

Structural Biochemistry Course IBPC

23-30 March 2017

Thursday, March 23

9h-9h15	General presentation of the course
9h15-10h45	An overview of mass spectrometry (Nathalie Caulet-Demont)
10h45-11h15	Short Exam for M1 ISDD students
11h15-12h15	Introduction to MALDI-TOF (Sandrine Masscheleyn) <i>Lunch Break</i>
13h30-17h	Protein crystallisation : how to make well-diffracting crystals (Karine Moncoq)

Friday, March 24

9h-12h	Practical session – Protein identification by mass spectrometry (MALDI-TOF) (Sandrine Masscheleyn, Karine Moncoq) <i>Lunch Break</i>
13h-17h	Practical session – Protein crystallisation with Dragonfly and Mosquito robots (Valerie Biou, Daniel Picot)

Monday, March 27

9h-12h	Principles of protein crystallography : from diffraction data to model building (Daniel Picot) <i>Lunch Break</i>
13h-17h	Practical session – Crystals visualisation and freezing (Valerie Biou, Karine Moncoq)

Tuesday, March 28

9h-12h	General presentation of the SOLEIL synchrotron <i>Lunch Break</i>
13h-17h	Practical session – Diffraction experiments and data collections at PX1 beamline (Leo Chavas, Serena Sirigu)

Wednesday, March 29

9h-12h	Practical session – Data analysis and phasing with CCP4 and Phenix programs (Karine Moncoq, Valerie Biou, Daniel Picot) <i>Lunch Break</i>
13h-14h	Principles of structure refinement (Valerie Biou)
14h-17h	Practical session – Model building and refinement with Phenix programs (Karine Moncoq, Valerie Biou, Daniel Picot)

Thursday, March 30

9h-10h	How to validate a 3D structure (Valerie Biou)
10h-12h	Practical session – Structure validation and analysis (Karine Moncoq, Valerie Biou, Daniel Picot) <i>Lunch Break</i>
13h-17h	Practical session – Molecular dynamics analysis with Gromacs programs (Marc Baaden)