

# WINTER SCHOOL ON STRUCTURAL CELL BIOLOGY

## PROGRAMME

9-13/02/2015

University Campus Bohunice, A11/seminar room 236

Monday 9.2.		Title of lecture:
13:00-13:45	<b>Julio Ortiz</b> (opening lecture, CryoEM)	General introduction to three-dimensional cryo microscopy
13:45-14:30	<b>Sacha de Carlo</b> (CryoEM)	Sample preparation and vitrification
14:30-15:00	Coffee Break	
15:00-16:30 (lekce 2x45 min)	<b>Martyn Winn</b>	1. De novo protein modelling and its use in interpreting experimental structural data; 2. Volume data from cryoEM and crystallography: fitting and building atomic models and matching against other volume data
17:00-18:30	Get-together meeting with tutors, hospitality	
Tuesday 10.2.		
9:00-10:30 (lekce 2x45 min)	<b>Jose Mario Carazo</b> (image processing)	1. Single Particle Analysis (SPA): The basics; 2. Image processing workflows for SPA
10:30-11:00	Coffee Break	
11:00-12:30 (lekce 2x45 min)	<b>Michael Sattler</b> (NMR, BioSAXS)	Combining NMR and SAS to study protein complexes in solution
12:30-13:30	Lunch	
13:30-17:30	Practical	
Wednesday 11.2.		
9:00-10:30 (lekce 2x45 min)	<b>Richard Bowater</b> (Biophysical methods)	1. Structure and function of nucleic acids; 2. Protein-nucleic acid interactions
10:30-11:00	Coffee Break	
11:00-12:30 (lekce 2x45 min)	<b>Laura Bowater</b>	1. Science Communication: past, present and future?; 2. Science Communication: what does it mean for you?
12:30-13:30	Lunch	
13:30-17:30	Practical	

<b>Thursday 12.2.</b>		
9:00-9:45	<b>Julio Ortiz</b>	Image processing workflows for Tomography
9:45-10:30	<b>Sacha de Carlo (CryoEM)</b>	New EM technologies
10:30-11:00	Coffee Break	
11:00-12:30 (lekce 2x45 min)	<b>Stephan Grzesiek (NMR)</b>	Insights into protein folding, dynamics and function from residual dipolar couplings, hydrogen bond scalar couplings and other NMR parameters
12:30-13:30	Lunch	
13:30-17:30	Practical	
<b>Friday 13.2.</b>		
9:00-10:30 (lekce 2x45 min)	<b>Bernd Simon (NMR, SAXS)</b>	Combining Small Angle Scattering and NMR to determine the structure of complexes
10:30-11:00	Coffee Break	
11:00-12:30 (lekce 2x45 min)	<b>Gerard Kleywegt (PDB research)</b>	PDBe - Bringing Structure to Biology (archival, integration and validation of molecular and cellular structure data)
12:30-13:00	Final remarks	
13:00-14:00	Lunch	