

**FEBS Workshop *Biological Surfaces and Interfaces:  
Interface Dynamics***

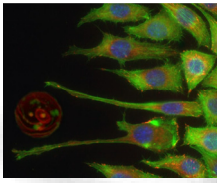
**02 July – 07 July 2017 – Hotel Eden Roc, Sant Feliu de Guixols, Catalonia, Spain**

**Chair: Manuel Salmeron-Sanchez, Glasgow, UK**

**Co-Chair: Ilya Reviakine, Seattle, WA, USA**

**Vice-Chair: Marta Bally, Chalmers, Sweden**

**CONFERENCE PROGRAMME**



**Sunday, July 02**

From 17.00

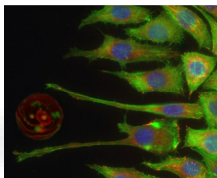
Registration

19.00

*Welcome Drink*

20.00

*Dinner*



**Monday, July 3**

07.30 – 08.45

Breakfast

08.45 – 09.00

Welcome & Information

## Session I – Engineering microenvironments to control cell fate

Chair: Ralf Richter

09.00 – 09.50

**Matthew J. DALBY**

University of Glasgow, UK

*Nanoscale control of stem cell differentiation*

09.50 – 10.40

**Masaru TANAKA**

Kyushu University, Japan

*Interfacial water at the cell/protein/material interface-Design of Biocompatible Polymers Based on the Intermediate Water Concept*

10.40 – 11.10

Coffee Break

11.10 – 12.00

**Andres J GARCIA**

Georgia Institute of Technology, US

*Biofunctional dynamic hydrogels for tissue repair*

12.00 – 12.50

**Pamela HABIBOVIC**

Maastricht University, Netherlands

*Design-driven biomaterials development: decoupling and recombining individual material properties*

12.50 – 13.05

**Malin EDVARDSSON (Sponsor talk Biolin Scientific)**

*Get a super power – enhance your senses with QSense*

13.15

Lunch & Free Time

15.00

*Demonstration of the Q-sense technology by Biolin*

15.45 – 16.15

Coffee Break

## Session II – Membranes, models membranes dynamics

Chair: Delphine Gourdon

16.15 – 17.05

**Ralf RICHTER**

University of Leeds, UK

*Many Weak Interactions Make a Difference – from “Fuzzy” Biomolecular Self Assembly to Superselectivity*

17.05 – 17.35

**Anders LUNDGREN**

University of Natural Resources and Life Sciences, Vienna

*Binding of fimbriated bacteria is force modulated through multivalency irrespective of surface specificity*

17.35 – 18.25

**Peter JÖNSSON**

Division of Physical Chemistry, Lund University, Sweden

*Studying intermolecular interactions between membrane-anchored proteins using hydrodynamic forces*

18.45 – 20.00

Dinner

## After-dinner Keynote Lecture

Chair: Manuel Salmeron-Sanchez

20.15 – 21.15

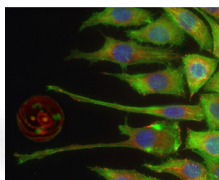
**Molly STEVENS**

Imperial College London, UK

*Exploring and engineering the cell/material interface*

21.15

Poster Session I



Tuesday, July 4

07.30 – 09.00

Breakfast

## Session III – Extracellular matrix and biomaterials

Chair: Tobias Weidner

09.00 – 09.50

**Catherine PICART**

University of Grenoble, France

*Engineered biomaterials coatings for the control of cell fate: from molecular mechanisms to regenerative medicine*

09.50 – 10.40

**Thomas BARKER**

School of Engineering & School of Medicine, University of Virginia, US

*Dynamic molecular complexes in cell interaction with the ECM*

10.40 – 11.10

Coffee Break

11.10 – 11.40

**Dimitris MISSIRLIS**

Max-Planck-Institute for Medical Research, Germany

*Substrate mechanics and the physical state of fibronectin regulate directionality in fibroblast migration*

11.40 – 12.30

**Delphine GOURDON**

University of Ottawa, Canada

*Fibronectin mechanobiology regulates tumorigenesis*

12.30 – 12.45

**Carmen PETERSSON (Sponsor talk JPK)**

*Optical tweezers combined with AFM - Investigating cell reactions to mechanical and biochemical stimuli*

12.45

Lunch & Free Time

15.45 – 16.15

Coffee Break

## Session IV – Molecular interfaces: from proteins to cells

Chair: Aranzazu Del Campo

16.15 – 17.05

**Maria GARCIA-PARAJO**

The Institute of Photonic Sciences, Spain

*The role of nanoclustering and diffusion on integrin activation in the immune system*

17.05 – 17.35

**Chris LORENZ**

King's College London, UK

*Investigating the beginnings of material-driven fibronectin fibrillogenesis with molecular dynamics simulations*

17.35 – 18.25

**Tobias WEIDNER**

Max Planck Institute for Polymer Research, Germany

*Protein control of hard and soft tissue – a molecular view*

18.45 – 20.00

Dinner

## After-dinner Keynote Lecture

Chair: Matt Dalby

20.15 – 21.15

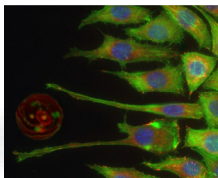
**Viola VOGEL**

Dep. of Health Sciences and Technology, ETH, Switzerland

*Mechanobiology: the art of forming and forcing bonds to break*

21.15

Poster Session II



Wednesday, July 5

07.30 – 09.00

Breakfast

## Session V – Migration and physical forces

Chair: Reinhard Fassler

09.00 – 09.50

**Xavier TREPAT**

Institute for Bioengineering of Catalonia, Spain

*Collective guidance of cell migration and invasion*

09.50 – 10.40

**Laura MACHESKY (IUBMB Lecturer)**

Beatson Institute for Cancer Research, Glasgow, UK

*Role of the actin cytoskeleton, matrix and stiffness in cancer invasion and metastasis*

10.40 – 11.10

Coffee Break

11.10 – 11.40

**Jake HAY**

University of Glasgow, UK

*Utilising non-pathogenic bacteria as a substrate for mesenchymal stem cell attachment and differentiation*

11.40 – 12.30

**Timo BETZ**

Institute of Cell Biology, ZMBE, Münster, Germany

*Activity at the border: How active cytoskeleton-membrane interaction control cell mechanics*

12.30

Lunch & Free Time

14.00

Excursion / Social Event

18.45 – 20.00

Dinner

## After dinner-Keynote Lecture

Chair: Andres Garcia

20.15 – 21.15

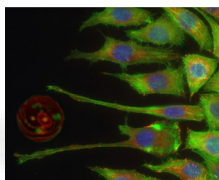
**Reinhard FÄSSLER**

Max Planck Institute of Biochemistry, Martinsried, Germany

*Mechanosensing via cell-matrix adhesions*

21.15

Poster Session III



Thursday, July 6

07.30 – 09.00

Breakfast

## Session VI – Dynamic interfaces

Chair: Timo Betz

09.00 – 09.50

**Aranzazu DEL CAMPO**

INM - Leibniz Institute for New Materials, Germany

*Light-triggered dynamic biointerfaces*

09.50 – 10.40

**Yukiko MATSUNAGA**

Institute of Industrial Science, University of Tokyo, Japan

*Actin cytoskeleton and cell migration in cancer*

10.40 – 11.10

Coffee Break

11.10 – 11.40

**Jenny MALMSTRÖM**

University of Auckland, New Zealand

*Organisation and functionalisation of protein nanorings*

11.40 – 12.10

**Ciro CHIAPPINI**

King's College London, UK

*Generating molecular replicas of tissues by nanoneedle interfacing*

12.10 – 12.40

**Marta BALLY**

Chalmers University of Technology, Sweden

*Cell-surface mimics to probe interactions between herpes simplex viruses and cell-surface carbohydrates*

12.40

Lunch & Free Time

15.45 – 16.15

Coffee Break

## Session VII – Translational Interfaces

Chair: Catherine Picard

16.15 – 16.45

**Catherine BERRY**

University of Glasgow, UK

*The Development of Bioengineered Mesenchymal Stem Cell Endosteal and Vascular Bone Marrow Models*

16.45 – 17.15

**Ilya REVIKINE**

University of Washington, USA

*Platelet-biomaterial Interactions in Material Hemocompatibility: From Implant-Induced Thrombosis to Integration*

17.15 – 17.55

**Kevin SHAKESHEFF**

School of Pharmacy, University of Nottingham, UK

*Thermoresponsive materials as injectable matrices for regenerative medicine*

18.00 – 19.00

Forward Look Plenary Discussion

Chair: Manuel Salmeron-Sanchez

19.30

Drinks Reception & Workshop Dinner

Friday, July 7  
Breakfast & Departure

Sponsors



INTERNATIONAL UNION  
OF BIOCHEMISTRY AND  
MOLECULAR BIOLOGY



This meeting is endorsed by the American Vacuum Society (AVS),  
Biomaterial Interfaces Division of the AVS.



This meeting is endorsed by the International Union for Vacuum  
Science, Technique and Applications (IUVSTA).