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
Session 4 – Chair: B. Kleuser, Potsdam
17:30 – 18:00  
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

Session 5 – Chair: J. Lademann, Berlin
9:00 – 9:45  
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

Session 6 – Chair: J. Bouwstra, Leiden
11:00 - 11:30  
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

Session 7 – Chair: A. Lendlein, Teltow
12:15 – 12:45  
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

Session 8 – Chair: M. Meinke, Berlin
14:45 – 15:30  
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

**Session 9 – Chair: J. Brandner, Hamburg**

16:30 – 16:45       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

**Session 10 – Chair: C.-M. Lehr, Saarbrücken**

17:15 – 17:45       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**

**Session 11 – Chair: M. Schäfer-Korting, Berlin**

9:00 – 9:45       C. M. Lehr, Helmholtz Institute for Pharmaceutical Research Saarland, Saarland University, Saarbrücken, Germany: Nanotechnology approaches for non-invasive antigen delivery via the hair follicles

**Session 12 – Chair: A. Fahr, Jena**

9:45 – 10:15       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

**Session 13 – Chair: S. Hedtrich, Berlin**

11:00 – 11:15       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

Conference Website: