

ANALYTIQUE ET BIOSÉPARATION

INITIATION TO ¹³C-FLUXOMICS

THE OBJECTIVE IS TO ACQUIRE THEORETICAL AND PRACTICAL KNOWLEDGE FOR THE ANALYSIS OF METABOLIC SYSTEMS IN CELLS OR TISSUES USING ¹³C-FLUXOMICS APPROCHES.

TARGET AUDIENCE :

The course is intended for PhD students, postdocs, researchers, engineers or technical staff from academia or industry with:

- basic/intermediate knowledge in metabolism, Mammalian cells and health
- ongoing/forthcoming project regarding metabolism, in health domains

PROGRAM :

- **Day 1 (6h) :**
 - General introduction
 - Metabolic systems
- **Day 2 (6h) :**
 - Data analysis for metabolic network
 - Modeling og metabolic fluxes (cells scale)
 - Experimental design & sampling (theoretical part)
- **Day 3 (6h) :**
 - Experimental desin & sampling (practical part)
 - Analysis & data treatment by MS & NMR
- **Day 4 (6h) :**
 - Flux map
 - Feedback & round table
 - Conclusion and Training evaluation

INSTRUCTORS :

- **Jean-Charles PORTAIS** : University Professor biochemistry & metabolism. Scientific director of MetaboHUB-MetaToul.
- **Justine BERTRAND-MICHEL** : Research Engineer, INSERM MetaboHUB-MetaToul. Co-director of MetaboHUB-MetaToul platform and head of MetaboHUB-MetaToul-Lipidomics.
- **Nathalie POUPIN** : Researcher, INRAE. Network analysis and bioinformatics.
- **Pierre MILLARD** : Researcher, INRAE. Metabolic systems biology
- **Florian BELLVERT** : Research Engineer, CNRS. Co-Manager of MetaboHUB-MetaToul-Metabolic networks.
- **Edern CAHOREAU** : Research Engineer, CNRS. MetaboHUB-MetaToul. NMR, isotopic analysis and fluxomics.
- **Ludovic COTTRET**: Research Engineer, INRAE. MetaboHUB-MetaToul network analysis and fluxomics.

INFOS

DURATION : 3 days - 24 Hours

NUMBER OF PARTICIPANTS : Min 4 / Max 8

PRICE :

Academic : 1300 €

Others : 2500 €

Lunch and educational materials included

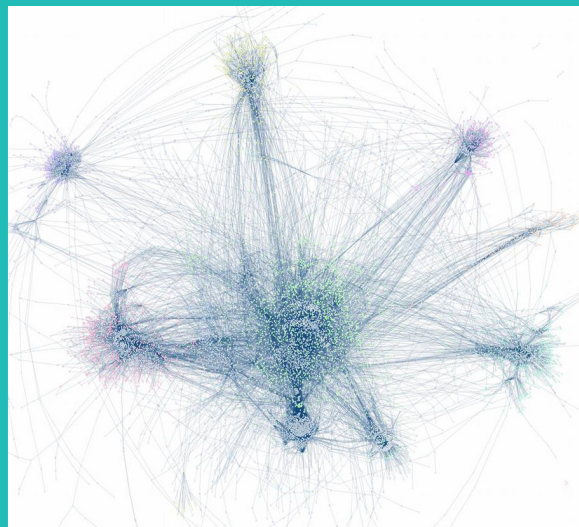
TRAINING COURSE MANAGERS :

- **Lindsay PEYRIGA** - Application Engineer, CNRS. Co-Manager of MetaboHUBMetaToul-Metabolic networks
- **Maud HEUILLET** - Research Engineer, INRAE. Metabolic networks

INFORMATION AND REGISTRATION :

05 61 55 92 53 | fcq@insa-toulouse.fr

PERIOD OF TRAINING :
FROM 29 OF SEPTEMBER TO
2ND OF OCTOBER 2025



The learning outcomes will be assessed throughout the session through quizzes, practical exercises or roundtables.

A certificate of attendance will be delivered at the end of the training