

**International Conference on
Dermal Drug Delivery by Nanocarriers
14.-16.03.2016, Berlin**



Program

Monday, March 14, 2016

- 12:00 – 13:30 Lunch
- 13:30 -13:45 **Opening Ceremony**
Speakers:
E. Rühl, Freie Universität Berlin
P.-A. Alt, Freie Universität Berlin
- 13:45 – 18:00 **Scientific Program**
Topic 1: Novel Nanocarriers: Concepts and Properties
- Session 1 – Chair: E. Rühl, Berlin*
- 13:45 – 14:30 **W. Hennink**, Utrecht University, The Netherlands: Polymeric nanoparticles for targeted drug delivery
- Session 2 – Chair: M. Roberts, Adelaide*
- 14:30 – 15:00 **R. Haag**, Freie Universität Berlin, Germany: Dendritic Nanocarriers for Drug and Dye Delivery
- 15:00 – 15:30 **K. Landfester**, Max Planck Institute for Polymer Research, Mainz, Germany: The importance of the protein corona for targeted drug delivery
- 15:30-16:00 Coffee Break
- Session 3 – Chair: K. Landfester, Mainz*
- 16:00 – 16:30 **A. Lendlein**, Institute of Biomaterial Science and Berlin-Brandenburg Centre for Regenerative Therapies (BCRT), Helmholtz-Zentrum Geesthacht, Teltow, Germany: Functional polymers and carrier systems
- 16:30 – 16:45 **Yan-Ping Chen**, National Taiwan University, Taipei, Taiwan: Application of the supercritical fluid process on the re-crystallization and micronization of active pharmaceutical ingredients for the treatment of skin disease
- 16:45 – 17:00 **T.N. Barradas**, Universidade Federal do Rio de Janeiro, Brazil: Hydrogel-thickened nanoemulsions as pH-dependent transdermal delivery systems of Psoralen
- 17:00 – 17:15 **V. Dubey**, Sun Pharmaceuticals Industries Ltd., Vadodara, India: Conceptualization of siRNA delivery to skin cells via flexible nanodendrosomes
- 17:15 – 17:30 **D. Kaden**, Surflay Nanotec GmbH, Berlin, Germany: Fluorescent particles for pH sensing in hair follicles

17:30 – 18:00 *Session 4 – Chair: B. Kleuser, Potsdam*
A. Fahr, Friedrich-Schiller-Universität Jena, Germany: Lipid-based colloidal systems for drug delivery into skin

18:00 – 20:00 **Welcome Reception and Poster Session 1**

Tuesday, March 15, 2016

9:00 – 12:30 **Scientific Program**
Topic 2: Diagnostics and Modeling of Transport of Nanocarriers in Skin

9:00 – 9:45 *Session 5 – Chair: J. Lademann, Berlin*
J. Bouwstra, Universiteit Leiden, The Netherlands: Intradermal vaccination by means of microneedles and nanoparticles

9:45 – 10:15 **E. Rühl**, Freie Universität Berlin, Germany: Label-free spectromicroscopy as a probe for dermal drug delivery

10:15 - 10:30 **U. Alexiev**, Freie Universität Berlin, Germany: From time-resolved fluorescence spectroscopy to targeted FLIM analysis of nanocarriers in cells and tissue

10:30 – 11:00 Coffee Break

11:00 - 11:30 *Session 6 – Chair: J. Bouwstra, Leiden*
U. Nienhaus, Karlsruhe Institute of Technology, Germany: The Protein Corona on Nanoparticles: Insights from Quantitative Fluorescence Microscopy

11:30 – 11:45 **P. Volz**, Freie Universität Berlin, Germany: Application of single molecule fluorescence microscopy to characterize the penetration of a large amphiphilic molecule in the stratum corneum of human skin

11:45 - 12:00 **M. Radtke**, Freie Universität Berlin, Germany: Ratchet mechanism for nanoparticle transport in hair follicles

12:00 - 12:15 **A. Klossek**, Freie Universität Berlin, Germany: Studies for improved understanding of lipid distributions in human skin by combining stimulated and spontaneous Raman Spectroscopy

12:15 – 12:45 *Session 7 – Chair: A. Lendlein, Teltow*
S. Mitragotri, University of California, Santa Barbara, U.S.A.: Ionic liquids for transdermal drug delivery

12:45 – 14:45 **Lunch and Poster Session 2**

14:45 – 18:15 **Scientific Program**
Topic 3: Topical Treatment of Skin by Drug-Loaded Nanocarriers

14:45 – 15:30 *Session 8 – Chair: M. Meinke, Berlin*
M. Roberts, University of South Australia, Adelaide, Australia: Topical and cutaneous delivery using nanosystems

15:30 – 16:00 **A. Vogt**, Charité – Universitätsmedizin Berlin, Germany: Nanoparticle penetration across human skin barrier, what can we learn from ex vivo skin studies?

- 16:00 – 16:30 Coffee Break
- 16:30 – 16:45 *Session 9 – Chair: J. Brandner, Hamburg*
F. Sahle, Charité – Universitätsmedizin Berlin, Germany: Synthesis and characterization of thermoresponsive nanogels for controlled delivery of drugs through the hair follicle
- 16:45 – 17:00 **M. Meinke**, Charité – Universitätsmedizin Berlin, Germany: Incorporation, penetration and release of dexamethasone loaded to nano-sized lipid carriers
- 17:00 – 17:15 **F. Rancan**, Charité – Universitätsmedizin Berlin, Germany: Dermal delivery and cellular targeting by polyglycerol-based thermoresponsive nanogels
- 17:15 – 17:45 *Session 10 – Chair: C.-M. Lehr, Saarbrücken*
R. Gurny, Université de Genève, Switzerland: Preclinical testing of tacrolimus loaded micellar nanocarriers for the treatment of psoriasis: Advantages over conventional treatments
- 17:45 – 18:00 **M. Radbruch**, Freie Universität Berlin, Germany: The stratum corneum is the target of CMS nanocarriers after topical application in healthy and inflamed mouse skin
- 18:00 – 18:15 **J. Lademann**, Charité – Universitätsmedizin Berlin, Germany: Triggered release of drugs from nanoparticles in the skin: New perspectives for drug delivery
- 19:00 Conference Dinner (Ristorante Galileo) and Poster Prize Awards**

Wednesday, March 16, 2016

- 9:00 – 12:30 Scientific Program**
Topic 4: Studies on Cells, Inflammation Models, and Use of Nanocarriers for Systemic Applications
- 9:00 – 9:45 *Session 11 – Chair: M. Schäfer-Korting, Berlin*
C. M. Lehr, Helmholtz Institute for Pharmaceutical Research Saarland, Saarland University, Saarbrücken, Germany: Nanotechnology approaches for non-invasive antigen delivery via the hair follicles
- 9:45 – 10:15 *Session 12 – Chair: A. Fahr, Jena*
S. Hedtrich, Freie Universität Berlin, Germany: Inflammatory skin disease models for assessment of nanocarrier related effects
- 10:15 – 10:30 **A.-S. Boisgard**, Université Lyon, France: Hydrogel formulation of poly(lactic acid) (PLA) nanoparticles containing JAK/Stat inhibitors for topical treatment of psoriasis
- 10:30 – 11:00 Coffee Break
- 11:00 – 11:15 *Session 13 – Chair: S. Hedtrich, Berlin*
G. Yealland, Freie Universität Berlin, Germany: Thermoresponsive nanogel mediated protein replacement therapy restores skin-barrier function to full-thickness skin models derived from transglutaminase 1 deficient patients
- 11:15 – 11:30 **S. Lohan**, Charité – Universitätsmedizin Berlin, Germany: ROS formation by different Nanocarriers and ROS scavenging effect by CoQ10 loaded usNLC in HaCaT cells

- 11:30 – 11:45 **C. Gerecke**, University of Potsdam, Germany: Determination of toxicological properties of ester-based Core-multishell nanoparticles
- 11:45 – 12:00 **A. Edlich**, University of Potsdam, Germany: Crosstalk of core-multishell nanotransporters for cutaneous drug delivery and antigen-presenting cells of the skin
- Session 14 – Chair: A. Vogt, Berlin*
- 12:00 – 12:30 **J. Brandner**, University Medical Center Hamburg-Eppendorf, Germany: Contribution of tight junctions to skin barrier function
- 12:30 – 12:45 **Summary and Closing Remarks**
E. Rühl, Freie Universität Berlin, Germany
- 12:45 – 13:45 **Lunch**