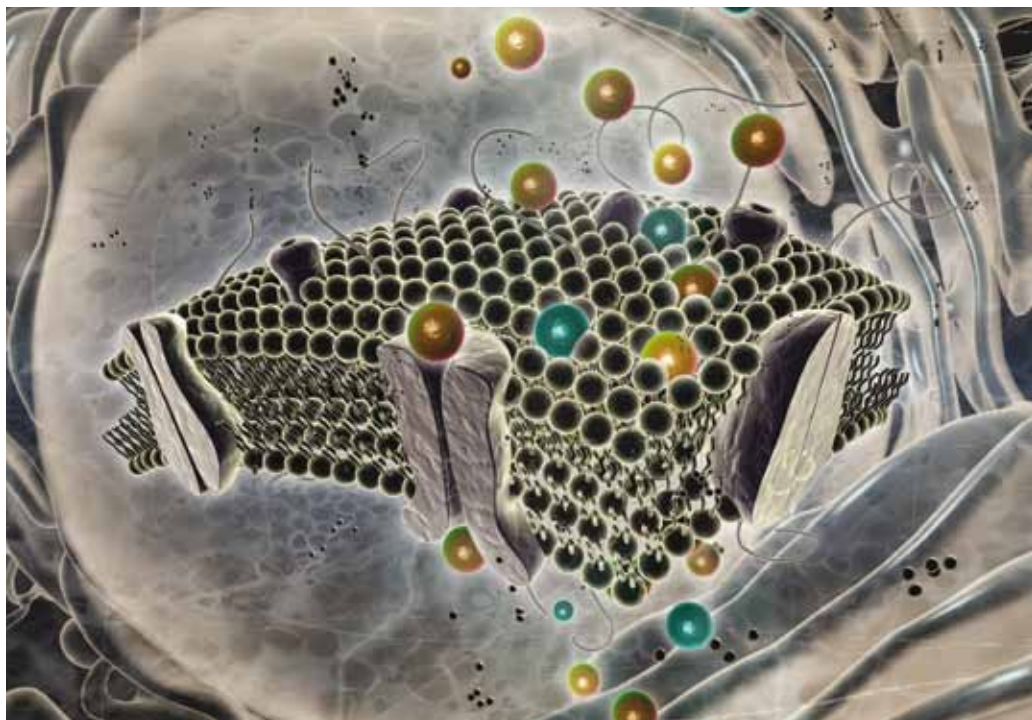


Faraday Discussion 161

Lipids and Membrane Biophysics

11-13 September 2012

Burlington House, London, UK



One of the key challenges in biophysics and chemical biology is gaining an understanding of the underlying physico-chemical basis of the highly complex structure and properties of biomembranes. It used to be thought that the lipid component played a mainly passive role, simply acting as a self-assembled bilayer matrix within which the active protein components functioned. However, it has now become clear that there is an intimate two-way interplay between the lipid and the protein components in determining membrane structure, organization and dynamics, and that lipids play many active roles in biological function. Concepts such as lateral segregation and domain formation, lateral pressure, curvature and curvature elasticity have attracted enormous interest in recent years, although their validity when applied to real biomembranes remains unclear or even obscure.

This Faraday Discussion will consider recent developments in the study of biomembrane structure, ordering and dynamics, with particular emphasis on the roles of lipids in these phenomena. As well as discussing new experimental and theoretical findings and novel methodologies, the meeting will focus on exploring the relevance of concepts from amphiphile self-assembly and soft matter physics to understanding biomembranes.

Themes

- Lipid self-assembly
- Structure, ordering and dynamics of membranes
- Lateral segregation, trans-bilayer coupling and microdomains
- Membrane curvature, micromechanics and fusion
- Lipid-protein interactions: two-way coupling
- Interactions of signalling lipids and other molecules with membranes
- Biomedical and technological applications of lipid membranes

Scientific Committee

Professor John Seddon

Imperial College London, UK (Joint Chair)

Dr Calum Drummond

CSIRO, Melbourne, Australia (Joint Chair)

Professor Colin Bain

Durham University, UK

Professor Derek Marsh

Max-Planck-Institut Göttingen, Germany

Professor Ole Mouritsen

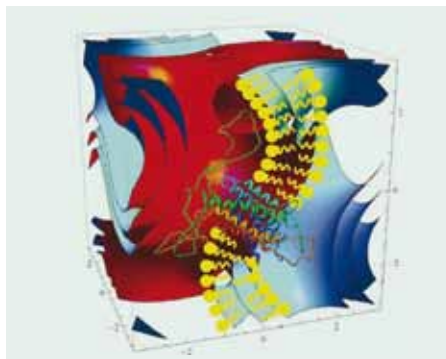
University of Southern Denmark, Denmark

Professor Paul O'Shea

University of Nottingham, UK

Aims

Faraday Discussion 161 aims to bring together membrane biologists, biophysicists, bioengineers and physical chemists to discuss recent theoretical and experimental advances in biomembrane research, and to explore how developments in imaging, spectroscopy and scattering can lead to new insights. Prospects for the development of novel membrane-based biomedical and technological applications will also be explored.



Call for Papers

Offers of papers within any of the themes of the meeting are now invited. Deadlines are listed on this page.

Abstracts for both oral and poster presentations should be sent by email attachment to RSC Events (events@rsc.org) with the following subject header: 'FD161 abstract'. The abstracts should be no longer than one A4 page in portrait layout.

Please include your full address and contact details in the email and indicate whether you are submitting an abstract for oral or poster presentation.

How It Works

The Scientific Committee will select contributed papers to complement the invited presentations on the basis of the abstracts received. The authors will then be asked to submit their work as a full paper, which will form the basis of their short presentation at the meeting. The paper itself must contain new, unpublished work and be submitted by 21 April 2012.

The papers selected for presentation and discussion will be refereed and then sent to all participants as preprints.

Preprints will be issued four weeks in advance of the meeting. The Discussion will be conducted on the assumption that the papers have been read in advance and only **five minutes** will be allowed for each presentation. Most of the time will be devoted to discussion, a record of which will be submitted for publication in the Faraday Discussion Volume which will be published by the RSC approximately six months after the meeting.

Key Deadlines

Abstracts for oral presentation – **18 November 2011**

Abstracts for poster presentation – **13 July 2012**

Early bird registration – **13 July 2012**

Standard registration – **10 August 2012**

Invited Speakers

Professor John Nagle (Introductory)

Carnegie Mellon University, USA

Professor Evan Evans (Closing)

Boston University, USA

Professor Olaf Sparre Andersen

Cornell University, USA

Professor Alfred Blume

Martin-Luther-Universität Halle-Wittenberg, Germany

Professor Markus Deserno

Carnegie Mellon University, USA

Professor Reinhard Lipowsky

MPI of Colloids and Interfaces, Germany

Professor David Needham

Duke University, USA

Professor Thomas Schmidt

Leiden Institute of Physics, The Netherlands

Professor Petra Schille

TU Dresden, Germany

Professor Håkan Wennerström

University of Lund, Sweden

Registration

Registration will open in Spring 2012. Accommodation will be available to book when you register – please see the website for details.

Financial support is available for students and recent graduates. The bursary application form will be available when registration opens.

Venue

The meeting will be held in Burlington House, London.



Networking

Faraday Discussions provide excellent opportunities for interaction with other delegates. Networking will take place through an interactive poster session and the conference dinner which will include the traditional Faraday Loving Cup ceremony.

Faraday Discussion Volume

The Faraday Discussion Volume documents the unique series of discussion meetings. The papers presented at the meeting are published in the Faraday Discussion Volume together with a record of the discussion contributions made at the meeting. Faraday Discussions therefore provide an important record of current international knowledge and views in the field concerned.

The latest ISI citation data give an **impact factor*** for Faraday Discussions of **3.7** emphasising their importance as a forum for developing exciting new ideas.

Sponsoring Faraday Discussion 161

Sponsorship and exhibition opportunities available at this meeting include table-top exhibitions, sponsorship of social events and advertisements in the book of abstracts. Please contact RSC Events for details.

Further Information

All enquiries concerning any aspect of FD161 should be addressed to RSC Events.

*2009 Journal Citation Reports®, (Thomson Reuters 2010)

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