



**RESEARCH CONFERENCES**

ESF-EMBO Symposium

# Biological Surfaces and Interfaces

Hotel Eden Roc, Sant Feliu de Guixols  
(Costa Brava) • Spain  
1-6 July 2007

Chair: **Marcus Textor**, ETH Zürich, CH

Co-Chair: **Giovanni Marletta**, University of Catania, IT

Vice-Chairs: **Julie Gold**, Chalmers University of Technology, SE &  
**Joachim P. Spatz**, MPI for Metals Research, Stuttgart / University of  
Heidelberg, DE

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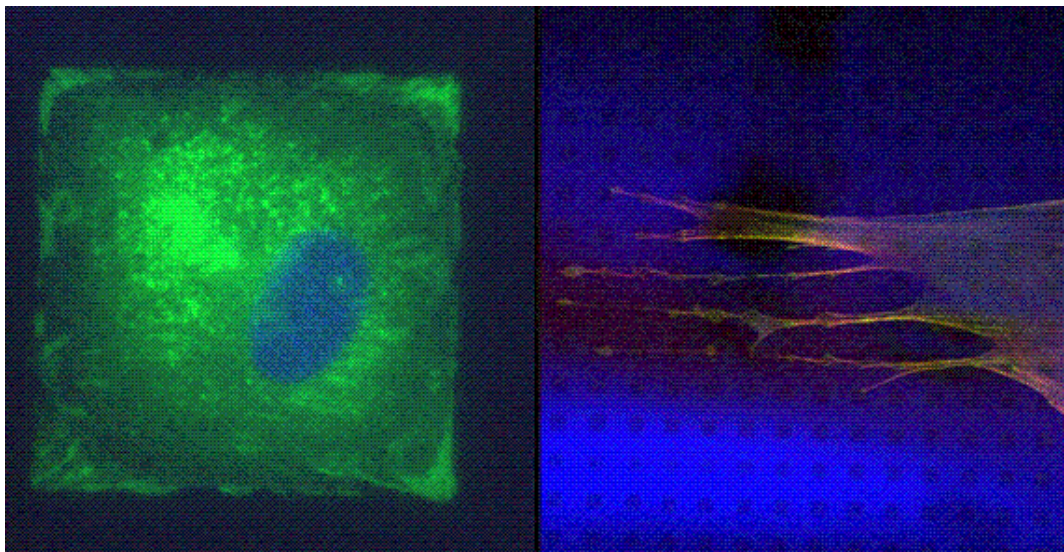


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# Final Programme

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## Sunday, 1 July

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Late afternoon / early evening	Registration at the ESF desk
19.00	Dinner
20.30	Reception & Drinks

## Monday, 2 July

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08.45-09.00	Conference Opening
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### Session 1: Healing & Tissue Regeneration

Chair: Lia Addadi, Weizmann Institute of Science, IL

09.00-09.40	<b>Masayuki Yamato</b> Tokyo Women's Medical University, JP <i>Cell Sheet Engineering for Three-Dimensional Tissues</i>
09.40-09.55	Discussion
09.55-10.35	<b>Luigi Ambrosio</b> University of Naples, IT <i>Polymer Scaffolds for Connective Tissue Regeneration</i>
10.35-10.50	Discussion
10.50-11.20	Coffee Break
11.20-12.00	<b>Andrés Garcia</b> Georgia Institute of Technology (GATECH), US <i>Biointerfaces Directing Tissue Healing</i>
12.00-12.15	Discussion
12.15-12.55	<b>Jeffrey Hubbell</b> Ecole Polytechnique Federale de Lausanne (EPFL), CH <i>Biofunctional Polymers Inducing Tissue-Specific and Immune-Specific Reactions</i>
12.55-13.15	Discussion
13.15	Lunch

### Session 2: Steering Cell Function at Interfaces

Chair: Marcus Textor, ETH Zürich, CH

16.00-16.40	Panel Discussion
16.40-16.55	Discussion
16.55-17.20	Coffee Break

- 17.20-18.00 **Duncan Sutherland**  
University of Aarhus, DK  
*Proteins at Nanostructured Interfaces for Steering Cellular Biosystems*
- 18.00-18.15 Discussion
- 18.15-18.55 **Douglas Weibel**  
University of Wisconsin, US  
*Controlling Bacterial Cell Shape Using Chemistry Nanostructures*
- 18.55-19.10 Discussion
- 19.15 Dinner
- 20.30-21.10 **Samuel Stupp**  
Northwestern University, US  
*Signalling at the Interface Between Cells and Nanostructures*
- 21.10 Poster session I & drinks

## Tuesday, 3 July

### Session 3: Biomolecules at Interfaces/Biomolecular Interactions

Chair: Julie Gold, Chalmers University of Technology, SE

- 09.00-09.40 **Lia Addadi**  
Weizmann Institute of Science, Rehovot, IL  
*Molecular Recognition at the Interface Between Organized Surfaces in Biology*
- 9.40-9.55 Discussion
- 09.55-10.35 **Gerald Pollack**  
University of Washington, US  
*The Unexpectedly Critical Role of Water on Surface Properties*
- 10.35-10.50 Discussion
- 10.50-11.20 Coffee Break
- 11.20-12.00 **Ashutosh Chilkoti**  
Duke University, US  
*Manipulating and Quantifying Biomolecules at Engineered Interfaces*
- 12.00-12.15 Discussion
- 12.15-12.55 **Nicholas Abbott**  
University of Wisconsin, US  
*Amplification of Biological Interactions using Liquid Crystals*
- 12.55-13.15 Discussion
- 13.15 Lunch

## Session 3: Biomolecules at Interfaces/Biomolecular Interactions (continued)

Chair: Erik Reimhult, ETH Zürich, CH

- 16.00-16.40      **Horst Vogel**  
Ecole Polytechnique Federale de Lausanne (EPFL), CH  
*Investigating the Activation of G Protein Coupled Receptors by Single Molecule Fluorescence Microscopy*
- 16.40-16.55      Discussion
- 16.55-17.10      **Sylvie Roke** (contributed presentation)  
MPI for Metals Research, Stuttgart, DE  
*Vibrational Sum Frequency Generation Scattering: Bridging the Gap between Surface Science & Soft Matter*
- 17.10-17.25      **Nicolas Voelcker** (contributed presentation)  
Flinders University, AU  
*Evaluating Stem Cell-Biomaterial Surface Interactions Using Cell Microarrays*
- 17.25-17.55      Coffee Break
- 17.55-19.00      Poster Session I (continued)
- 19.00              Dinner
- 20.30-21.10      **Bengt Kasemo**  
Chalmers University of Technology, US & Göteborg University, SE  
*Supported Lipid Bilayers and Vesicles: Mechanistic Aspects, Lipid Exchange and Protein Interactions*
- 21.10              Poster Session II & Drinks

### Wednesday, 4 July

## Session 4: Vesicles & Membranes

Chair: Bengt Kasemo, Chalmers University of Technology, SE

- 09.00-09.40      **Steven Boxer**  
Stanford University, US  
*Imaging and Reaction Dynamics in Model Membrane*
- 09.40-09.55      Discussion
- 09.55-10.35      **Patricia Bassereau**  
Institut Curie, FR  
*Deformation of Lipid Membranes by Proteins*
- 10.35-10.50      Discussion
- 10.50-11.20      Coffee Break
- 11.20-12.00      **Suzanne Jarvis**  
Trinity College Dublin, IE  
*Interactions at the Membrane-Fluid Interface*
- 12.00-12.15      Discussion
- 12.15-12.55      **Claudia Steinem**  
Georg-August University, Göttingen, DE  
*Membranes on Nanoporous Supports: A New Tool to Monitor Ion Channel Activities*

12.55-13.15	Discussion
13.15	Lunch
Afternoon	Half-day excursion to Girona (optional)
19.30	Get-together & Conference Dinner

### Thursday, 5 July

## Session 5: Novel Surface Chemistry/Engineered Interfaces

Chair: Giovanni Marletta, Università di Catania, IT

09.00-09.40	<b>Martin Möller</b> RWTH Aachen, DE <i>Tba</i>
09.40-09.55	Discussion
09.55-10.35	<b>Szczepan Zapotoczny</b> Jagiellonian University, PL <i>Molecular Engineering of Stimulus Responsive Surfaces</i>
10.35-10.50	Discussion
10.50-11.20	Coffee Break
11.20-12.00	<b>Phillip Messersmith</b> Northwestern University, US <i>Interfacial Mimicry of Mussel: Enhancing and Preventing Bioadhesion for Medical Applications</i>
12.00-12.15	Discussion
12.15-12.55	<b>Jukka Lausmaa</b> SP Borås, SE <i>Imaging Mass Spectrometry for Molecular Mapping of Biosurfaces and Interfaces</i>
12.55-13.15	Discussion
13.15	Lunch

## Session 6: Contributed Presentations

Chair: Janos Vörös, ETH Zürich, CH

16.00-16.15	<b>Christian Dittrich</b> (contributed presentation) University of Basel, CH <i>Purpose and Adaptability: Induced Self-Assembly of a Biological Peptide Motif</i>
16.15-16.30	<b>Sofia Svedhem</b> (contributed presentation) Chalmers University of Technology, SE <i>The action of phospholipase D on supported lipid bilayer</i>
16.30-16.45	<b>Elena Martinez</b> (contributed presentation) Barcelona Science Park, ES <i>Production of Functionalised Micro and Nanostructured Polymer Surfaces to Trigger Mesenchymal Stem Cell Differentiation</i>
16.45-17.00	<b>Susan Perkin</b> (contributed presentation) Oxford University, UK <i>Interactions Between Charge Mosaics</i>

17.00-17.30	Coffee Break
17.30-19.00	Poster Session II continued
19.00	Dinner
20.30-21.10	<b>Buddy Ratner</b> University of Washington, US <i>Engineering the Biointerface with Precision Control of Proteins</i>
21.10	Poster Session II (continued) & Drinks

### Friday, 6 July

## Session 7: Complexity of Interfaces at Different Length Scales

Chair: Samuel Stupp, Northwestern University, US

09.00-09.40	<b>Andreas Janshoff</b> University of Mainz, DE <i>Forces and Dynamics in Cell Adhesion</i>
09.40-09.55	Discussion
09.55-10.35	<b>Will Hancock</b> Pennsylvania State University, US <i>Using Fields, Surface Chemistry and Microfabrication to Control Kinesin-Driven Microtubule Transport</i>
10.35-10.50	Discussion
10.50-11.20	Coffee Break
11.20	Forward Look Plenary Discussion
12.00	Lunch & Departure

### Abstracts, Posters & Short Oral Presentations

There will be no short talks other than those listed on the programme.

All other abstracts are accepted as posters. The list of accepted posters is available from [www.esf.org/conferences/07222](http://www.esf.org/conferences/07222).

Posters can be fixed with self-adhesive tape, blu-tack or drawing pins onto double-sided poster panels. Recommended poster size is 130 cm high x 130 cm wide. Use letters and drawings that can be read from approximately 100 cm distance.