

**Domaine :** Sciences du vivant - **Thématique(s) :** Microbiologie, génétique moléculaire

STAGES COURTS

## EPIGENETIC TRAINING COURSE: « INITIATION TO CHROMATIN AND METHYLATED DNA IMMUNOPRECIPITATION »

Chromatin and DNA modifications, *i.e.* epigenetic modifications, are involved in the control of gene expression. This course provides a theoretical introduction to the field of epigenetics as well as a practical training to learn the main bases of the methods for studying these epigenetic modifications.

 **Dates :** Voir le calendrier

 **Lieu :** Campus Pierre et Marie Curie – Paris (Jussieu)

€ **Tarif :** 2185 €

**Modalité :** Présentiel

### GOALS

- Acquire the theoretical and practical bases necessary to analyse chromatin, chromatin proteins and DNA methylation using chromatin immunoprecipitation (ChIP) and DNA methylation (MeDIP).

### PUBLIC AND PRE-REQUISITE

**Public :** Technicians, engineers, researchers, teachers-researchers, doctoral students.

**Pre-requisite :** Basic knowledges in molecular biology, bachelor level.

### PROGRAM

#### LECTURES

- Epigenetics and chromatin: post-translational modifications of histones, chromatin remodelling complexes.
- Methylation and hydroxymethylation of DNA.
- Epigenetic diseases.
- Methods to analyse epigenetic modifications.
- qPCR for ChIP and MeDIP.
- Introduction to ChIP-seq.

#### PRACTICAL TRAINING

- Chromatin and methylated DNA immunoprecipitation experiments from 3T3 cells (cross-linking, chromatin extraction and fragmentation, DNA extraction and fragmentation, immunoprecipitation, qPCR, analysis of results).

### METHODS

- Lectures.
- Practical training.

### RESPONSABLE(S) PÉDAGOGIQUE



Frédérique Peronnet

### INFORMATIONS

#### Competency Development Action

**Category:** (Article L6313-1 of the Labour Code)

Training action

**Number of participants:** from 8 to 16.

**Language:** The course can be provided in english or french upon request.

### CONTACT

 biosciences-fc@sorbonne-universite.fr

- Teaching materials, bibliography and documentation are given to the participants.

### EVALUATION METHODS

Statement of accomplishment.

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### HIGHLIGHTS

- Teaching method adapted to acquire the strategic tools.
  - Teaching of the latest developments in epigenetics.
  - Instructors: Professor of Genetics and Researcher, experts in epigenetics.
  - Internship organized in collaboration with Diagenode
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