

Training School on fruit proteomics and high throughput enzymology

Venue: Bordeaux, June 1-5, 2015

Organizer : Serge Delrot

For more information visit the [training information webpage](#) or contact the organizer at : serge.delrot@u-bordeaux.fr.

Fruit composition results from genotype x environment interactions. Many studies have studied fruit development and its response to environment through transcriptomic approaches. Yet, the metabolite content of the fruit depends on enzymatic activities, and thus on the amount of enzyme proteins and on their regulation.

This school will provide hands-on training on quantitative proteomics and high throughput enzymology in fruits. It will allow the participants to become familiar with advances techniques and concepts presently used to investigate fruit metabolism at the protein level. It will be based on the facilities of the Center of Functional genomics at the University of Bordeaux, more precisely on the platforms dedicated to high throughput enzymology (Dr. Yves Gibon) and proteomics (Pr. Marc Bonneau) (<http://www.cgfb.u-bordeaux2.fr/en/proteome>). Dr. Stéphane Claverol, Dr. Fatma Lecourieux, Dr. David Lecourieux (proteomics), Dr. ZhanWu Dai (enzymology), and Dr. Bertrand Beauvoit (modelling) will also supervise the trainees.

The school will be organized as follows :

Monday 1 :

Quantitative proteomics using Label-free method: theoretical background ; samples preparation, proteins concentration using SDS-PAGE, gel staining, cutting and destaining of the polypeptides band, overnight in-gel digestion of the proteins using trypsin.

Tuesday 2 :

Quantitative proteomics using Label-free method: theoretical background, tryptic peptides extraction from gel matrix, mass spectrometers presentation (MALDI-TOF-TOF & LC/MS/MS), tryptic peptides analysis using LC/MS/MS technology, presentation and use of relevant software.

Wednesday 3 :

morning : quantitative proteomics using Label-free method: data analysis

afternoon : high throughput enzymology : introduction, preparation of buffers and media

Thursday 4 :

high throughput enzymology : assays of twenty enzymes of primary and secondary metabolism (proteins extracted from grape berry powder and enzymatic assays).

analysis of data ; complements on theoretical background

Friday 5 :

morning : high throughput enzymology : data interpretation

afternoon : integration of proteomics and enzymatic data ; introduction to kinetic modelling

The school will be limited to 10 trainees.