

Saturday, August 25th

- 9.30 Biocompatibility and clearance of nanoparticles**
Carsten Weiss, Karlsruhe Institute of Technology, Germany
- 10.00 Core Cross-linked Micelles: From Synthetic Concepts for Precise Control of Morphology and Function to Clinical Translation**
Matthias Barz, Institute for Organic Chemistry, JGU Mainz, Germany
- 10.30 Tumor-targeted drug delivery systems based on tumor-specific markers and tumor acidic microenvironment**
Guo-Bin Ding, Shanxi University, China
- 11.00 Coffee Break**
- 11.30 Nanoantibiotics - Fact or fiction?**
Svenja Siemer, Department of Nanobiomedicine/ENT, UMM
- 11.45 Novel Strategies in Biomaterial Surface Modification in vivo**
Jonas Eckrich, ENT department, UMM
- 12.00 Discussion round table: "The Clinician Scientist: Trapped between bed and benchside? Scientists versus Publisher: Who is shaping science?"**
Julia Weinmann-Menke, Krishnaraj Rajalingam, Sebastian Strieth, Roland Stauber, Désirée Wünsch
UMM Mainz, Germany
- 12.30 Time to say goodbye - Closing Remarks, Awards**
Sebastian Strieth, Roland Stauber, Désirée Wünsch
UMM Mainz

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Organisation and Contact

Sebastian Strieth, Roland Stauber, Désirée Wünsch
University Medical Center Mainz
Langenbeckstr. 1
55131 Mainz

wuensch@uni-mainz.de
rstauber@uni-mainz.de
sebastian.strieth@unimedizin-mainz.de

Lageplan

Universitätsmedizin Mainz



Universitätsmedizin
der Johannes Gutenberg-Universität Mainz,
Langenbeckstr. 1, 55131 Mainz

Conference Venue
Lecture Hall, Building 102

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Universitätsmedizin Mainz

Debugging Nanobio-interfaces to promote clinical translation

23th to 25th August 2018
Mainz

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Debugging Nanobio-interfaces to promote clinical translation

Dear colleagues,

developments allowing the precise and controlled manufacturing of nanomaterials even in large scales boosted nanotechnology as a key technology of the 21st century. Applications now reach various areas of life sciences, including their implementation in novel medical diagnostics, biomaterials, and therapeutic products. This has raised high expectations for further translation and realistic clinical improvements. In contrast, few NMs have ultimately reached clinical applications as robust tools for nanomedicine.

Bearing such limitations in mind, with this symposium, we aim to not only bring together leading researchers in both experimental and (pre)clinical nanobiomedicine but also to provide a platform for young researchers to educate trans-disciplinary communication in the growing though still split areas of nanobiomedicine. Hence, we would appreciate to welcoming you on this occasion at the University Medical Center Mainz!

With best regards,
Sebastian Strieth, Roland Stauber, Désirée Wunsch

Thursday, August 23th

- | | |
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| 12.45 | Get together
Lunch and Registration |
| 13.45 | Opening and welcome
Sebastian Strieth, Roland Stauber, Désirée Wunsch |
| 14.00 | On the role of amphiphilicity in nanoparticle-protein interfaces
Francesco Stellacci, EPFL, Lausanne, Switzerland |
| 14.30 | Smart Macro-Nanomedicine
Twan Lammers, ExMI, University Hospital Aachen, Germany |
| 15.00 | Coffee with the experts |
| 15.30 | Surface structure and interactions between bacteria lipopolysaccharide membranes
Wuge Briscoe, University of Bristol, UK |
| 16.00 | Toxicity mechanisms of metal oxide nanoparticles under realistic exposure and bio-transformation processes
Chengfang Pang, Technical University of Denmark, Denmark |
| 16.30 | Super-Resolution Light Microscopy of cellular Nanostructures
Christoph Cremer, IMB Mainz, University Heidelberg, KIP, Germany |
| 17.00 | Science and Wine
Discussion at the Mainzer Weinmarkt |

Friday, August 24th

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| 9.15 | Greetings & Welcome
Stefan Müller-Stach, Vice President for Research and Early Career Academics, JGU Mainz |
| 9.30 | Personalized Cancer Nanomedicines: Design principles and applications
Avi Schroeder, Technion, Israel |
| 10.00 | A Novel Scavenging Tool for Cancer Biomarker Discovery based on the Blood-Circulating Nanoparticle Protein Corona
Marilena Hadjidemetriou, University of Manchester, UK |
| 10.30 | DNA in extracellular vesicles (exosome): biomarker and functional potential in cancer and metastasis
Basant Thakur, University Medical Center Essen, Germany |
| 11.00 | Coffee with the experts |
| 11.30 | Cell function diagnostics and clinical acceptance
Oliver Hayden, TU Munich, Germany |
| 12.00 | Nanotechnology for prevention of biofilm-related implant infections
Meike Stiesch, Hannover Medical School, Germany |
| 12.30 | Novel antibacterial (bio)materials
Angela Mutschler, UNISTRA, University of Strasbourg, France |
| 13.00 | Lunch
Interdisciplinary tables to foster broad scientific exchange |

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| 14.00 | miRNA and mRNA useful small molecules for musculoskeletal regeneration
Martijn van Griensven, TU Munich, Germany |
| 14.30 | Small meets smaller - Nanomaterial-based modulation of microbes
Shirley Knauer, University of Duisburg-Essen, Germany |
| 15.00 | Ultra-small nanoparticle interaction with different cells
Marie Kalbacova, University of Prague, Czech Republic |
| 15.30 | Coffee with the experts |
| 16.00 | Learning to transform 2D nanomaterials for medicine using imaging and pharmacology
Kostas Kostarelos, University of Manchester, UK |
| 16.30 | Bone Regeneration: Interaction of Biomaterials and the Biological Interface
Bilal Al-Nawas, Oral and Maxillofacial Surgery, UMM, Germany |
| 17.00 | Application potential of 3D printing for the simulation of surgical intervention
Bernhard Dorweiler, Thoracic and heart surgery, UMM, Germany |
| 17.30 | Science and Food for Debugging
Location: Restaurant Bootshaus Mainz |