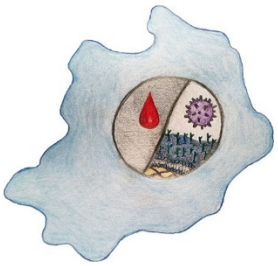

FEBS 2019 Advanced Lecture Course

Biological Surfaces and Interfaces: The Mechanistic View.

June 30 – July 5, 2019
Hotel Eden Roc
Sant Feliu de Guixols, Spain

Program

Organizers:

Chair
Marta Bally
Umeå University
Sweden

Co-chair
Ilya Reviakine
University of Washington – Seattle
WA, USA

Vice-Chair
Delphine Gourdon
University of Ottawa
ON, Canada

Vice-Chair
Chris Lorenz
King's College
London, UK

Sponsors:

FEBS | Microvacuum Ltd. | JPK Instruments | Avanti Polar Lipids

Biointerfaces | AWSensors | Insplorion | BBA Biomembranes

Sunday, June 30th, 2019

17 : 00 -	Registration
19 : 00	Welcome mixer
20 : 00	Dinner

Monday, July 1st, 2019

07 : 30 – 08 : 30	Breakfast
08 : 45 – 09 : 00	M.B./I.R., Welcome and announcements
Session I: Materials in biological milieu	
09 : 00 – 09 : 45	Andrea Salis *Department of Chemical & Geological Sciences, University of Cagliari, Italy* Specific effects of electrolytes at biointerfaces
09 : 45 – 10 : 30	Tobias Weidner *Department of Chemistry, Aarhus University, Denmark* How proteins nucleate materials – a molecular view at the interface
10 : 30 – 11 : 00	Coffee break & poster set-up
11 : 00 – 11:45	Francesca Baldelli Bombelli *Department of Chemistry, Material and Chemical Engineering, Politecnico di Milano, Italy* Nanoparticle-protein conjugates: design, characterization, and biointeractions
11 : 45 – 12 : 05	David Cheung *National University of Ireland Galway, Ireland* Effect of surface structure and chemistry on protein adsorption
12 : 15 –	Lunch and free time
15 : 30 – 16 : 00	Coffee & meet the speakers of session I
16 : 00 – 16 : 45	Viktoria Weber *Department of Physical Chemistry, Danube University Krems, Austria* The blood-biomaterial interface
16 : 45 – 17:05	Birgit Fendl *Danube University Krems, Austria* Association of CRP With Extracellular Vesicles
Session II: Lipid Interfaces	
17:05 – 17 : 50	Tommy Nylander *Department of Physical Chemistry, Lund University, Sweden* Biomolecular interactions at the lipid aqueous interface of non-lamellar liquid crystalline phases.
17 : 50 – 18 : 20	Coffee break
18 : 20 – 19 : 05	Peter Tieleman *Department of Biological Sciences, University of Calgary, AB, Canada* Increasing complexity and realism in computer simulations of biological membranes
19 : 05 – 19: 25	Sarah Waldie *Institute Laue-Langevin, Grenoble, France.* Cholesterol Deuteration and Exploitation for the Study of HDL/LDL Exchange Phenomena in Atherosclerosis
19 : 30 –	Dinner
20 : 30 –	Poster Session I

Tuesday, July 2st, 2019

07 : 30 – 08 : 30	Breakfast
Session II: Lipid Interfaces, cont'd.	
09 : 00 – 9 : 45	Maikel C. Rheinstädter *Department of Physics and Astronomy, McMaster University, Hamilton, ON, Canada* *Neutrons and X-Rays for Health and Disease*
9 : 45 – 10 : 05	Saara Lautala *University of Helsinki, Finland* A potent partial agonist of PKC orients in membranes like the biological activator diacylglycerol
10 : 05 – 10 : 20	Carmen Pettersson *JPK BioAFM, Bruker Nano Surfaces, Berlin, Germany* Investigating Dynamic Biological Processes with High-Speed, High-Resolution Correlative AFM-Light Microscopy
10 : 20 – 10 : 30	Sponsor Pitch talks: Insplorion, Microvacuum
10 : 30 – 11 : 00	Coffee Break & poster viewing
11 : 00 – 11 : 20	Kaori Sugihara *University of Geneva, Switzerland* The mechanism of antimicrobial peptide synergy
11 : 20 – 11 : 40	Dayane Alvares *National University of Cordoba, Argentina; and São Paulo State University - UNESP-IBILCE, Brazil* Impact of an antimicrobial peptide on the membrane fluidity of host membranes: Influence of cholesterol and a hopanoid
11 : 40 – 11 : 55	FEBS Presentation by Claudio Soares, Universidade Nova de Lisboa, Portugal
12 : 00 –	Lunch and free time

Tuesday, July 2st, 2019

15 : 30 – 16 : 00	Coffee & meet the speakers of session II and III
Session III: Biological Membranes	
16 : 00 – 16 : 45	Patricia Bassereau *Physico-Chimie Curie, Institut Curie, Paris, France* Linkers at the interface plasma membrane-cortical actin: only linkers?
16 : 45 – 17 : 30	Natalie Elia *Department of Life Sciences, Ben Gurion University of the Negev, Beer Sheva, Israel* Cytokinetic membrane abscission mediated by the ESCRT complex
17 : 30 – 18 : 00	Coffee break
18 : 00 – 18 : 45	Susan Daniel *School of Chemical and Biomolecular Engineering, Cornell University, Ithaca, NY, USA* Biologically complex supported cell membranes and their applications in host-pathogen interactions
18 : 45 – 19 : 05	Hudson Pace *Umeå University, Sweden* Next-Generation Model Membrane Architectures for Investigating Host-Pathogen Interactions
19 : 05 – 19 : 25	Natalia Baranova *Institute of Science and Technology (IST) – Vienna, Austria* In vitro reconstitution of bacterial cell division
19 : 30 –	Dinner
20 : 30 –	Poster Session II

Wednesday, July 3rd, 2019

07 : 30 – 08 : 30	Breakfast
Session IV: Cells and Tissue Interfaces	
09 : 00 – 9 : 45	Manuel Salmeron-Sanchez *Department of Biomedical Engineering, University of Glasgow, UK* Engineered 3D environments to control stem cell differentiation
9 : 45 – 10 : 30	Wilbur A. Lam *Department of Biomedical Engineering, Georgia Institute of Technology & Emory University School of Medicine, Atlanta, GA, USA* Engineering microsystems to study cell-cell interactions in hematology and vascular biology
10 : 30 – 11 : 00	Coffee break & poster viewing
11 : 00 – 11 : 45	Thomas Crouzier *Division of Glycoscience School of Biotechnology, Royal Institute of Technology (KTH), Stockholm, Sweden* Evading the foreign body reaction with immune-modulating mucin hydrogels
11 : 45 – 12 : 05	Rami Mhanna *American University of Beirut, Lebanon* The sulfation of biomimetic glycosaminoglycans controls growth factor binding and subsequent cell proliferation and differentiation
12 : 05 – 12 : 25	Ralf Richter *University of Leeds, UK* Multivalent Recognition at Fluid Surfaces: The Interplay of Receptor Clustering and Superselectivity
12 : 30 –	Lunch and excursion/free time
19 : 30 –	Dinner
20 : 30 –	Poster Session III

Thursday, July 4th, 2019

07 : 30 – 08 : 30	Breakfast
	Session IV: Cells and Tissue Interfaces: cont'd.
09 : 00 – 09 : 45	Joachim O. Rädler *Faculty of Physics and Centre for Nanosciences, Ludwig Maximilians Universität München, Germany* Structured interfaces for the study of cell migration phenotypes
	Session III: Biological Membranes: cont'd.
09 : 45 – 10 : 30	Petra Schwille *Cellular and Molecular Biophysics, Max Plank Institute of Biochemistry, Martinsried, Germany* How membranes catalyze protein self-organization
10 : 30 – 11 : 00	Coffee and poster viewing
11 : 00 – 11 : 20	Chris Lorenz *King's College London, UK* The effect of oxidised cholesterol on model red blood cell membranes
11 : 20 – 11 : 40	Adree Khondker *McMaster University, Hamilton, ON, Canada* A Molecular Mechanism for Polymyxin-induced Membrane Damage that predicts Bacterial Resistance
11 : 40 – 12 : 00	Jorge Royes Mir *ENS Chimie, Paris, France* Teaching nanomaterials to bacteria: bioproduction of chemically modifiable proteoliposomes.
12 : 00 – 12 : 20	Ferra Pinnock *Cornell University, Ithaca, NY, USA* On-chip synthesis of Ganglioside GM1 for the Treatment of Huntington's Disease
12 : 30 –	Lunch and free time
15 : 30 – 16 : 00	Coffee & meet the speakers of sessions IV and V
	Session V: Organs on a chip
16 : 00 – 16 : 45	Milica Radisic *Institute of Biomaterials & Biomedical Engineering, University of Toronto, ON, Canada* Advances in organ-on-a-chip engineering
16 : 45 – 17 : 30	Robert Passier *Applied Stem Cell Technologies, University of Twente, Enschede, the Netherlands* Human heart-on-chip models for modelling cardiovascular disease
17 : 30 – 18 : 45	Forward Look round-table session
19 : 30	Conference Dinner

Friday, July 5th, 2019

8 : 00	Breakfast
9 : 00	Departure