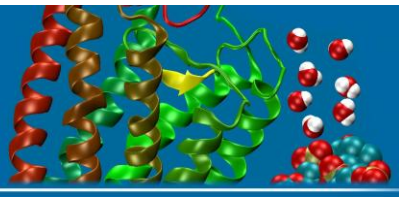
Structural Biology *of* Membrane Proteins



E-bulletin of Marie-Curie Integrated Training Network - SBMPs

November 2011

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Conferences and workshops related to membrane proteins in 2011/2012:

Amphipol Workshop 2012:

Applications of Amphipols to Membrane Protein Studies

April 17 - 19, 2012

Case Western Reserve Iniversity, Cleveland, USA

http://www.ibpc.fr/amphipol2012

Description:

Keeping membrane proteins water-soluble without denaturing them is notoriously difficult, due to the destabilizing properties of detergents. Amphipols are "short amphipathic polymers that are able to keep individual MPs soluble under the form of small hydrophilic complexes". They have proven extremely efficient at stabilizing membrane proteins in detergent-free aqueous solutions and have found many applications. Objectives are to introduce academic and industrial scientists to the use of amphipols for such applications as membrane protein stabilization, folding,

cell-free synthesis and immobilization, drug screening, diagnostics, vaccination, and structural studies by NMR and cryo-electron microscopy.

Theoretical part will include presentations about membrane protein structure, the use of detergents, membrane protein (in)stability in aqueous solutions, structure and properties of amphipols, functionalized amphipols, trapping membrane proteins with amphipols, structure and properties of membrane protein/amphipol complexes, amphipol-assisted membrane protein folding and cell-free synthesis, amphipol-mediated membrane protein immobilization and its application to drug screening and diagnostics, NMR and electron microscopy studies of amphipol-trapped membrane proteins, using amphipols to formulate vaccines.

Practicals will include training to membrane protein trapping with amphipols, amphipol-assisted membrane protein folding, and characterization by size exclusion chromatography of membrane protein/amphipol complexes. Periods will be set aside for discussions with interested participants of their own projects. Following the theoretical course is a prerequisite to taking part in the practicals.

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AFM-SMFS workshop

18-20th of January 2012, Basel. Switzerland

Description:

In this workshop the students will learn the (very) basics of atomic force microscopy (AFM) imaging and single-molecule force spectroscopy (SMFS) of membrane proteins. In a first part the students will be teached the basics of the methods. Then the students will learn how to prepare samples (bacteriorhodopsin and one or two other membrane proteins). Then the students will become familiar with AFM imaging (low resolution only!) and SMFS experiments. In a last step the students will learn analyzing the data. We will be able to host up to 8 students.

Registration deadline: 6th of January, 8 places maximum.
Registration process: email to
daniel.mueller@bsse.ethz.ch, muriel.tauzin@ipbs.fr

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Liquid-state NMR worksop

14th-15th December 2011, Frankfurt, Germany

Description:

Basic theory of 2D NMR and practical applications, meaning and measuring of 1D and 2D experiments.
Registration dead line: 25th of November
Registration process: email to vdoetsch@emi.uni-frankfurt.de, muriel.tauzin@ipbs.fr

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The information about new **conferences**, **courses** and **workshops** related to membrane proteins as well as some important news related to **SBMPs** (including meetings, publications etc.) please send to ***Slawomir Filipek*** *(*sfilipek@iimcb.gov.pl*)*.

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