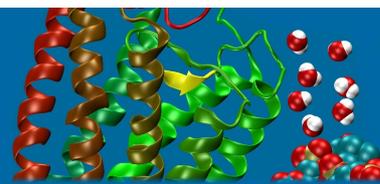


Structural Biology *of* Membrane Proteins



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

January 2011

Upcoming conferences and workshops in 2011:

Molecular Medicine Workshop 2011

Cell Death and Disease

10 - 14 March, 2010 Obergurgl, Austria

<http://events.embo.org/11-cell-death/index.html>



EMBO Molecular Medicine
Workshop 2011

**Cell Death &
Disease**

Description:

Findings on cell death regulation gained in animal models were shown to have general validity for the regulation of cell death signalling in humans. For example, apoptosis, a genetically programmed pathway to remove superfluous or potentially harmful cells in the body of all metazoans is conserved in its fundamentals from worm to men. Additional layers of cell death regulation, also found in humans, have been identified subsequently by studying cell death in different model organisms including yeast, *C. elegans*, *drosophila* or zebrafish.

Last but not least, *Mus musculus* has been proven to be a suitable model to study the relevance of cell death signalling in human pathologies such as cancer, autoimmunity and neurodegeneration and different key molecules of the apoptosis machinery are currently explored for their drugability in human diseases, some of them already well advanced in clinical trials.

A central theme of the event, therefore, will be to provide an update on recent findings relating to cell death signalling pathways that are currently targeted for the treatment of different human pathologies with a main focus on cancer and autoimmunity.

While apoptosis is a key mechanisms that is currently targeted at different levels, e.g. at the level of death receptor signalling, Bcl-2 family proteins or inhibitor of apoptosis proteins for the treatment of human disease, other cell death mechanisms such as autophagy or necroptosis are just in the process of being understood in molecular terms, opening new opportunities for therapeutic intervention.

Hence, a second focus of the workshop lies on alternative cell death mechanisms and their molecular basis and an emphasis will therefore also be given to define molecular interaction points between different modes of cell death events.

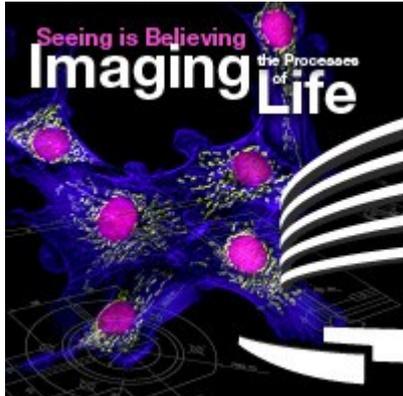
Last but not least, this workshop aims to strengthen the communication between basic researchers and those working on the translational aspects of cell death research as well as clinicians that are involved in early clinical trial using compounds that aim to target different cell death pathways.

EMBL Symposia 2011
Seeing is Believing – Imaging the Processes of Life

17 - 20 March 2011

EMBL Advanced Training Centre, Heidelberg, Germany

<http://www.embo-embl-symposia.org/symposia/2011/EES11-01/index.html>



Description:

The processes of life are naturally dynamic in space and time from the molecular to the organismal level. The rapid development of imaging methods across this full scale of biological organization has revolutionized our ability to directly visualize the inner workings of proteins, protein complexes, organelles, cells, tissues, organs and whole organisms and ecosystems.

With the Symposium “Seeing is Believing – Imaging the Processes of Life” we aim to bring together the leading developers of imaging methods with cutting edge applications that illustrate how imaging can answer biological questions. We will place emphasis on methods that are able to capture the dynamics of life and aim to span the whole range from molecular resolution to imaging of whole organisms.

EMBO Workshop 2011

Function and structure of septins, filament-forming GTP-binding proteins

6 - 9 March 2011

St Goar, Germany

<http://cwp.embo.org/w11-11/index.html>



Description:

Septins represent a family of GTP binding proteins which form heterooligomeric complexes which polymerize to form a new type of non-polar filament. They have originally been discovered in budding yeast where they perform a barrier function in bud emergence.

Its role in higher eukaryotic cells is still unclear. However, in recent years a convergence of basic biomedical research from a number of fields has demonstrated that septins are essential for cytokinesis, play critical roles in vesicle trafficking, cytoskeletal organisation, ciliary transport, membrane dynamics, dendritic branching and infection by intracellular pathogens.

The major topics are:

- Structure of septins
- Interaction partners of septins
- Septin function in yeast and in *C.elegans*
- GTP-binding/hydrolysis of septins
- Septin functions in mammals
- Septins in neuronal biology
- Novel septin assemblies
- Septin function in cancer

- Septin function in infectious diseases and immunology
- Non-canonical functions of septins

Septins have also been associated with a wide array of diseases such as neoplasia (e.g. MLL, ALL, colorectal cancer), neurodegenerative diseases (e.g. Morbus Alzheimer, Parkinson´s disease), hereditary neuralgic amyotrophy, infections and infertility. The EMBO workshop is intended to bring together people from different disciplines to discuss exciting recent findings and try to arrive at a common mechanistic understanding of these proteins.

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).
