Mhlanga (NL), Serge Mostowy (UK), Gaia Pigino (Milan), Gipi Schiavo (UK), Shahragim Tajbakhsh (Paris), Sharon Tooze (London), Danijela Vignjevic (Paris) Jean-Paul Vincent (UK), Michael Way (UK), Assaf Zaritsky (Israel), Chiara Zurzolo (Paris)

Fellowships (1500€ each) will be granted to the 3 best applicants from foreign countries to cover, in part, their travel and accommodation expenses.

Co-directors:

Roberto Bruzzone
Philippe Chavrier
Chiara Zurzolo

Online registration:

www.pasteur.fr/course/cell

Practical information:

Deadline for application: September 15, 2024

Attendees: 20 students

Contact: enseignement@pasteur.fr

