

Molecular Architecture, Dynamics and Function of Biomembranes

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Biological membranes are very complex structures that vary considerably in composition depending on their function(s) and location. Multi-disciplinary approaches are vital to understanding the functional, structural and compositional complexity of membrane biogenesis and function. Detailed insights into the pathways and mechanisms leading to the assembly and proper functioning of membranes require co-operative research efforts of biochemists, biophysicists, structural biologists, and molecular and cell biologists. However, students, postdoctoral fellows and junior scientists often find it hard to grasp and apply this mixture of approaches without a broad overview of the field. The proposed Course is an excellent platform and opportunity to acquire an integrated overview of the structure, function and biogenesis of biological membranes and their components, to gain more insight in the possibilities offered by different disciplines and to discuss with experts in the field and learn about the multiple approaches, techniques and specialties in membrane research.

Main topics will include

- Protein translocation
- Organelle shaping
- Vesicle budding/fusion
- Lipid synthesis/degradation (including lipid droplets)
- ER unfolded protein response
- Protein folding and chaperones
- Protein degradation (ERAD)
- Physics of membrane biology (curvature; lipid segregation)
- Membrane biology of bacteria
- Association between different organelles
- Nuclear transport, structure, and envelope formation

Eminent scientists in the field will animate the school.

These include:

Vytas Bankaitis (College Station, US); Patricia Bassereau (Paris, FR); Eefjan Breukink (Utrecht, NL); Pascale Cossart (Paris, FR); Dame Sally Davies (UK); Ulrich Hartl (Martinsried, DE); Manajit Hayer-Hartl (Martinsried, DE); Tom Kirchhausen (Boston, US); Gerrit van Meer (Utrecht, NL); Jodi Nunnari (Davis, US); Nikolaus Pfanner (Freiburg, DE); David Ron (Cambridge); Tom Rapoport (Boston, US); Samara Reck-Petersen (San Diego, US); Liesbeth Veenhof (Groningen, NL); William Wickner (Dartmouth, US);

This Lecture Course, will feature lectures, poster sessions and (in)formal discussions and will be open for graduate students, postdocs and specialists in this field

Organization Committee

Eefjan Breukink & Gerrit van Meer (Utrecht, NL), Pascale Cossart (Paris, FR), Ulrich Hartl (Martinsried, DE), Tom Rapoport (Harvard, US), Bill Wickner (Dartmouth, US)

Application and registration

<http://web.science.uu.nl/cargese2017/>

Registration fee : 725 Euros
Deadline for applications : April 15, 2017



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