PROTEOMICS APPROACHES IN LIFE SCIENCES
CNC Advanced Courses 2021
Doctoral Program in Experimental Biology and Biomedicine (PDBEB)

May 3-7, 2021

Location: Online

Lecturers:
Bruno Manadas (CNC/UC-Biotech & IIIUC, University of Coimbra)
ORCID iD: 0000-0002-2087-4042
Cátia Santa (CNC/UC-Biotech & IIIUC, University of Coimbra)
ORCID iD: 0000-0002-7854-1670
Gabriela Lochmanova (CEITEC - Masaryk University, Czech Republic)
ORCID iD: 0000-0002-0490-9380
Isaura Simões (CNC/UC-Biotech & IIIUC, University of Coimbra)
ORCID iD: 0000-0002-9331-6340
João Rodrigues (CNC/UC-Biotech & IIIUC, University of Coimbra)
ORCID iD: 0000-0002-8621-5410
Pedro Beltrão (EMBL-EBI, United Kingdom)
ORCID iD: 0000-0002-2724-7703
Pedro Curto (CNC/UC-Biotech & IIIUC, University of Coimbra)
ORCID iD: 0000-0003-4997-1759
Pitter Huesgen (Forschungszentrum Jülich, Germany)
ORCID iD: 0000-0002-0335-2242
Romina Belli (University of Trento, Italy)

PROGRAM

MONDAY | MAY 3

Bruno Manadas & Sandra Anjo
09:00 - 10:00 - Introduction to Proteomics – biological context
10:00 - 11:00 - Biological need and sample collection
11:00 - 12:00 - Sample prep and analysis
12:00 - 14:00 - Lunch Break
14:00 - 17:00 - Data acquisition; Database search and PTM identification

TUESDAY | MAY 4

09:00 - 10:00 - Quantitative proteomics data acquisition and data analysis (Bruno Manadas)
10:00 - 11:00 - Untargeted proteomics screening for biomarker discovery (Bruno Manadas)
11:00 - 12:00 - Translational research in biomarker discovery (Sandra Anjo)
12:00 - 14:00 - Lunch Break
14:00 - 16:00 - Using proteomics approaches in different biological contexts: from host-pathogen-interactions to plant biology (Isaura Simões)
16:00 - 17:00 - Proteomics in psychiatry (Cátia Santa)

WEDNESDAY | MAY 5

10:00 - 11:00 - Rapid protease specificity profiling using proteome-derivate peptide libraries (Pitter Huesgen)
11:00 - 11:30 - “Coffee Break”

11:30 - 12:30 – Open Seminar: Microscale Degradomics: Hunting N-termini in Small Specimen (Pitter Huesgen)
12:30 - 14:30 - Lunch break
14:30 - 15:30 - Practical aspects of protease substrate discovery by protein termini enrichment (Pitter Huesgen)

THURSDAY | MAY 6

09:00 - 10:00 - Interactomics Part I - Analysis by Mass Spectrometry (Sandra Anjo)
10:00 - 11:00 - Interactomics Part II – the dynamic interactome of DJ-1 (Sandra Anjo)
11:00 - 12:00 - Fundamentals of Redox Protein Analysis by Mass Spectrometry (Sandra Anjo)
12:00 - 14:00 - Lunch break
14:00 - 15:00 - Mass spectrometric analysis in epigenetic studies (Gabriela Lochmanova)
15:00 - 17:00 - Free user-friendly Statistical tools (Vera Mendes & João Rodrigues)

FRIDAY | MAY 7

09:00 - 11:00 - GeneOntology tools (Sandra Anjo & Pedro Curto)
11:00 - 12:00 - Title to be announced (Romina Belli)
12:00 - 14:00 - Lunch break
14:00 - 15:00 - Open Seminar: Proteomics approaches to study SARS-CoV-2 biology and to identify antiviral drugs (Pedro Beltrão)
15:00 - 16:00 - Students evaluation