



Training School

**Plant hormones & metabolites:
techniques and data
processing**

September 7-9, 2022
Universitat Jaume I

INTOMED Innovative tools to combat crop pests
in the Mediterranean

 intomedprima@gmail.com  intomed.bio.uth.gr  [@Primalntomed](https://twitter.com/Primalntomed)

Overview



Recent advances in plant science have focused on omics techniques, therefore future scientists in the field are aware of the relevance of holistic approaches studied in a comprehensive manner. This three-day training course aims to provide practical and theoretical knowledge about plant metabolomics using specific bioinformatics software to provide understandable data for human beings.

Especialist

Day 1 | Hands on and basics on hormonal and peptide analysis. Targeted metabolomics

Victoria Pastor; Paloma Sánchez; Victor Flors

Day 2 | Basics on Non-targeted metabolomics and omics processing.

Victoria Pastor, Jordi Gamir, Antoni Garcia

Day 3 | Basics on GC-MS

Paloma Sánchez-Bel, Tania Portolés

Organizers & Trainers

Victoria Pastor (Universitat Jaume I): pastorm@uji.es

Jordi Gamir (Universitat Jaume I): jgamir@uji.es

Paloma Sánchez (Universitat Jaume I): pbel@uji.es

Víctor Flors (Universitat Jaume I): flors@uji.es

Antoni Garcia (Centre for Research in Agricultural Genomic): antoni.garcia@cragenomica.es

Tania Portolés Nicolau (Universitat Jaume I): tportole@uji.es

When

September 7-9, 2022

Where

Department of Biology, Biochemistry and Natural Sciences of the Universitat Jaume I (UJI) with the collaboration of the Servicios Centrales de Instrumentación Científica (SCIC).

*The Training School will be restricted to 10-12 students and you need to bring your own laptop. If you are interested in participating in the course please contact Víctor Flors at flors@uji.es.

Course Structure



Day 1 | Liquid chromatography and mass spectrometry applied to plant hormones

Time	Activity	Lecturer /trainer
9:00-9:30	<p>Presentation of the organizers/trainers</p> <p>Presentation of the participants</p>	<p>Victoria Pastor</p> <p>Paloma Sánchez</p> <p>Victor Flors</p> <p>Jordi Gamir</p>
9.30-11.00	Lecture-Plant hormonal analysis	<p>Victor Flors Plant hormone analyses.</p> <p>1)Sample purification (different tissues, cell types, organelles)</p> <p>2)MS analysis of plant hormones)</p> <p>3) Concepts on Calibration Curves and Internal Standards</p>
11.30-13.30	<p>Practical Introduction to the hormonal Analysis (hormonal extraction and preparation for UPLC injection)</p> <p><i>Lunch Break</i></p>	Paloma Sánchez
14.30-17.00	UPLC-MS injection	Victor Flors
17.00-17.30	Peptide analysis	Victoria Pastor
17.30-18.30	Meet with experts	<p>Victoria Pastor</p> <p>Paloma Sánchez</p> <p>Victor Flors</p>

Course Structure



Day 2 | Injection and LC-MS handling. Sample preparation for multiple analysis.

Time	Activity	Lecturer /trainer
9:00-9:30	Presentation of Trainers /Organizers	Victoria Pastor Jordi Gamir Antoni Garcia
9:30-10:30	Data recovery -Integration and Interpretation	Victoria Pastor
10:30-11:00	Cofee Break	
11:00-13:30	Lecture. Non-targeted-metabolomics	Jordi Garmi
13:30-15:00	Lunch Break	
15:00-18.00	Lecture. Omics Integration	Antoni García
18.00-19.00	Meet with experts; questions and remarks	Victoria Pastor Jordi Gamir Antoni García

Course Structure



Day 3 | Basics on plant proteomics and biological interpretation of omics data.

Time	Activity	Lecturer /trainer
9:00-9:30	Presentation of Trainers /Organizers	Paloma Sánchez-Bel Tania portolés. GC-MS
9:30-10:30	Lecture. Plant sampling and processing	Paloma Sánchez-Bel
10:30-11:00	Coffee Break	
11:00-13:30	Lecture Targeted and non-targeted metabolomics in GC-MS	Tania Portolés
13:30-15:00	Lunch with experts	All experts