Training School for Cross-Linking

Date: 23.10.2017, 9:00 am – 5.00 pm

Location: IMBA, Dr. Bohrgasse 3, Lecture Hall

9.00 – 9.15 –Welcome (Frank Sobott, Karl Mechtler,)

9.15 – 10.00 Introduction about Cross-linking (Andrea Sinz, Alexander Leitner)

10.00 – 10.45 Cross-linking Strategies I: Non-Cleavable Cross-linkers (Philip Andrews, Alexander Leitner)

10.45 – 11.15 Break

11.15 – 12.15 Cross-linking Strategies II: Cleavable Cross-Linkers (Lan Huang, Andrea Sinz)

12.15 – 13.45 Break

13:45 – 14.15 Cross-linking Harmonization Initiative

14.15 – 15.005 In Vivo Cross-linking experiments (Jim Bruce)

15.00 – 15.30 Break

15.30 – 16.15 Software MeroX (Michael Götze)

16.15 – 17.00 Cross-Linking Modeling (Nir Kalisman, Konstantinos Thalassinos)

Goals of the Training School:

Protein-protein interactions are one of the main driving forces underlying all cellular processes and the knowledge of protein interfaces is the key to understanding cellular functions. Complementary to the classical methods of structural biology (X-ray crystallography,NMR spectroscopy and electron microscopy), cross-linking combined with mass spectrometry (MS) has developed into an alternative technique to obtain valuable information about the structure and dynamics of macromolecular assemblies in solution.

In this workshop, fundamentals of the cross-linking MS strategy will be introduced. Different cross-linking strategies using non-cleavable and MS-cleavable cross-linkers as well as in vivo cross-linking will be presented. Practical aspects of two complementary software tools (MeroX) and on modeling protein complexes based on cross-linking constraints will be taught.

Participants are encouraged to bring their own laptop computers!

Please download the software here: http://www.stavrox.com/Download_MeroX_Win.htm

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