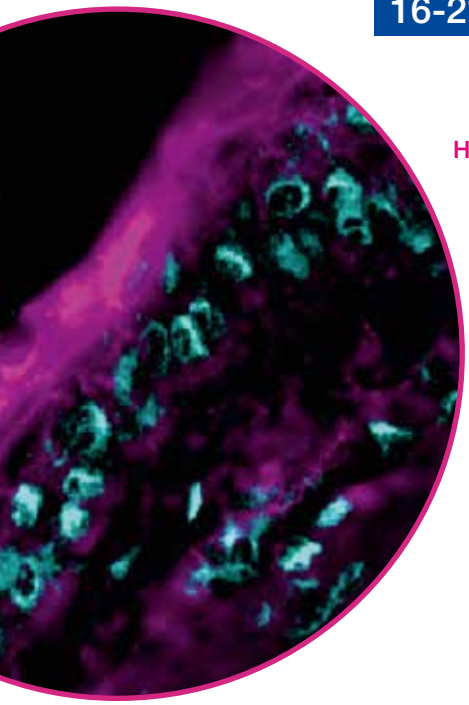
10th

International Conference and Workshop on

BIOLOGICAL BARRIERS

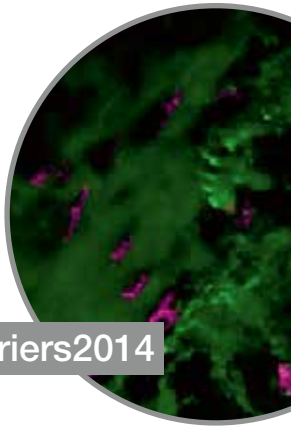
16-21 February 2014



Helmholtz-Institute
for Pharmaceutical
Research Saarland

and

Saarland University



www.uni-saarland.de/biobarriers2014

Programme Chairs and Organisers:
Prof. Dr. Claus-Michael Lehr, apl. Prof. Dr. Ulrich F. Schäfer,
Prof. Dr. Marc Schneider, Dr. Nicole Daum, Dr. Steffi Hansen,
Dr. Brigitta Loretz, Dr. Maike Windbergs

Helmholtz-Institut für Pharmazeutische Forschung Saarland

HELMHOLTZ ZENTRUM FÜR INFEKTIONSFORSCHUNG

UNIVERSITÄT DES SAARLANDES

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PROGRAMME

Sunday Feb 16, 2014

Nanomedicine

- **Opening of the Conference by the Programme Chairs and Organisers**
- **Hot Topics in Nanomedicine**
  Patrick Couvreur (University of Paris-Sud, FR)
- **Lab-on-a-Chip Approach to Drug Delivery**
  Ali Khademhosseini (MIT, US)
- **Crossing Biological Barriers Promoted by Cyclodextrins**
  Gerhard Wenz (Saarland University, DE)
- **Microfluidics for Encapsulation and Controlled Release**
  David A. Weitz (Harvard University, US)
- **Nanomedicines and Penetration of Biological Barriers**
  David Grainger (University of Utah, US)
- **Porous PLGA Particles**
  Steven Schwendemann (University of Michigan, US)
- **Bio Meets Nano: The Nanoparticle-Protein Corona**
  Roland Stauber (University of Mainz, DE)
- **Immunotoxicity of Nanomaterials**
  Bengt Fadeel (Karolinska Institute, SE)
- **Round Table Discussion**

Monday Feb 17, 2014

Bacterial Barriers

- **Welcome Address by Dirk Heinz, Scientific Director of Helmholtz Centre for Infection Research (HZI)**
- **Polymers for Overcoming Bacterial and Eukaryotic Cellular Barriers**
  Cameron Alexander (University of Nottingham, UK)

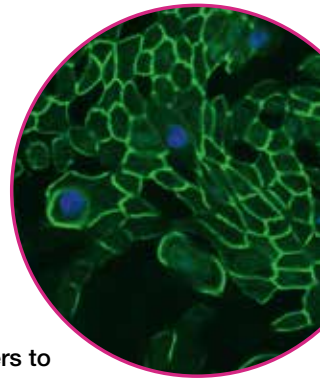
- **Transport Phenomena at the Bacterial Cell Wall**
  Mathias Winterhalter (University of Bremen, DE)

- **Antimicrobial Peptides, Peptidomimetics and Cell-Penetrating Peptides**
  Henrik Franzyk (University of Copenhagen, DK)

- **Invasin Modified Drug Carriers**
  Petra Dersch (HZI, DE)

- **Bacteria Movement in Biofilms**
  Romain Briandet (INRA, FR)

- **Round Table Discussion**



Non Cellular Barriers: Mucus and Surfactant

- **Mucus and Surfactant as Barriers to Pulmonary Drug Delivery**
  Claus-Michael Lehr (HIPS, DE)

- **Lung Surfactant**
  Jesus Perez-Gil (University of Madrid, ES)

- **Particle Transport Through Mucus**
  Justin Hanes (Johns Hopkins School of Medicine, US)

- **Techniques for Analysing Mucus**
  Kevin Braeckmans (Ghent University, BE)

- **Mucus in Gastrointestinal Drug Delivery**
  Catherine Nordgård (University of Trondheim, NO)

- **Transport Across the Buccal Mucosa**
  Eva Roblegg (University of Graz, AT)

- **Contributed Talks and Poster Walk**

Tuesday Feb 18, 2014

Overcoming the Skin Barrier

- **Welcome Address by Volker Linneweber, President of Saarland University**
- **Transdermal Vaccination Against HIV by the DermaVir Patch**
  Julianna Lisziewicz (Genetic Immunity, US)
- **Follicle Targeting**
  Steffi Hansen (HIPS, DE)
- **Laser Poration for Vaccination**
  Richard Weiß (University of Salzburg, AT)

Skin Barrier - New Aspects

- **Tight Junctions**
  Johanna Brandner (University Hospital Hamburg, DE)
- **Skin Defensins**
  Jürgen Harder (University of Kiel, DE)
- **Extension of the Jmax Concept**
  Michael Roberts (University of Queensland, AU)

Skin Barrier - Analytical Techniques

- **Correlative Microscopy of the Human Skin Barrier**
  Roger Wepf (ETH, CH)
- **Computational Modelling of the Skin Barrier**
  Dirk Neumann (Scientific Consilience, DE)
- **Lateral Diffusion**
  Barrie Finnin (Monash University, AU)
- **Chemically Selective Visualisation by Confocal Raman Microscopy**
  Maike Windbergs (Saarland University, DE)

- **Raster Image Correlation Spectroscopy on Liposomes**
  Jonathan Brewer (University of Southern Denmark, DK)

- **Glycosylation Facilitates Skin Transport of Macromolecules**
  Samir Mitragotri (University of California, US)

- **Contributed Talks and Poster Walk**

Wednesday Feb 19, 2014

In Vitro Models of Biological Barriers

- **Welcome Address by Mardas Daneshian, Center for Alternatives to Animal Testing-Europe (CAAT)**

- **Skin Models**
  Joke Bowstra (Leiden University, NL)

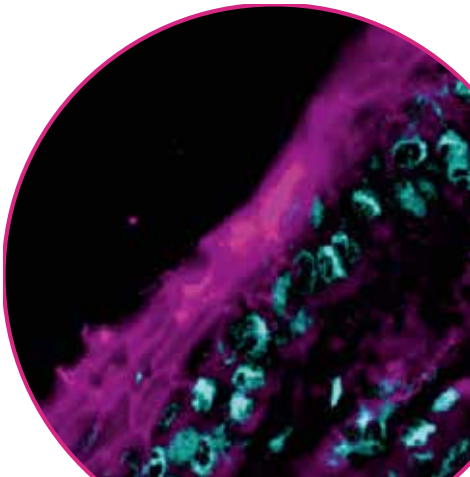
- **Lung Models in Medicine and Toxicology**
  Donna Davies (University of Southampton, UK)

- **Lung Models in Drug Delivery**
  Nicole Daum (HIPS, DE)

- **Dynamic Models of the Gastrointestinal Tract**
  Heike Walles (University of Würzburg, DE)

- **Human-on-a-Chip**
  Uwe Marx (Technical University of Berlin, DE)

- **Round Table Discussion**



REGISTRATION AND PRICING

Name: _____

Affiliation: _____

E-mail: _____

Date: _____

Signature: _____

Please select the registration fee of the relevant combination:

	Academia		Industry	
	Early	Regular	Early	Regular
Conference Only	O €350	O €500	O €600	O €750
Conference & Lab Course	O €600	O €900	O €1.100	O €1.400

Early registration fee applies before 15 December 2013.

All fees include a conference dinner, various receptions, basic lunch catering and public transportation within Saarbrücken.

For participants who will submit abstracts, please specify:

O I would prefer a poster presentation

O I want my abstract to be considered for an oral presentation

If you wish to participate in lab courses, please indicate your preferences below. Please note: You can participate in 2 out of 3 lab courses.

- **Lab Course 1** Skin drug delivery
  O First Choice O Second Choice
- **Lab Course 2** Advanced analytical techniques
  O First Choice O Second Choice
- **Lab Course 3** Nanomedicines
  O First Choice O Second Choice

Places in lab courses are limited and will be assigned on a first come, first served basis!

Register online: www.uni-saarland.de/biobarriers2014
Or send your registration by fax to: **+49 – 681 – 302 – 4270**

LAB COURSES

The lab courses are designed to provide instruction in advanced analytical techniques and methods relevant to skin research and nanomedicine. The courses offer some theoretical introduction as well as hands-on experience in the lab. Small group sizes (maximum 2x6) allow for intensive training and discussion. The programme is designed primarily to introduce young scientists to standard techniques as well as new equipment, and to provide a comparison of technologies. Last but not least, the setting also provides an excellent opportunity for networking.

- **Lab Course 1** Skin drug delivery
  Skin preparation and segmentation; permeation and penetration studies; tape stripping; artificial membranes.

- **Lab Course 2** Advanced analytical techniques
  Visualisation by confocal Raman microscopy, correlative microscopy (SEM-fluorescence overlay); asymmetric flow field flow fractionation (AFFFF), and other quantification and visualisation techniques.

- **Lab Course 3** Nanomedicines
  Nanoparticle preparation, dynamic light scattering and nanoparticle tracking analysis, particle dissolution testing.

The three lab courses are run in parallel and are each repeated once. It is therefore possible to participate in two out of the three courses. A lab course can only be chosen as a complete unit – individual topics from different courses cannot be selected and combined, for organisational reasons.

Please note that lab courses are finish by lunchtime on Friday February 21, 2014.

ABSTRACTS AND POSTERS

Participants who wish to give a poster or contributed oral presentation must submit a 1 page (A4) abstract. Slots for contributed oral presentations will be assigned at the organisers' discretion.

Abstracts should be prepared in accordance with the abstract template, found on the homepage.

CONTACT

Contact the KWT conference office for further information, registration and booking:

KWT - Conference Office
T: +49 - 681 - 302 - 2656
F: +49 - 681 - 302 - 4270
biobarriers2014@mx.uni-saarland.de

KWT
Universität des Saarlandes
Kontaktstelle für Wissens- und Technologietransfer