

# Controlled Release meets BioBarriers

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



meets



## Scientific Program

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

**TUESDAY, March 3**

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### 14<sup>th</sup> International Conference on Biological Barriers

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

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## WEDNESDAY, March 4

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

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## GALENOS meets TALENTS: Workshops for Young Scientists

13:00 – 14:00

### Alumni Key Notes

**Chairs: Lamyae Baddouri & Beshoy Tawfik & Wim Hennik & Marjan Fretz**

**Talk: How extracellular vesicles have accompanied me on my academic endeavors**

**Gregor Fuhrmann** (Friedrich-Alexander-University, Erlangen, DE)

**Talk: Vitamin B12–loaded macrophage membrane–biomimetic hybrid lipid vesicles**

**Ana Melero** (University of Valencia, Valencia, ES)

**Talk: Overcoming ocular barriers: comparing mucoadhesive and muco-inert platforms for posterior segment delivery**

**Hákon Hrafn Sigurðsson** (University of Iceland, Reykjavik, IS)

14:00 – 15:00

### Alumni short talks & discussion

**Talk: How Galenos training shaped my academic profile in advanced drug delivery**

**Maria Letizia Manca** (University of Cagliari, Cagliari, IT)

**Talk: Boosting cancer therapy via extracellular vesicles**

**Manuela Banciu** (Babes-Bolyai University, Cluj-Napoca, RO)

**Talk: A combination of iontophoresis and an anti-biofilm agent for the root canal disinfection**

**Tais Gratieri** (University of Brasilia, BR)

**Talk: Targeted immunomodulation: leveraging CRISPR-lipid nanoparticles to reprogram macrophages in cancer treatment**

**Francisca Leonard** (Houston Methodist Research Institute, Houston, USA) ([online](#))

**Talk: The journey after my PhD in advanced drug delivery**

**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

**Chairs: Monisha Krishan & Nikolay Kirilov & Fabiana Nador & Udo Bakowsky**

**Talk: A Celtic journey - from the Saar to the land of the leprechauns**

**Carsten Ehrhardt** (Trinity College Dublin, Dublin IE)

**Talk: Open circles and missed chances**

**Gerrit Borchard** (University of Geneva, Geneva, CH)

**Talk: Barrier-responsive 3D-printed dapson films for local and transdermal delivery in Hansen's disease**

**Ruy Carlos Beck** (Federal University of Rio Grande do Sul, Porto Alegre, BR)

16:30 – 17:30

### Alumni short talks & discussion

**Talk: Gold supracluster nanocarriers for siRNA delivery across cellular barriers to enhance radio- and phototherapy**

**Xavier Le Guevel** (University Grenoble Alpes, Grenoble, FR)

**Talk: Light-activated drug release from liposome-hydrogel systems**

**Timo Laaksonen** (University of Helsinki, Helsinki, FI)

**Talk: pH-Sensitive Tacrolimus loaded nanostructured lipid carriers for the treatment of inflammatory bowel disease**

**Hussain Ali** (Tianjin University, Tianjin, CN) ([online](#))

**Talk: Assessing the transport of antibiotics across the human lung epithelium in vitro**

**Sina Simon** (F. Hoffmann-La Roche AG, Basel, CH)

**Talk: PubPharm: Your platform for a pharmacy-specific literature search**

**Christina Draheim** (Universitätsbibliothek, Technische Uni Braunschweig, DE)

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17:30 – 17:55	<b>Round table discussion</b> <b>Invited lecture: Anti-infective drug discovery and development at the HIPS from a medicinal chemist's perspective</b> <b>Anna Hirsch</b> (Helmholtz Institute for Pharmaceutical Research, Saarbrücken, DE)
17:55 – 18:30	<b>Posters + industry exhibition</b>
18:30	<b>TALENTS reception</b>

## THURSDAY, March 5 (Please find all details in our workshop program)

09:00 - 11:00 *)	<b>Chair: Claus-Michael Lehr</b> <b>PhD defended – what comes next? – Postdoctoral opportunities</b> <b>Location: Math E2.5, HS 2</b> 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, UdS) Michelle Feuser & Sarah Frisch (Novo Nordisk) Roundtable Discussion
11:00 – 11:30	<b>Coffee break (posters &amp; exhibition)</b> <b>Chair: Marius Hittinger</b>
11:30 – 13:00	<b>"Start Up!" – Founding a company in the life sciences sector</b> <b>Location: Math E2.5, HS 2</b> Introduction & Moderation: Marius Hittinger (PharmBioTec/ Mucosatec) Dominik Hermle (SPRIND) <a href="#">(online)</a> Martin Hörenz (Projekträger Jülich) <a href="#">(online)</a> Andreas Wehr (SIKB) Peter Sullivan (MyxoTec) Nina-Marie Burmeister (LAHA) Boris Sevarika (NanoZymeX) Leon Chen (SmartBagEco) Jannik Jungmann (PHABIOC GmbH)
*) <i>in parallel</i> : Breakout session for industry partners	
09:00 – 11:00	<b>Chair: Marc Schneider</b> <b>Current Technologies - Presentations of our exhibitors &amp; participating industries</b> <b>Location: Math E2.5, HS 3</b> Agilent MyBiotech Nanofcm Epithelix abbvie Liso Anton Paar Postnova Vitrocell
13:00 – 13:45	<b>Lunch break &amp; registration for CRS DeChAt participants</b>

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## THURSDAY, March 5

### 30<sup>th</sup> CRS DeChAt Local Chapter Meeting

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

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**Flash talk:** *Stable nanocrystal formulations of azole antimycotics and their viability for dermal application*

**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:** *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”**

**Chair: Brigitta Loretz**

Sabine Maamari (Avocet, DE)

Marius Hittinger (Mucosatec, DE)

Karsten Lindhardt (Biograil, DK)

Nazende Günday-Türeli (MyBioTech, DE)

19:15 – 19:30 Walk to dinner location

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19:30 **Conference dinner (Aula)**

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## FRIDAY, March 6

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08:30 **Registration & Coffee**

08:50 – 09:50 **General Assembly CRS DeChAt  
(Location Math E.2.5, HS 2)**

**Chairs: Udo Bakowsky & Stefan Schiller**

09:55 – 10:20 **Invited lecture: Polyelectrolytes as potent antimicrobial systems**

**Rainer Haag** (Freie Universität Berlin, Berlin, DE)

10:20 – 10:45 **Invited lecture: Multicompartmental bioengineered 3D intestinal models for advanced drug screening**

**Bruno Sarmiento** (i3S - University of Porto, Porto, PT)

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### Young Scientists Committee (YSC) Session

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10:45 – 10:50 **Introduction incl. YSC Award**

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

**Chairs: Sangeun Lee & Mariia Nesterkina**

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)

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11:10 – 11:40 **Posters & exhibition (with coffee)**

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**Chairs: Mariia Nesterkina & Sangeun Lee**

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11:40 – 11:50	<b>Short talk:</b> <i>Extracellular vesicles derived from enterococcus faecalis: contact-dependent and uptake-independent biogenic immunomodulators</i> <b>Marlon A. Gancino Guevara</b> (Saarland University, Saarbrücken, DE)
11:50 – 12:00	<b>Short talk:</b> <i>Lipid mesophases loading monoclonal antibodies for the localized treatment of ulcerative colitis</i> <b>Rafaela Gazzi</b> (University of Bern, Bern, CH)
12:00 – 12:10	<b>Short talk:</b> <i>Enhanced photodynamic therapy using TEL-based liposomes loaded with NIR photosensitizers in lung cancer cel</i> <b>Rashid Munir</b> (Marburg University, Marburg, DE)
12:10 – 12:20	<b>Short talk:</b> <i>Implementation of open flow microperfusion for continuous sampling in artificial ecm mimicking subcutaneous tissue</i> <b>James McFarlane Hoad</b> (University of Graz, Graz, AT)
12:20 – 12:30	<b>Short talk:</b> <i>Dissecting lipid nanoparticle–endosomal membrane mimic interactions to understand RNA escape across biological barriers</i> <b>Alice Spadea</b> (Max Planck Institut, CBG, Dresden, DE)
12:30 – 12:40 *)	<b>Short talk:</b> <i>Engineering nanoparticles to cross lymphatic barriers to immunotherapy</i> <b>Katharina Maisel</b> (University of Maryland, College Park MD, USA)
12:40 – 12:50 *)	<b>Short talk:</b> <i>Cationic polycarbonate nanogels for therapeutic nucleic acid delivery</i> <b>Lutz Nuhn</b> (Julius-Maximilians-Universität, Würzburg, DE)
*) in parallel	<b>Award Committee Meeting</b>
12:50 – 13:15	<b>Award Ceremony &amp; Closing remarks</b> <i>Chair: Claus-Michael Lehr</i> Awards for best poster, best flash talk and best short talk
13:15	<b>End of the program</b>