



**BIOME Retreat - Cellular and Molecular Immunology/Infectious Diseases/Tumour and Signalling**

**06-07.11.2025**

**Venue:** Unperfekthaus, Friedrich-Ebert-Str. 18-26, 45127 Essen

# PROGRAMME

A warm welcome to our annual retreat hosted at Unperfekthaus (UpH) in Essen!

Please note that both days **from beginning to end are obligatory** for the doctoral participants as the focus here is on close interdisciplinary exchange between all members of the three cores.

## Timing:

- **TALKS: 10-12 minutes for each doctoral talk, 3-5 minutes for discussion - no more than 15 minutes altogether!!!**
- **POSTERS: 6 minutes poster presentation, 6 minutes for discussion - no more than 12 minutes altogether!!! (Poster size: DIN A0, portrait)**

## Chairs:

- For each BIOME talk session, two doctoral members have been nominated as chairs. Please prepare for this role well.
- Please ensure that all slides have been uploaded on the lecture hall's equipment before each session starts.

## Poster Walks:

- For the poster walks, it has been decided to break up the SC jury as well as the poster zones into mixed-core units. This is to expand the translational aspect of peer exchange and expert input.

## Poster/Talk Peer Review:

- Each doctoral participant will be assigned two fellow BIOME members' posters or talks to assess in detail and give back critical feedback in an anonymous form.  
All information regarding this will be given to you shortly before the event.

The best talk and the top three posters will be selected and certified.

**Unperfekthaus in Essen:** Address: *Unperfekthaus, Friedrich-Ebert-Str. 18-26, 45127 Essen*

**Meeting Rooms:** 4<sup>th</sup> Floor - Main Meeting Room: Raum 423, with additional poster area in Raum 453.

## Your Orga-Team 2025:

### Immunology:

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### Infectious Diseases:

[PaulaIsabel.BusskampCastro@uk-essen.de](mailto:PaulaIsabel.BusskampCastro@uk-essen.de)

### Tumour & Signalling:

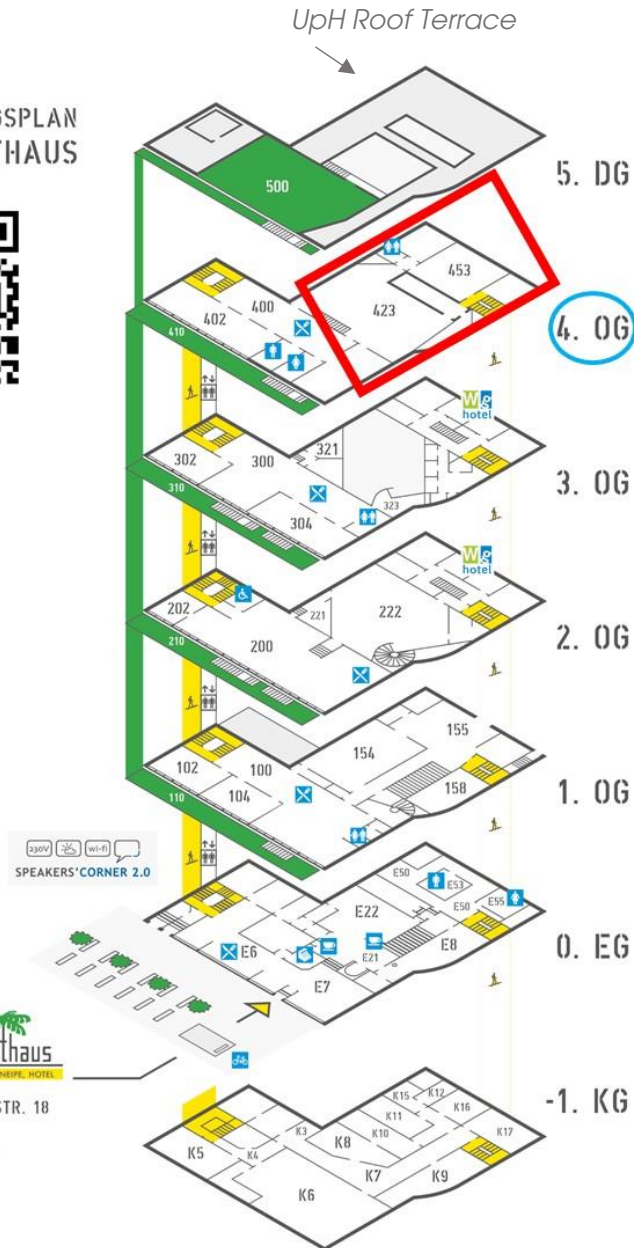
[Michelle.Elbert@uk-essen.de](mailto:Michelle.Elbert@uk-essen.de) and  
[Vivienne.Schneider@uk-essen.de](mailto:Vivienne.Schneider@uk-essen.de)

### BIOME:

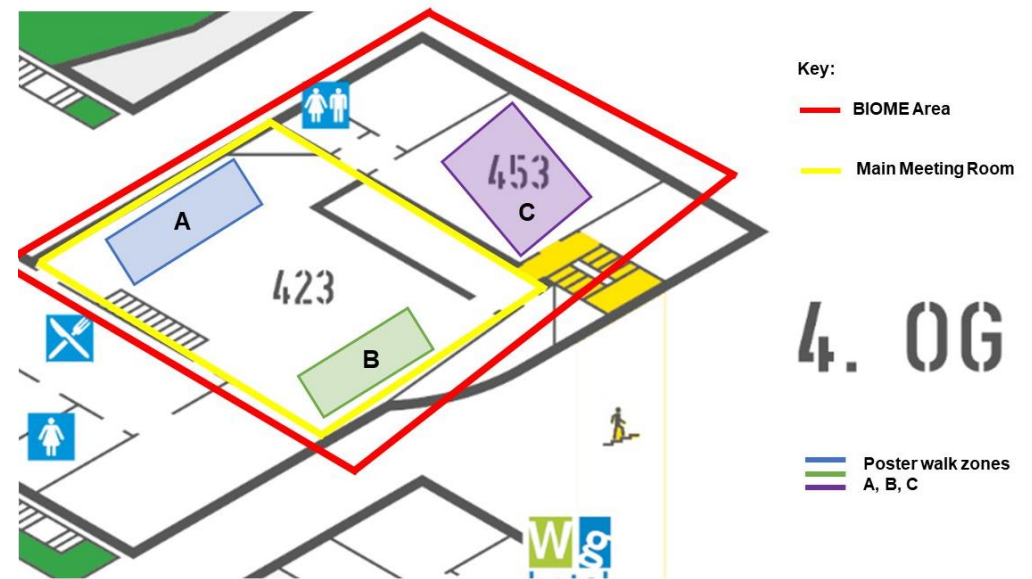
[Delia.Cosgrove@uk-essen.de](mailto:Delia.Cosgrove@uk-essen.de)

# PROGRAMME

ORIENTIERUNGSPLAN  
UNPERFEKTHAUS



Detailed Plan, UpH, 4<sup>th</sup> Floor - with Poster Walk Zones A,B and C:



IMPORTANT DETAILS

# PROGRAMME

## THURSDAY, 06.11.2025

**Before 09:00 – 1<sup>st</sup> Poster session participants to please hang up their posters.**

### GREETING

**09:00 – 09:15** Scientific Coordinators and Orga-Team: **Welcoming Words**

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### SESSION 1

#### Immunology

**Doctoral TALKS, Chairs: Hannah Breiter and Johannes Josef Schneider**

<b>09:15 – 09:30</b>	Nadine Gausmann	Impact of the kallikrein system on the immune cell function
<b>09:30 – 09:45</b>	Mohamed Elbeltagy	Establishment of genetically modified mesenchymal stromal cells derived extracellular vesicles expressing purinergic pathway's active enzymes CD39 and CD73 for the treatment of graft versus host disease
<b>09:45 – 10:00</b>	Fatemeh Ghorbani	Characterization and targeting of tumor-reactive T-cells to improve melanoma immunotherapy
<b>10:00 – 10:15</b>	Moritz Oldenburg	Synergistic activation of tumor-specific CD8+ T-cells through TNF- $\alpha$ : Enhancing anti-tumor immunity with a SMAC mimetic and arenavirus infection

### SESSION 2

**10:15 – 12:00** 1<sup>st</sup> POSTER Session during  **BREAK**

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Posters	Group 1	Zone A
1	Nelson Niski	Pharmacological HIF stabilization restores CD4+ T cell function in hereditary hemorrhagic telangiectasia
2	Shreya Bhat	Establishing an endothelial activation assay for functional characterization of MSC-derived extracellular vesicle products
3	Jan Luca Murkowski	Defining the immunometabolic signature of HIV-1 immunological non-responders
4	Zhongsheng Liu	The interaction of hepatitis B virus, innate signalling and cellular metabolisms for innate antiviral mechanisms
5	Sarah Ertmer	HSPC-induced phenotypic and metabolic plasticity in glioblastoma
6	Paniz Salimitari	Modeling EGFR-targeted therapy and immune interactions in NSCLC to address therapeutic resistance

THURSDAY, 06.11.2025

## PROGRAMME

Posters	Group 2	Zone B
7	Laura Paula Brennecke	Evaluating Novel HIV cure approaches in blood samples from people living with HIV
8	Hannah Hoffmann	Two types of an unusual friendship: Human cytomegalovirus elicits overlapping and distinct effects on myeloid and lymphoblastic forms of acute leukaemia
9	Frida Kaußen	Nanoparticle-intensified proton beam therapy: A new strategy for retinoblastoma treatment
10	Vivienne Schneider	Generation and characterization of urinary bladder organoids
11	Rawaa Biadsy	How the interaction between gut microbiome and neutrophils influences inflammatory brain injury after ischemic stroke
12	Mats Schoumakers	How adequately does "hypoxia-mimicking" work in immune cells? - Effects of hypoxia-simulating substances compared to "real" hypoxia

Posters	Group 3	Zone C
13	Roman Frings	Molecular analysis of the TSC complex and its lysosomal tethering mechanisms
14	Yanosan Thavarasa	Role of intra-domain localizations of primary KIT mutations in gastrointestinal stromal tumors
15	Dennis Nagel	Impact of type I interferons on tumour-dependent granulopoiesis and neutrophil tumorigenicity
16	Lioba Tenbohlen	Immunomodulatory effects of the HIF stabilizer roxadustat in critically ill patients with CKD and renal anemia
17	Isabel Zydek	Isolation and characterization of antiviral antibodies against herpes simplex viruses
18	Vaasudevan Sridhar	Lipid metabolism of NK cells during acute retroviral infection

SESSION 3	<u>Keynote Speaker</u>	Chair: Mohamed Elbeltagy
12:00 – 13:00	<b>Dr. Chong Sun</b> (T-cell) immune regulation in cancer DKFZ Heidelberg	Identifying limiting factors in antitumor T cell responses
13:00 – 14:00		<b>LUNCH</b> (1 <sup>st</sup> / 2 <sup>nd</sup> Poster session switch at <b>13:55</b> )



# PROGRAMME

## SESSION 4

### Infectious Diseases

### Doctoral TALKS, Chairs: Yue Yu and Vaasudevan Sridhar

14:00 – 14:15	Mohamed Saad	Chronic/latent viral infections modulate the function of cytotoxic T-cells and natural killer cells with anti tumour activity
14:15 – 14:30	Antonia Reimer	Investigation of cytomegalovirus infections of the human retina
14:30 – 14:45	Leonie Kerkmann	Virus-trained NK cells and their impact on cancers
14:45 – 15:00	Daniel Stricker	Analysis of the cellular immune response after vaccination against RSV in immunocompromised cohorts


## SESSION 5

15:00 – 17:00 2<sup>nd</sup> POSTER Session during  BREAK

Posters	Group 1	Zone A
1	Marcel Jung	Investigation of a stable subtype of neutrophil in health and disease
2	Tim Milfeit	Optimizing chemically defined culture systems for robust production of therapeutic MSC-EVs
3	Paula Busskamp Castro	Flow virometry as novel tool to characterize the diversity of virus swarms
4	Lea Allerchen	Multimodal preclinical imaging of Aspergillus fumigatus invasion and treatment
5	Antonio Alexander	Not enough – Removal of fibrotic stimuli and exposure to healthy hematopoietic cells is insufficient to reverse fibrotic transformation in mesenchymal stromal cells
6	Lea Otte	Resolving and harnessing neural crest lineage-driven cancer heterogeneity

Posters	Group 2	Zone B
7	Finn Wichmann	Toward a molecular definition of cytotoxic Hodgkin lymphoma: Transcriptomics and functional analyses
8	Hendrik Winkel	Dynamics of circulating immune cells during neoadjuvant immunotherapy of HNSCC
9	Eva Müller	Metabolic signatures of latent HIV: Insights from multi-omics approaches
10	Bin Cheng	Glycosyltransferase B3GAT3 promotes HBV replication and expression through the LAPTM5-lysosomal DDX17 axis
11	Amal Rabih Al Kadi	The integrated stress response (ISR) as a master regulator of drug-tolerant persister cell phenotypes in lung adenocarcinoma during immune checkpoint blockade
12	Luisa Lengenfelder	Metabolic disruption in the mTOR network

# PROGRAMME

Posters	Group 3	Zone C		
13	Lamis Salem	Development and characterization of tumor specific antibodies		
14	Xinyi Zhang	Investigating the role of progranulin in chemoresistance of pancreatic ductal adenocarcinoma (PDAC)		
15	Julian Schmitjes	Influence of iron on the immunometabolism of human natural killer cells in viral infections		
16	Jeffrey Hastings	Eliminating the retroviral reservoir: therapeutic induction of cytotoxic follicular T-helper cells that kill infected cells in B-cell follicles		
17	Maria Al Hourani	KIT downstream signaling mutations in GIST: Malefactors of resistance or persistence		
18	Mariana Ferreira Pissarra	Establishment of a novel system for kinase activity measurements in breast cancer patient samples		
SESSION 6	<u>Keynote Speaker</u>	Chair: Paula Busskamp Castro		
17:00 – 18:00	<b>Prof. Andreas Baur</b> <i>Role of extracellular vesicles during viral infections</i> Universitätsklinikum Erlangen	The astonishing dimension of plasma extracellular vesicles (pEV)		
18:00 – 19:00		RETREAT SOCIAL: BUFFET with drinks (Poster removal at 20:00)		
SESSION 7a	<u>Meet-the-Expert</u>	Chairs: Paula Busskamp Castro, Mohamed Elbeltagy, Michelle Elbert and Vivienne Schneider		
19:00 – 19:30	<b>Plenary Session (<i>general</i>)</b> with Dr. Chong Sun, Prof. Andreas Baur and Prof. Bruce Morgan	<b>Podium discussion, Q&amp;A session:</b> Keynote speakers are invited to describe their personal career paths, sharing some words of advice with the young researchers for their professional futures based on their own experience.  The audience is then invited to ask the speakers any <i>general, overarching</i> questions.		
SESSION 7b	<u>Meet-the-Expert</u>	Chair: Mohamed Elbeltagy	Chair: Paula Busskamp Castro	Chairs: Michelle Elbert and Vivienne Schneider
19:30 – 20:00	<b>Parallel Session (<i>specific</i>)</b> with each keynote speaker	<b>Session with Dr. Chong Sun</b> BIOME members are invited to ask any further <i>specific</i> questions regarding the speaker's career path, their personal tips, as well as more in-depth questions about their particular work and research.	<b>Session with Prof. Andreas Baur</b> BIOME members are invited to ask any further <i>specific</i> questions regarding the speaker's career path, their personal tips, as well as more in-depth questions about their particular work and research.	<b>Session with Prof. Bruce Morgan</b> BIOME members are invited to ask any further <i>specific</i> questions regarding the speaker's career path, their personal tips, as well as more in-depth questions about their particular work and research.

# PROGRAMME

## FRIDAY, 07.11.2025

**Before 09:00 – 3<sup>rd</sup> Poster session participants to please hang up their posters.**

SESSION 8	<u>Tumour &amp; Signalling</u>	Doctoral TALKS, Chairs: Elias Acker and Lea Otte
09:00 – 09:15	Georgia Antonopoulou	Characterization of tumor heterogeneity in pancreatic cancer with focus on evolutionary and microenvironment dynamics during progression
09:15 – 09:30	Alexander Beyer	Mechanisms of humoral immune dysfunction in a mouse model of chronic lymphocytic leukemia
09:30 – 09:45	Michelle Elbert	Mechanisms of humoral immune dysfunction in patients with chronic lymphocytic leukemia
09:45 – 10:00	Ankita Pal	Mapping heterogeneity in thyroid cancer: proliferative programs, EMT, and clonal responses to viral pressure
10:00 – 10:15	Arzoo Shamoon	Dissection progression and resolution of myelofibrosis at the single-cell level to develop disease-modifying therapeutic approaches on MPN
10:15 – 10:30	Julia Kugler	Integration of panel sequencing and optical genome mapping data to improve the diagnostics of pediatric AML

### SESSION 9

10:30 – 12:00 3<sup>rd</sup> POSTER Session during  BREAK

Posters	Group 1	Zone A
1	Angelo Novak	Systematic assessment of urinary proteome stability under various storage conditions using pyelonephritis as a model
2	Ankit Singh	Multileveled dysregulation of apoptosis as a key mechanism of acquired therapy-resistance pancreatic cancer
3	Anne Hartmann	Characterising patient blood to develop new strategies to cure HIV
4	Gaurav Manik Borse	Investigating itaconate as a master regulator of adaptive signalling and the persister cell phenotype in lung adenocarcinoma
5	Felix Gerach	Advancing intraoperative sampling in patients with glioblastoma to access the skull bone immune compartment


FRIDAY, 07.11.2025



# PROGRAMME

Posters	Group 2	Zone B
6	Lara Schöler	People living with HIV exhibit an exceptionally high prevalence and effector strength of cytomegalovirus-specific antibody responses
7	Lisa Ebel	Role of FGF-receptor tyrosine kinases as oncogenic drivers of GIST
8	Tobias Perings	Non-invasive and functional profiling of B-cell lymphomas with a focus on mantle cell lymphoma
9	Hannah Breiter	TCRm CAR NK cell therapy for targeting WT1 in pediatric AML: Addressing <i>in vivo</i> translational barriers
10	Johannes Josef Schneider	Hypoxia-regulated cDNA expression for targeted immunotherapy of solid cancers with genetically modified T-cells

Posters	Group 3	Zone C
11	Xin Wang	Targeting DNA damage response as a therapeutic strategy in pancreatic ductal adenocarcinoma (PDAC)
12	Nastassia Kabankova	Critical role of IFNAR1 signaling in neutrophil-mediated antitumor immunity and CD8 T cell activation in head and neck cancer
13	Samira Ali	Evaluation of autologous conditioned serum-derived extracellular vesicles' mechanism of action, in comparison to MSCs-derived EVs
14	Juliane Cramer	Comparative analysis of the lectin-binding profiles of betacoronaviruses to identify lectins with therapeutic potential
15	Tina Dluzak	Host-pathogen-interactions in hantavirus infections: A focus on cytoskeleton crosstalk

SESSION 10	<u>Keynote Speaker</u>	Chairs: Michelle Elbert and Vivienne Schneider
12:00 – 13:00	<b>Prof. Bruce Morgan</b> <i>Reactive oxidated species, GFP-coupled proteins</i> Universität des Saarlandes	Illuminating the redox landscape: From metabolite dynamics to cellular decision-making
13:00 – 14:00		<b>LUNCH</b> (Poster 3 <sup>rd</sup> / 4 <sup>th</sup> session switch at 13:55)

# PROGRAMME

## SESSION 11

14:00– 15:30


4<sup>th</sup> POSTER Session during ☕☕☕ BREAK

Posters	Group 1	Zone A/B
1	Palaniappan Ramesh	BCL-B promotes lung cancer invasiveness by direct inhibition of BOK
2	Lars Borgards	Lactylation-dependent polarization of macrophages and its role in inflammatory diseases
3	Sarah Freygang	Characterisation of a second C-type lectin-like gene in rat cytomegalovirus
4	Muhila Mohanarangan	The impact of the virus-producing cell type on the spread and neutralization sensitivity of HIV swarms
5	Foteini Filippopoulou	mTOR and the cellular stress response: The effects of tryptophan (TRP) deprivation in glioblastoma
6	Ilgim Özerk	CCR4-NOT: The missing link between MTOR and mRNA deadenylation

Posters	Group 2	Zone C
7	Leandra Jürgens	Influence of rat cytomegalovirus vXCL1 on antigen cross-presentation of dendritic cells
8	Yue Yu	Dissecting IFN $\alpha$ subtype-specific antiviral mechanisms against SARS-CoV-2
9	Elias Acker	From signaling to survival: CXCR4 inhibition as a path to improved retinoblastoma treatment
10	Murad Muhammad	Polarisation of the stromal cells by tumour-derived extracellular vesicles
11	Pauline Plaumann	HOXB13 and its putative role in cell morphologic and metastatic processes in Ewing sarcoma

## SESSION 12

### Retreat Finale

15:30 – 15:45	All Participants	Democratic vote on best doctoral talk award
15:45– 16:00	Poster Committee	Conclave to decide on best poster awards
16:00 – 16:30		The BIOME 2025 Retreat Award Ceremony – <b>Prizes for the best 3 posters and the best talk</b>  Annette Paschen, Daniel Engel and Stefan Heinrichs – <b>Closing Remarks</b>

(4<sup>th</sup> Poster session removal at end of retreat)