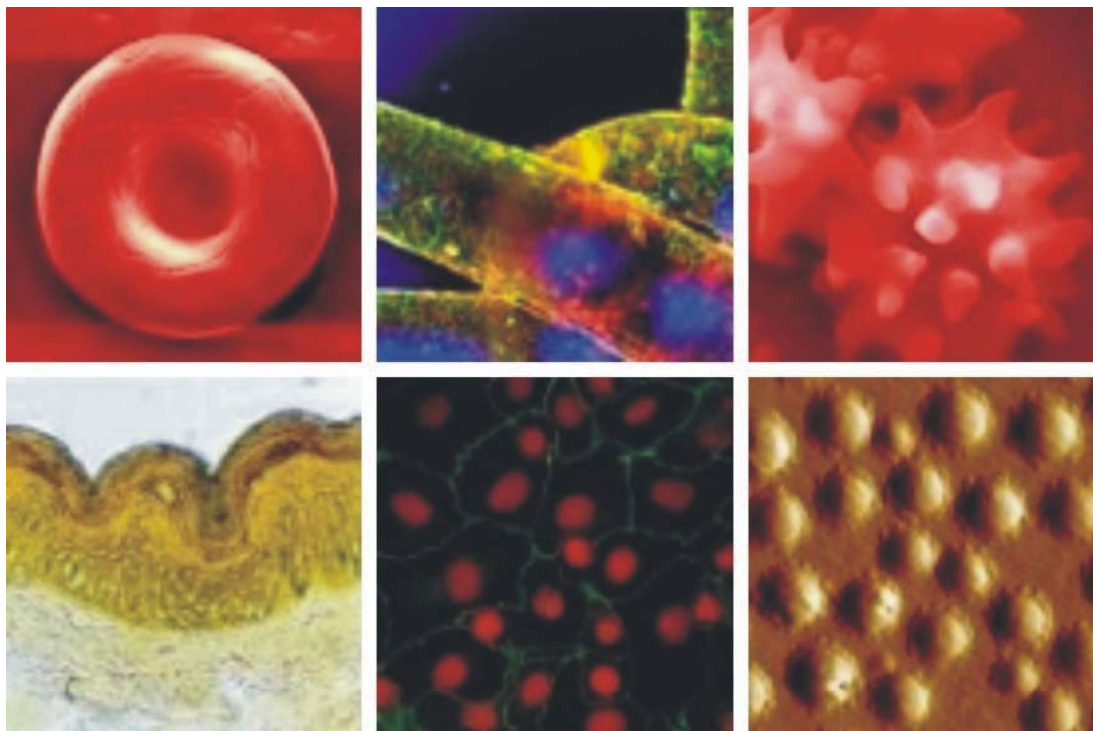


6th International Conference and Workshop on
**Cell Culture and *in vitro* Models
for Drug Absorption and Delivery**



March 1 – 10, 2006

Department of Biopharmaceutics and
Pharmaceutical Technology
Saarland University, Saarbrücken, Germany



UNIVERSITÄT
DES
SAARLANDES



stiftung
europrofession

Programme Chairs and Organisers:

Prof. Dr. Claus-Michael Lehr
Dr. Ulrich F. Schaefer

Wednesday, March 1st, 2006

Seminar 1: "Modelling and Overcoming the Skin Barrier"
Wednesday and Thursday, March 1st and 2nd, 2006

- 14:00 Welcome Address
- 14:15 *Key Note Lecture:* Structure and Function of the Human Skin Barrier
J. A. Bouwstra, Leiden University, The Netherlands
- 14:45 *Key Note Lecture:* Alternatives to Animal Testing – What's in the pipeline?
M. Liebsch, Federal Institute for Risk Assessment (BfR), Berlin/ Germany
- 15:15 - 15:30 Coffee Break

IN VITRO SKIN PERMEATION STUDIES

- 15:30 Standardisation of Skin Permeation Experiments
U. Bock, Across Barriers, Germany
- 16:00 Native Versus Reconstructed Human Skin
M. Schäfer-Korting, Free University Berlin, Germany
- 16:30 - 16:45 Coffee Break

RECONSTRUCTED SKIN MODELS

- 16:45 Short Presentations of Commercially Available Reconstructed Skin Models:
- EpiSkin, L'Oreal, France
 - Skinethic, SkinEthic, France
 - Phenion Model, Phenion, Germany
 - AST2000, CellSystems, Germany – to be confirmed
 - EpiDerm, MatTek, USA – to be confirmed
- following Panel Discussion
- 18:00 Adjourn and Welcome Reception

Thursday, March 2nd, 2006

BIOINFORMATICS APPROACHES TO MODEL THE SKIN BARRIER

- 08:30 Key Note Lecture: Role of Bioinformatics in the Context of New Medicines
T. Lengauer, Max-Planck-Institute for Computer Science, Saarbrücken/ Germany
- 09:00 Maximum Flux Concept to Predict Skin Permeation
M.S. Roberts, University of Queensland, Australia
- 09:30 Choosing the Right Predictors for Skin Permeation
J. Pugh, University of Cardiff, UK
- 10:00 - 10:30 Coffee Break
- 10:30 An Expert System for Skin Irritation and Corrosion
M. Herzler, Federal Institute for Risk Assessment (BfR), Berlin/ Germany
- 11:00 3D-Simulation of Diffusion Processes in the Skin
G. Wittum, Ruprecht-Karls-University Heidelberg, Germany
- 11:30 Bioinformatics Approach to Predict Skin Permeation
D. Neumann, Center for Bioinformatics, Saarland University, Germany
- 12:00 – 13:30 Lunch Break

SKIN BARRIER AND NANOPARTICLES

- 13:30 Targeting of Nanoparticles to Hair Follicles
J. Lademann, Charité, Germany
- 14:00 Carnauba Wax Nanoparticles for Sun Protection
C. Müller-Goyman, University of Braunschweig, Germany
- 14:30 *in vitro* Skin Penetration Studies with ZnO and TiO₂ Nanoparticle Formulations in Pig Skin
A. Gamer, BASF, Ludwigshafen, Germany
- 15:00 – 15:15 Coffee Break

NEW APPROACHES TO SKIN DRUG DELIVERY

- 15:15 Percutaneous Absorption of Tea Tree Oil
J. Reichling, Ruprecht-Karls-University Heidelberg, Germany
- 15:45 Liposomes for Skin Drug Delivery
A. Fahr, University Jena, Germany
- 16:15 – 16:30 Coffee Break

NOVEL ANALYTICAL AND VISUALISATION TOOLS

- 16:30 Sequential Injection Analysis - a Tool for Automated Monitoring
P. Solich, Charles University, Prague/ Czech Republic
- 16:50 Confocal and Multiphoton Laser Scanning Microscopy
K. König, IBMT, Germany
- 17:10 High Speed and Ultra High Speed Imaging by Laser Microscopy
P. Lipp, Saarland University, Germany
- 17:30 Discussion and Adjourn
- 18:00 GET TOGETHER – Science Park Saar

Friday, March 3rd, 2006

LAB-COURSE 1 (two modules running in parallel, each for half a day)

Number of participants is limited to 24 persons – early registration recommended!

09.00 - 12:30 Morning Course

14:00 - 17:30 Afternoon Course

Module A: FRANZ-DIFFUSION CELL
incl. experiments with human skin and reconstructed epidermis models

U. Schäfer, A. Henning, Saarland University

Module B: SAARBRÜCKEN PENETRATION MODEL
(full thickness human skin)

J. Luengo, S. Hansen, Saarland University

Saturday, March 4th, 2006

GALENOS NETWORK – all members and non members are welcome to participate

09:30 Progress-Report on Marie-Curie Research Training Network
“Galenos Euro-PhD in Advanced Drug Delivery”
C.-M. Lehr, Co-ordinator Galenos Network

10:00 "Students' Day" - Poster Presentations
Short oral presentations of participants' posters. Coffee being served.

12:00 – 14:00 Working Lunch: Galenos Network Meeting

14:00 Management Training Course:
International Research and Project Management in the Field of Life Sciences
TBA, Eurice, Germany

18:00 Adjourn

Sunday, March 5th, 2006

SOCIAL EVENT

Excursion Saar-Lor-Lux region to several places of interest.

Monday, March 6th, March

Seminar 2: "Mucosal Barriers"
Monday and Tuesday, March 6th and 7th, 2006

09:00 Opening and Welcome by C. Ege, State Secretary of Saarland Ministry of Economic Affairs

GASTROINTESTINAL BARRIER AND ORAL DRUG DELIVERY

09:15 *Key Note Lecture:* Epithelial Transporters and Efflux Systems Affecting Oral Bioavailability
Leslie Z. Benet, University of California, U.S.A.

10:00 – 10:30 Coffee Break/ Posters

10:30 Standardisation and Validation of *in-vitro* Permeability Studies
E. Haltner, Across Barriers, Germany

11:00 Predictive Dissolution Testing
J. Krämer, PHAST, Germany

11:30 BCS Classification and Biowaivers
D. Barends/ M. Nouwen, RIVM, The Netherlands

12:00 - 14:00 Lunch Break

Parallel: 12:00 - 14:00 Working Lunch: Co-ordinators Meeting of Marie Curie Consortium

PULMONARY BARRIER

14:00 Cell Culture Models of Respiratory Epithelia
B. Forbes, Kings College London, UK

14:30 Transporter Systems Protein at Air Blood Barrier
M. Gumbleton, Cardiff University, UK

15:00-15:15 Coffee Break

OCULAR BARRIER

15:15 Ocular Cell Culture Models for Cornea and Retinal Pigment Epithelium
A. Urtti, University of Helsinki, Finland

15:45 A Human Corneal Equivalent from SV40 Immortalised Cell Lines
M. Zorn-Kruppa, German Animal Welfare Federation - Animal Welfare Academy, Germany

16:15-16:30 Coffee Break

BLOOD BRAIN BARRIER

16:30 *in vitro* Models of the Blood Brain Barrier
G. Fricker/ V. Reichel, Ruprecht-Karls-University Heidelberg, Germany

17:00 *in silico* Modelling of Blood Brain Barrier Permeability
M. Hutter, Center for Bioinformatics, Saarland University, Germany

17:30 Adjourn

18:00 Reception

Tuesday, March 7th, March

Theme day: Impact of Nanobiotechnology on New Medicines
Sponsored by Stiftung Europrofession * * * Location: European Academy, Otzenhausen

- 08:00 Departure/ Transfer to European Academy, Otzenhausen
- 09:15 Welcome Reception
- 09:45 Nanotechnologies for Drug Delivery: 30 Years of Intensive Research and Now?
P. Couvreur, Université de Paris-Sud, France
- 10:30 Transport Across the Blood Brain Barrier: What Can Bring the Colloids
J.P. Benoit, Université d'Angers, France
- 11:15 – 11:45 Coffee Break
- 11:45 Nanomedicines for Cancer Therapy
G. Storm, University of Utrecht, The Netherlands
- 12:15 Liposome Technology Revisited
S. Antimisiaris, Patras University, Greece
- 12:45 – 14:30 Lunch
- 14:30 Trojan Implantable Systems for the Delivery of Nanotechnologies Carrying Nucleic Acids
E. Fattal, University Paris-Sud, France
- 15:00 Biodegradable Nanoparticles for Oral Delivery of Water Insoluble Drugs
R.K. Majeti, NIPER, India
- 15:30 – 15.45 Coffee Break
- 15:45 Biodegradable Poymers for DNA Based Drugs
W. Henninck, University of Utrecht, The Netherlands
- 16:15 Nanoparticles for Oral Drug Delivery
P. Maincent, University of Nancy 1, France
- 16:45 New Drug Delivery Opportunities for Micro- and Nanogels?
S. C. De Smedt, Ghent University, Belgium
- 17:15 Discussion Round Table
- 17:45 Closing Remarks
- 18:30 Dinner Buffet
- 21:30 Departure/ Transfer to Saarbrücken

Wednesday, Thursday and Friday, March 8th, 9th and 10th

LAB-COURSE 2

Each course module takes four hours and comprises an introductory seminar and experiments. The six modules are rotating during these three days, so that each participant will attend each module. Two days according to the time schedule below.

Number of participants is limited to 60 persons – early registration recommended!

Time-Schedule:

08:30 - 12:30 Morning Course

14:00 - 18:00 Afternoon Course

Modules:

1. **Transport and Visualization studies: Transwell™-System**
C. Baldes, E. Collnot und S. Tätz, Saarland University, Germany
2. **Transport and Visualization studies: Confocal Laser Scanning Microscopy**
M. Schneider, Saarland University, Germany
A. Lamprecht, University of Franche-Comté, France
3. **Cell Binding and Uptake**
F. Gabor, University of Vienna, Austria
S. Motz and C. Zimmer, Saarland University, Germany
4. **Bioelectrics of Epithelia (Ussing chamber)**
K.J. Kim, University of Southern California, USA
A. Kristl, University of Ljubliana, Slovenia
M. Bur, Saarland University, Germany
5. **Fluorescence Activated Cell Sorting (FACS)**
N. Daum, S. Anabousi, K.Meier, L. Muijs, Saarland University, Germany
6. **Scanning Probe Microscopy (AFM)**
U. Bakowsky, University of Marburg, Germany
B. Weiss, Saarland University, Germany

optional:

7. **Surface Plasmon Resonance**
H. Sigurdsson, University of Iceland, Iceland