



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

08-09.11.2021

Venue: Haus der Technik, Hollestraße 1, 45127 Essen

PROGRAMME

A warm welcome to our first in-person annual retreat since November 2019 hosted at Haus der Technik (HdT) in Essen!

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

Timing:

- **TALKS: 12 minutes for each doctoral talk, 3 minutes for discussion**
- **POSTERS: 6 minutes poster presentation, 6 minutes for discussion**

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 Jury:

- For the poster walks, parallel to the SC jury, four doctoral students from each core have been selected to form a doctoral jury to judge the posters of their own core. It is hoped this will give you greater insight into the process of judging the poster presentations. (In the case that a member of the jury is presenting during a particular poster session, the jury consists of three core members for that session.)

Prizes will be awarded for the best talk and the top three posters.

Haus der Technik (HdT) in Essen: Address: Haus der Technik, Hollestraße 1, 45127 Essen (Hörsaal B, 3rd Floor).

To date, the main **public health** issues to bear in mind for this event are:

- To enter the building, you need either a negative Corona PCR test not older than 48 h or a negative antigen rapid test not older than 6 h **or** proof of vaccination **or** proof of convalescence from a Covid-19 infection (3G).
- Face masks are required except when seated in the hall or while eating/drinking.
- HdT uses the LUCA App for check-in purposes.
- Forms for contact tracing will be placed by HdT on every second seat in the lecture hall. Please fill these out and keep your assigned seat for the duration of the event.

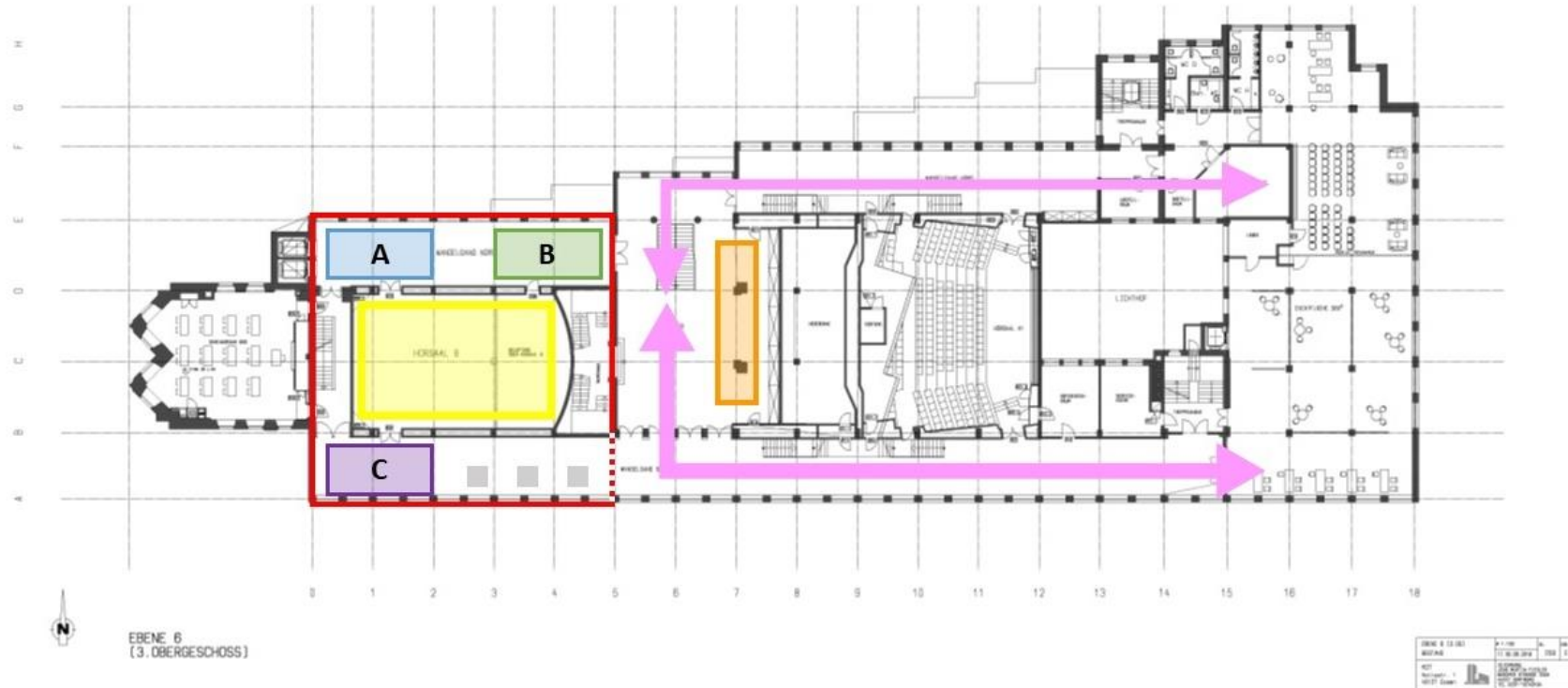
All other details can be found in HdT's hygiene plan (<https://www.hdt.de/hygieneplan>), which you are requested to read. (International students: please ask your German colleagues for explanations if your German is not good enough.)

We are very much looking forward to discussing science with you in a live setting again! It's been a long time.



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Plan HdT
Hörsaal B, 3rd Floor



Poster Walk Guide and Doctoral Jury:

Zone A: Immunology

Maksim Domnich
Antiono Hvrat
Ann-Kathrin Schnorrmeier
Leonie Weber

Zone B: Infectious Diseases

Philipp Podschwadt
Jonas Schuhenn
Corinna Schuler
Jaana Westmeier

Zone C: Tumour & Signalling

Zülal Cibir
Jetsy Montero Vergara
Carolin Salmon
Vivien Ulrich

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MONDAY, 08.11.2021

Before 09:00 – 1st Poster session participants to please hang up their posters.

SESSION 1 Infectious Diseases Doctoral TALKS, Chairs: Luisa Betke and Denise Mennerich

09:00 – 09:15	Philipp Podschwadt	Identification of immunosuppressive sequences in retroviral envelope proteins and analysis of their influence on tumorigenesis and tumour control
09:15 – 09:30	Jonas Schuhenn	Differential interferon- α subtype immune signatures suppress SARS-CoV-2 infection
09:30 – 09:45	Corinna Schuler	Cellular and viral determinants of HCMV-induced impairment of leukemic cell proliferation
09:45 – 10:00	Jaana Westmeier	The role of MIF and its receptors in T cells in hospitalized COVID-19 patients

SESSION 2

10:00 – 11:45 1st POSTER Session during  BREAK

Posters	<u>Immunology</u>	Zone A
1	Benedict Antuamwine	Immunoregulatory activity of tumour associated neutrophils in murine tumour models
2	Irene Adelaide Bocci	Targeting pathologic macrophages for widening the therapeutic window
3	Maksim Domnich	The composition and role of HNC exosomes in the tumorigenic activation of neutrophils
4	Yanis Mouloud	Immortalized mesenchymal stromal cells for the large scale production of extracellular vesicles
5	Elena Siakaeva	Emergency tumour-mediated granulopoiesis and its modulation by type I interferons

Posters	<u>Infectious Diseases</u>	Zone B
6	Gwenllian Appeltrath	Comparative analysis of the SARS-CoV-2-specific antibody response in healthy and HIV-infected individuals
7	Maren Bormann	Neutralisation of SARS-CoV-2 in cell culture
8	Dan-Tiberiu Furnica	Antifungal activity of novel anti-infective compounds
9	Zehra Karaköse	Regulation of the induction of IFN α subtypes during HIV infection

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Posters	<u>Tumour & Signalling</u>	Zone C
10	Yi-Yang Chen	Regulation of angiogenesis in the pathogenic niche of acute myeloid leukemia
11	Zhen Chen	The role and the underlying mechanism of ALDH1A3 in glioblastoma
12	Zülal Cibir	Unravelling the phenotypic coevolution on melanoma cells and neutrophils fostering metastasis and therapy resistance
13	Sara Egea Rodriguez	Therapeutic validation of DNA helicases in cancer
14	Lina Marie Hoffmeister	Functional significance of molecular mutations in pediatric acute myeloid leukemia

SESSION 3

Keynote Speaker

Chair: Annette Paschen

11:45 – 12:45

Florian Rambow

*Laboratory for Molecular Cancer**Biology***VIB-KU Leuven**

Dissecting the melanoma ecosystem one cell at the time

12:45 – 13:30

**LUNCH** (1st / 2nd Poster session switch at **13:25**)

SESSION 4

Immunology

Doctoral TALKS, Chairs: Leonie Weber and Antonio Hvrat

13:30 – 13:45

Julia Pietrek

Generation of antigen-specific regulatory T cells using chimeric antigen receptors as a treatment of autoimmune hepatitis

13:45 – 14:00

Kevin Bronischewski

Molecular and functional characterisation of single human B-1 lymphocytes

14:00 – 14:15

Keven Hörster

Genetic modifications in hematopoietic progenitor cells and NK cells for the development of models and therapies for AML and MDS

14:15 – 14:30

Simone Stupia

Defining the role of CIITA in tumour cell-intrinsic and CD4+ T-cell induced phenotype switching and therapy resistance

SESSION 5

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14:30 – 16:15

2nd POSTER Session during ☕☕☕ BREAK

Posters	<u>Immunology</u>	Zone A
1	Anna Lena Lütticke	Expansion of multipotent hematopoietic stem and progenitor cells, directed by HOX transcription factors
2	Ann-Kathrin Schnormeier	B cell differentiation in the germinal center reaction and the resulting memory B cell compartment in humans
3	Andre van der Wurff	Investigation of the dysregulation of natural killer cells in the context of changes in cell metabolism during sepsis
4	Xi Wang	Role of the tumour microenvironment in the response to cancer immunotherapy
5	Mohamad <u>Amer</u> Nashtar	Immunotherapy of atherosclerosis with rtSLP

Posters	<u>Infectious Diseases</u>	Zone B
6	Luisa Betke	Heterologous immunity by HCMV-specific CD4+ TCR cross-recognizing HLA-DPB1 alloantigens
7	Denise Mennerich	Identification and characterisation of interferon-gamma-stimulated effector proteins and interferon-gamma-repressed dependency factors effecting cytomegalovirus replication
8	Daniela Mittermüller	<i>In vivo</i> imaging of CTL-Treg interaction in Friend virus infection

Posters	<u>Tumour & Signalling</u>	Zone C
9	Fei Kuang	Pepsin-mediated T cell tolerance to enhance the anti-tumour effect of LCMV and its mechanism
10	Yu-An Lin	The role of angiogenesis and macrophages in acute myeloid leukemia
11	Carolin Salmon	Liquid biopsy investigations to clarify the tumour evolution of ovarian carcinoma and to develop personalised therapy concepts
12	Jetsy Montero Vergara	Characterisation of the molecular mechanism of autophagy inhibition by HER2
13	Victoria Berg	The influence of HIV on B cells and its role in the development of B cell lymphoma

SESSION 6

Keynote Speaker

Chair: Mirko Trilling

16:15 – 17:15

Martin Schwemmler
 Institute for Virology
 Albert Ludwigs University
 Freiburg

Bats reveal the true power of influenza A virus adaptability

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17:15 – 18:30



RETREAT SOCIAL: Finger-food BUFFET with drinks (Poster removal at 18:30)

TUESDAY, 09.11.2021

Before 09:00 – 3rd Poster session participants to please hang up their posters.

SESSION 7 Tumour & Signalling Doctoral TALKS, Chairs: Zülal Cibir and Jetsy Montero Vergara

09:00 – 09:15	Lilian Beeck	Molecular pathogenesis of Hodgkin's lymphoma
09:15 – 09:30	Stefanie Egetemaier	Epigenetic-metabolic reprogramming as a universal strategy in therapy-resistant tumour cell phenotypes
09:30 – 09:45	Natalia Miroshnikov	Chemotherapy resistances in human retinoblastoma: investigations on the molecular mechanisms and the development of new therapeutic approaches
09:45 – 10:00	Alicia Tüns	Molecular determinants of relapse in lung cancer

SESSION 8

10:00 – 11:45 3rd POSTER Session during  BREAK

Posters	<u>Immunology</u>	Zone A
1	Swati Dhiman	Cloning, purification and characterisation of glucosylceramidase
2	David Hässig	Distinct molecular endotypes in CD8+ T cells contribute to the pathogenesis of patients with a combination of COPD and asthma
3	Laura Kahl	Comparative analysis of the tumour microenvironment in primary versus metastatic head and neck cancer
4	Leonie Weber	Generation of antigen-specific regulatory T cells using chimeric antigen receptors as a treatment of type 1 diabetes
Posters	<u>Infectious Diseases</u>	Zone B
5	Johanna Freyberger	Characterisation of the SARS-CoV-2 specific non-neutralising antibody response in healthy individuals and HIV-infected patients
6	Annika Brochtrup	The cytotoxic immune response against SARS-CoV-2

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7	Korbinian Wunsch	Infectivity, cellular and humoral immune response of a geriatric COVID-19 cohort
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Posters	<u>Tumour & Signalling</u>	Zone C
8	Lina Farhoumand	Evaluation of the anti-tumour potential of beta-blockers in the tumour-spheroid-model of uveal-melanoma
9	Lara Fehr	Interplay of oncogenic growth factor receptors and functional immune status in head and neck cancer
10	Vivien Ullrich	Targeting clonally expanding drug-resistant tumour cells in recurrent glioblastoma
11	Rui Fang	Characterisation of intratumoral heterogeneity of the tumour microenvironment in pancreatic ductal adenocarcinoma
12	Maximilian Kerkhoff	Evaluation of fluorescent dyes for determination of tumour vitality in CAM model

SESSION 9

Keynote Speaker

Chair: Hannes Klump

11:45 – 12:45

Barbara Grüner
Emmy Noether Group Molecular
 Tumorpathology, Essen

Multiplexed deconvolution of metastasis and therapy response *in vivo*

12:45 – 13:30

LUNCH (Poster 3rd / 4th session switch at 13:25)

SESSION 10


13:30 – 15:00

4th POSTER Session during  BREAK

Posters	<u>Immunology</u>	Zone A
1	Antonio Hrvat	Improving the anti-tumour activity of natural killer cells by novel nanoparticle-antibody-conjugates
2	Irem Özel	Functional characterisation of neutrophil IFN and TGF-beta signalling in cancer
3	Maren Soldierer	Utilizing naive and modified effector cells in the treatment of pediatric AML

Posters	<u>Infectious Diseases</u>	Zone B
4	Xiaoyan Wang	Analysis of immunogenicity and seroprevalence of human adenovirus types

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5	Lisa Drübert	Regulation of the induction of IFN α subtypes during HIV infection
6	Lars Widera	Influence of Thrombospondin-1 on UTI infections in CLL environment
Posters	<u>Tumour & Signalling</u>	Zone C
7	Lars Mohren	Role of enhancer of zeste homologue 2 (EZH2) and protein tyrosine phosphatase receptor type E (PTPRE) in chemoresistant retinoblastoma cells
8	Stefanie Saoub	The interaction between hypoxia-inducible factors and the tumour suppressor p53 in the inflammatory colorectal carcinoma
9	Dario Van Meenen	Impact of an ADAM10 and ADAM 17 knockdown on the tumorigenicity of retinoblastoma cells
10	Sophia Hahn	Impact of the genetic signature of leukemic stem cells in pediatric AML
11	André Haase	Trefoil factor family (TFF) peptides - potential biomarkers, pathway therapy targets and prospective application strategy in retinoblastoma therapy
12	Laura Reetz	Characterization of circulating extracellular vesicle(EV)-DNA from blood and cerebrospinal fluid (CSF) for monitoring recurrence in pediatric medulloblastoma (pMB)
13	Karim Al-Ghazzawi	Identification of new biomarkers for rare isolated orbital inflammation for therapeutical advance
15:00 – 15:15	All Participants	Democratic vote on best doctoral talk award
15:15 – 15:30	Poster Committee	Conclave to decide on best poster awards
15:30 – 16:00		The BIOME 2021 Retreat Award Ceremony – Prizes for the best 3 posters and the best talk Sven Brandau: Closing Remarks

(4th Poster session removal at end of retreat)

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NOTES: