

Controlled Release meets BioBarriers

March 3rd-6th 2026 - Saarbrücken, DE
Campus E2.2 + Campus E2.5



meets

BIO
BARRIERS



Scientific Program

(The program may be subject to changes without prior notice)

TUESDAY, March 3

14th International Conference on Biological Barriers

11:00	Registration
12:45 – 13:15	Welcome address by the President of Saarland University Ludger Santen & Saarland's Minister of Science Jakob von Weizsäcker
13:15 – 13:40	Invited Lecture: Approaches for spatiotemporal drug delivery Hamid Ghandehari (University of Utah, Salt Lake City, USA)
13:40 – 14:05	Invited lecture: Polymer therapeutics – Can we use new materials to cross BioBarriers for diseases of unmet need Cameron Alexander (University of Nottingham, Nottingham, UK)
14:05 – 14:30	Invited lecture: Remote-controlled drug delivery Wilfried Weber (INM, Leibniz-Institute for New Materials, Saarbrücken, DE)
14:30 – 15:00	Coffee break (posters & exhibition)
15:00 – 15:10	Short talk: Advanced intestinal organoid model to investigate neuroepithelial interactions in the gut Tultul Saha (Kaiserslautern University of Applied Sciences, Zweibrücken, DE)
15:10 – 15:20	Short talk: Dissecting the interplay of drug substances with bile and mucus Josef Kehrein (University of Würzburg, Würzburg, DE)
15:20 – 15:30	Short talk: Placenta–embryoid body chip for preclinical safety assessment of drugs and nanoparticles Tina Bürki-Thurnherr (Empa, Swiss Federal Laboratories, St.Gallen, CH)
15:30 – 15:55	Invited lecture: Nanomedicines for immunomodulation Elias Fattal (University Paris-Saclay, Orsay, FR)
15:55 – 16:20	Invited lecture: Gut hormone stimulation via lipid nanocarriers as therapeutic strategy in the treatment of gastrointestinal disorders Ana Beloqui (Université catholique de Louvain, Brussels, BE)
16:20 – 16:30	Short talk: Personalizable hiPSC-based models for predictive toxicology Sylvia Wagner (Fraunhofer-Institut für Biomedizinische Technik IBMT, Sulzbach, DE)
16:30 – 16:40	Short talk: pH-Responsive Nanostructured calcium phosphate microrods for pulmonary targeting of alveolar macrophages Jannis Fries (Saarland University, Saarbrücken, DE)
16:40 – 16:50	Short talk: MolMeDB - Molecules on membranes database Kateřina Storchmannová (Palacký University in Olomouc, Olomouc, Czech Republic)
16:50 – 17:00	Short talk: Resolving the cellular uptake of biomimetic liposomes via 3D Raman imaging Stefanie Gier (Goethe University, Frankfurt, DE)
17:00 – 18:30	Posters + industry exhibition with drinks & snacks

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WEDNESDAY, March 4

- 08:30 – 08:55 **Invited lecture:** *Lung cancer and microbiota: Inhalable nanomedicines with antimicrobial properties as an innovative strategy to fight lung cancer*
Elise Lepeltier (University of Angers, Angers, FR) ***Deutsch-Französischer-Diskurs**
- 08:55 – 09:20 **Invited lecture:** Relevance of mechanobiology for improved clinical relevance of in vitro lung models
Otmar Schmid (Institute of Lung Health and Immunity, Helmholtz Munich, DE)
- 09:20 – 09:30 **Short talk:** *Multiparametric characterization of the human alveolar epithelial cell line Arlo: From electrophysiological properties to pulmonary edema model*
Tobias Neu (Helmholtz Institute for Pharmaceutical Research, Saarbrücken, DE)
- 09:30 – 09:40 **Short talk:** Inhalable synergistic phage-antibiotic microparticles for dual-mode eradication of pulmonary pseudomonas aeruginosa biofilms
Alexandra Hübl (Goethe University, Frankfurt, DE)
- 09:40 – 09:50 **Short talk:** *Optimizing the antimicrobial photodynamic efficacy of curcumin-loaded liposomes to treat pulmonary infections caused by gram-positive bacteria*
Lisa Schoene (Marburg University, Marburg, DE)
- 09:50 – 10:00 **Short talk:** *Carrier and cell type dependence of the role of the glycocalyx in mRNA nanoparticle uptake*
Roland Brock (Radboudumc, Nijmegen, NL)
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- 10:00 – 10:30 **Coffee break (posters & exhibition)**
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- 10:30 – 10:55 **Invited lecture:** *Local gene therapies to rescue severe genetic diseases of human epithelia*
Sarah Hedtrich (University of British Columbia, Vancouver, CA) ***Galenus Guest Speaker**
- 10:55 – 11:20 **Invited lecture:** *Modelling cancer-microbe interactions with organoids and organ chips*
Jens Puschhof (German Cancer Research Center (DKFZ), Heidelberg, DE)
- 11:20 – 11:30 **Short talk:** *Epithelial-to-mesenchymal transition-induced remodeling of extracellular vesicle lipid composition*
Oliwia Majchrzak (University of Geneva, Geneva, CH)
- 11:30 – 11:40 **Short talk:** *Investigating the in-vivo systemic toxicity of silica nanoparticles as a function of animal sex, dose, & nanoparticle physicochemical properties*
Sushanto Kumar Saha (University of Utah, Salt Lake City, USA)
- 11:40 – 11:50 **Short talk:** *Engineering liposome-coated Hf-based MOFs for improved chemoradiotherapy in stroma-rich tumors*
Ahmed Abdelhamid (University of Grenoble-Alpes, Grenoble, FR)
- 11:50 – 12:00 **Short talk:** *Auger electron-emitting PARP-inhibitor micelles for image-guided radio-chemotherapy combination*
Quim Peña (RWTH Aachen University Hospital, Aachen, DE)
- 12:00 – 13:00 **Lunch (posters & exhibition)**

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GALENOS meets TALENTS: Workshops for Young Scientists

13:00 – 14:00	Alumni Key Notes Talk: <i>How extracellular vesicles have accompanied me on my academic endeavors</i> Gregor Fuhrmann (Friedrich-Alexander-University, Erlangen, DE) Talk: <i>Vitamin B12–loaded macrophage membrane–biomimetic hybrid lipid vesicles</i> Ana Melero (University of Valencia, Valencia, ES) Talk: <i>Overcoming ocular barriers: comparing mucoadhesive and muco-inert platforms for posterior segment delivery</i> Hákon Hrafn Sigurðsson (University of Iceland, Reykjavik, IS)
14:00 – 15:00	Alumni short talks & discussion Talk: <i>tba</i> Maria Letizia Manca (University of Cagliari, Cagliari, IT) Talk: <i>Boosting cancer therapy via extracellular vesicles</i> Manuela Banciu (Babes-Bolyai University, Cluj-Napoca, RO) Talk: <i>A combination of iontophoresis and an anti-biofilm agent for the root canal disinfection</i> Tais Gratieri (University of Brasilia, BR) Talk: <i>Targeted immunomodulation: leveraging CRISPR-lipid nanoparticles to reprogram macrophages in cancer treatment</i> Francisca Leonard (Houston Methodist Research Institute, Houston, USA) Talk: <i>The journey after my PhD in advanced drug delivery</i> Marjan Fretz (Advanced Research Center for Nanolithography (ARCNL), Amsterdam, NL) Round table discussion
15:00 – 15:30	Coffee break (posters & exhibition)
15:30 – 16:30	Alumni Key Notes Talk: <i>A Celtic journey - from the Saar to the land of the leprechauns</i> Carsten Ehrhardt (Trinity College Dublin, Dublin IE) Talk: <i>tba</i> Gerrit Borchard (University of Geneva, Geneva, CH) Talk: <i>Barrier-responsive 3D-printed dapson films for local and transdermal delivery in Hansen's disease</i> Ruy Carlos Beck (Federal University of Rio Grande do Sul, Porto Alegre, BR)
16:30 – 17:30	Alumni short talks & discussion Talk: <i>Gold supracluster nanocarriers for siRNA delivery across cellular barriers to enhance radio- and phototherapy</i> Xavier Le Guevel (University Grenoble Alpes, Grenoble, FR) Talk: <i>Light-activated drug release from liposome-hydrogel systems</i> Timo Laaksonen (University of Helsinki, Helsinki, FI) Talk: <i>pH-Sensitive Tacrolimus loaded nanostructured lipid carriers for the treatment of inflammatory bowel disease</i> Hussain Ali (Tianjin University, Tianjin, CN) Talk: <i>Assessing the transport of antibiotics across the human lung epithelium in vitro</i> Sina Simon (F. Hoffmann-La Roche AG, Basel, CH) Talk: <i>PubPharm: Your platform for a pharmacy-specific literature search</i> Christina Draheim (Universitätsbibliothek, Technische Uni Braunschweig, DE) Round table discussion

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- 17:30 – 17:50 **Invited lecture: Anti-infective drug discovery and development at the HIPS from a medicinal chemist's perspective**
Anna Hirsch (Helmholtz Institute for Pharmaceutical Research, Saarbrücken, DE)
- 17:50 – 18:30 **Posters + industry exhibition**
- 18:30 **TALENTS reception**

THURSDAY, March 5

(Please find all details in our workshop program)

- 09:00 - 11:00 *) **PhD defended – what comes next? – Postdoctoral opportunities**
Introduction & Moderation: Claus-Michael Lehr (UdS/ HIPS)
Oksana Seumenicht (Alexander von Humboldt Foundation)
Martin Bultmann (On behalf of Galenus Foundation)
Simon Drescher (Phospholipid Research Center)
Suchismita Saha (Wiley)
Özge Tablacioglu (Career Center, ZeLL UdS)
Michelle Feuser & Sarah Frisch (NovoNordisc)
Roundtable Discussion

11:00 – 11:30 **Coffee break (posters & exhibition)**

- 11:00 – 13:00 **"Start Up!" – Founding a company in the life sciences sector**
Introduction & Moderation: Marius Hittinger (PharmBioTec/ Mucosatec)
Dominik Hermle (SPRIND)
Martin Hörenz (Projekträger Jülich)
Andreas Wehr (SIKB)
Peter Sullivan (MyxoTec)
Nina Marie-Burmeister (LAHA)
Boris Sevarika (NanoZymeX)
Leon Chen (SmartBagEco)
Wrap up & discussion

*) *in parallel*: Breakout session for industry partners

- 09:00 – 11:00 **Current Technologies - Presentations of our exhibitors & participating industries**
Agilent
MyBiotech
Nanofcm
Epithelix
abbvie
Liso
Anton Paar
Postnova

13:00 – 13:45 **Lunch break & registration for CRS DeChAt participants**

(detailed information in our workshop program)

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THURSDAY, March 5

30th CRS DeChAt Local Chapter Meeting

13:45 – 14:00	Welcome by the CRS DeChAt President Paola Luciani (University of Bern, Bern, CH)
14:00 – 14:25	Invited lecture: <i>MicroRNAs as therapeutic agents: delivery strategies and translational barriers</i> Andreas Keller (Clinical Bioinformatics Uds/ HIPS Saarbrücken, DE)
14:25 – 14:50	Invited lecture: <i>Engineering and controlling biomimetic and biohybrid microrobots for endo- and transvascular drug delivery</i> Simone Schürle (ETH, Zürich, CH)
14:50 – 15:00	Short talk: <i>Remote-controlled living therapeutic aterials</i> Shrikrishnan Sankaran (INM, Leibniz-Institute for New Materials, Saarbrücken, DE)
15:00 – 15:10	Short talk: <i>Design of lipid nanoparticles for messenger RNA therapy by repurposing of 'lipid-like' cationic amphiphilic drugs</i> Aliona Debisschop (Ghent University, Ghent, BE)
15:10 – 15:30	Group Foto
15:30 – 16:00	Posters & exhibition (with coffee)
16:00 – 16:25	Invited lecture: <i>Designing brain-targeted drug delivery systems for treating Parkinson's disease</i> Avi Schröder (Technion - Israel Institute of Technology, Haifa, IL)
16:25 – 16:50	Invited lecture: <i>Polypeptide-based therapeutics bypassing challenging biological barriers</i> Maria Vicent (Príncipe Felipe Research Center (CIPF), Valencia, ES)
16:50 – 17:00	Short talk: <i>Chamaeleon nanocarriers for RNA delivery and genome editing</i> Ernst Wagner (Ludwig-Maximilians-Universität, Munich, DE)
17:00 – 17:10	Short talk: <i>ApoE2-DARPin fusion proteins enable selective RNA transfer to CD8 T cells by lipid nanoparticles</i> Samuel Theuerkauf (Paul-Ehrlich-Institut, Langen, DE)
17:10 – 17:30	Bio break
17:30 – 18:15	Poster flash talks Flash talk: <i>Formulation of a dual-acting composite drug delivery system for localized treatment of endometriosis</i> Neslihan Derya Salar (University of Bern, Bern, CH) Flash talk: <i>A molecular waltz – biomimetic microrollers driven by rotating magnetic fields for enhanced drug delivery</i> Emilie Einsiedel (ETH Zürich, Zürich, CH) Flash talk: <i>Dynamic covalently crosslinked hydrogels as tunable delivery platform for nanoparticulate vaccines</i> Felix Hauswirth (University of Regensburg, Regensburg, DE) Flash talk: <i>Development of a regulatory relevant human placental co-culture model for early detection of toxicants impacting pregnancy and fetal development</i> Beatrice Anna Brugger (Empa, St. Gallen, CH) Flash talk: <i>Stable nanocrystal formulations of azole antimycotics and their viability for dermal application</i>

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Anna Tvrdá (University of Chemistry and Technology, Prague, CZ)

Flash talk: *pH-responsive farnesal-ε-poly-lysine conjugates: a self-assembling nano delivery system for targeted cancer therapy*

Camilla Passi (Saarland University, Saarbrücken, DE)

Flash talk: *Lung cancer and microbiota: inhalation of antimicrobial nanomedicine as an innovative strategy to fight lung cancer*

Mélina Guérin (University of Angers, Angers, FR)

Flash talk: *Development of a 3D bioprinted multicellular alveolar model to study epithelial barrier function and viral infection responses*

Muriel Urankar (Technische Universität Berlin, Berlin, DE)

18:15 – 19:15

Roundtable “Emerging Pharma Companies”

Sabine Maamari (Avocet, DE)

Marius Hittinger (Mucosatec, DE)

Karsten Lindhardt (Biograil, DK)

Nazende Günday-Türelı (MyBioTech, DE)

19:15 – 19:30

Walk to dinner location

19:30

Conference dinner (Aula)

FRIDAY, March 6

08:00 – 08:30

Registration & Coffee

08:30 – 09:30

General Assembly CRS DeChAT

09:30 – 09:55

Invited lecture: *Polyelectrolytes as potent antimicrobial systems*

Rainer Haag (Freie Universität Berlin, Berlin, DE)

09:55 – 10:20

Invited lecture: *Microengineered platforms driving innovation in nanomedicine*

Hagar Labouta (University of Toronto, Toronto, CN)

10:20 – 10:45

Invited lecture: *Multicompartmental bioengineered 3D intestinal models for advanced drug screening*

Bruno Sarmento (i3S - University of Porto, Porto, PT)

Young Scientists Committee (YSC) Session

10:45 – 10:55

Introduction incl. YSC Award

Mariia Nesterkina (HIPS, Saarbrücken, DE) & **Sangeun Lee** (UdS, Saarbrücken, DE)

10:50 – 11:00

Short talk: *Leveraging cell-penetrating-peptides and liposomes to enhance nanobody therapy in breast cancer*

Giulia Pander (Heidelberg University, DE)

11:00 – 11:10

Short talk: *A multiparametric kinetic in vitro assay for siRNA–LNP efficacy and toxicity: live-cell imaging validated against flow cytometry*

Manon Degey (University of Liège, Liège, BE)

11:10 – 11:40

Posters & exhibition (with coffee)

11:40 – 11:50

Short talk: *Extracellular vesicles derived from enterococcus faecalis: contact-dependent and uptake-independent biogenic immunomodulators*

Marlon A. Gancino Guevara (Saarland University, Saarbrücken, DE)

11:50 – 12:00

Short talk: *Lipid mesophases loading monoclonal antibodies for the localized treatment of ulcerative colitis*

Rafaella Gazzi (University of Bern, Bern, CH)

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12:00 – 12:10	Short talk: <i>Enhanced photodynamic therapy using TEL-based liposomes loaded with NIR photosensitizers in lung cancer cel</i> Rashid Munir (Marburg University, Marburg, DE)
12:10 – 12:20	Short talk: <i>Implementation of open flow microperfusion for continuous sampling in artificial ecm mimicking subcutaneous tissue</i> James McFarlane Hoad (University of Graz, Graz, AT)
12:20 – 12:30	Short talk: <i>Dissecting lipid nanoparticle–endosomal membrane mimic interactions to understand RNA escape across biological barriers</i> Alice Spadea (Max Planck Institut, CBG, Dresden, DE)
12:30 – 12:40 *)	Short talk: <i>Engineering nanoparticles to cross lymphatic barriers to immunotherapy</i> Katharina Maisel (University of Maryland, College Park MD, USA)
12:40 – 12:50	Short talk: <i>Cationic polycarbonate nanogels for therapeutic nucleic acid delivery</i> Lutz Nuhn (Julius-Maximilians-Universität, Würzburg, DE)

*) in parallel

Award Committee Meeting

12:45 – 13:15

Award Ceremony & Closing remarks

Awards for best poster, best flash talk and best short talk

13:15

End of the program