

## PROGRAM AILM2024

Tuesday May 28<sup>h</sup>

8:30 - 10:00 *Arrival / Registration / Coffee*

**Isotopic Labeling for the Study of Nucleic Acids and Complexes- I**

10:00 **Welcome**

10:20 **Frédéric Allain** (ETH Zurich – CH) - *Structural insights into protein-RNA interactions within biomolecular condensates using UV cross-linking and mass spectrometry of isotopically labeled RNA*

11:00 **Victoria D'Souza** (Harvard Medical School – Boston, USA) - *Extending the toolbox for RNA biology*

11:40 **Darren Hart** (ISBG - Grenoble – FR) - *User access to high-level research platforms through Instruct-ERIC and French FRISBI programs*

12:00-13:30 *Lunch will be served in front of IBS*

**Isotopic Labeling for Neutron Sciences**

13:30 **Giovanna Fragneto** (European Spallation Source, Lund –SE) - *Neutron structural characterisation of model membranes from natural lipids*

14:10 **Selected Talk**

14:30 **Franck Gabel** (ILL, Grenoble – FR) - *Deuteration and neutrons: a perfect couple for studying complex biomacromolecular systems in solution*

15:10 **Selected Talk**

15:30 **Selected Talk**

15:50-16:20 *Coffee Break*

**Spin Labeling for DNP - I**

16:20 **Bjorn Corzilius** (University of Rostock – DE) - *Site-specific dynamic nuclear polarization in uniform and sparsely labeled biomolecules*

17:00 **Selected Talk**

17:20 **Galia Debelouchina** (University of California, San Diego – USA) - *Chemical biology tools for NMR spectroscopy of gels and cells*

18:00 **Selected Talk**

18:30- 20:00 *Drinks & Dinner will be served in front of IBS*

**Wednesday May 29<sup>th</sup>****In Cell NMR**

**8:45** **François-Xavier Theillet** (I2BC – Gif sur Yvette - FR) - *In-cell NMR of  $\alpha$ -Synuclein and Tau at 310K and 10  $\mu$ M: the actual powers of  $^{13}\text{C}$ -labeling &  $^{13}\text{C}$ -detection*

**9:25** **Selected Talk**

**9:45** **Enrico Luchinat** (CERM, Florence – IT) - *Expression of fluorinated proteins in human cells for  $^{19}\text{F}$  in-cell NMR*

*10:25-10:55 Coffee Break*

**Membrane Proteins**

**10:55** **Alvar Gossert** (ETH Zurich – CH) - *Labeling in eukaryotic cells enables NMR studies of GPCR activation and deactivation*

**11:35** **Selected Talk**

**11:55** **Clemens Glaubitz** (University of Frankfurt – DE) - *Solid-state NMR and DNP approaches for the study of transporter and receptor proteins within the membrane*

*12:35-14:35 Lunch and Poster session*

**Spin Labeling for DNP - II**

**14:35** **Kendra Frederick** (University of Southwestern, Dallas – USA) - TBA

**15:15** **Selected Talk**

**15:35** **Sabine Hediger** (CEA – Grenoble - FR) - *SelDNP: Focusing on a selected protein site by DNP-enhanced solid-state NMR*

*16:15-16:45 Coffee Break*

**Isotopic Labelling for the Study of Nucleic Acids and Complexes- II**

**16:45** **Sarah Keane** (University of Michigan – FR) - *Structure-based regulation of microRNAs biogenesis*

**17:25** **Selected Talk**

**17:45** **Katja Petzold** (Uppsala University – SE) - *What label for what experiment: RNA dynamics*

**18:25** **Selected Talk**

*19:00- 20:00 Dinner will be served in front of IBS*

**Thursday May 30<sup>th</sup>****Integrated Structural Biology**

**8:45** Nadia Izadi-Pruneyre (Pasteur Institute, Paris – FR) - *Integrative structural biology of bacterial membrane nanomachines*

**9:25** Selected Talk

**9:45** Selected Talk

*10:05-10:35 Coffee Break*

**Therapeutic Proteins and Drug Discoveries**

**10:35** Julien Orts (University of Vienna – AT) - *Lead Generation without an X-Ray Crystal Structure: An NMR Method to Probe Protein-Ligand Complexes*

**11:15** Selected Talk

**11:35** Selected Talk

**11:55** Ulrich Hommel (Novartis, Basel – CH) - *Drugging the Undruggable: Can Protein Dynamics guide Drug Discovery ?*

*12:35-14:35 Lunch and Poster session*

**NMR of Proteins and Nucleic Acids**

**14:35** Selected Talk

**14:55** Selected Talk

**15:15** Selected Talk

**15:35** Selected Talk

*15:55-16:25 Coffee Break*

**Isotopic Labeling and Cell-Free Protein Expression**

**16:25** Frank Bernhard (University of Frankfurt – DE) - *Cell-Free protein synthesis tools for the production of NMR samples*

**17:05** Selected Talk.

**17:25** Pau Bernado (CBS, Montpellier – FR) - *Cell-Free approaches for the incorporation of structural probes for <sup>19</sup>F-NMR and SANS*

**18:05** Selected Talk.

*18:30-20:00 –Dinner will be served in front of IBS*

**Friday May 31<sup>st</sup>****NMR of Proteins**

**8:45** Sebastian Hiller (Biozentrum, Basel – CH) - *The dynamic chaperone network in the endoplasmic reticulum*

**9:25** Selected Talk

**9:45** Ewen Lescop (ICSN Gif-sur Yvette – FR) - *Probing lipid/protein coupled dynamics in membranes by High-Pressure NMR spectroscopy*

*10:25-10:55 Coffee Break*

**<sup>19</sup>F Labeling Methodologies**

**10:55** Ronald Micura (University of Innsbruck, AT) - *Chemical Synthesis of Modified RNA*

**11:35** Selected Talk

**11:55** Haribabu Arthanari (Harvard Medical School – Boston, USA) - *Leveraging Fluorine as Atomic Beacons in Biomolecular NMR: Challenges and Opportunities*

*12:35 Closing of AILM2024*

*12:45-13:30 Lunch at the EPN Campus Restaurant*