



Program of the Herbsttagung
of the German Respiratory Society (DGP)
Section Cell Biology
in Hannover

12. – 13. November 2021
at lecture hall F
at Hannover Medical School
(MHH)





Scientific Lead

Prof. Dr. Antje Prasse

Medizinische Hochschule Hannover and Fraunhofer ITEM

Dr. Jonas Schupp

Medizinische Hochschule Hannover

Venue

Hannover Medical School (MHH)

Lecture hall F

Carl-Neuberg-Str. 1

30625 Hannover

With many thanks for the financial support of:



10.000 €



3.000 €



2.000 €





Friday, November, 12th

- 12.00 Reception and snack
- 12.45 Welcome: Antje Prasse und Jonas Schupp
- 13.00 Keynote Lecture: **Lung Pathology of COVID-19** | Prof. Dr. Danny Jonigk, Institute of Pathology, Hannover Medical School (MHH)
- 13.30 – 14.10** **Session: Stem Cells Research and Lung Regeneration**
Chairs: Mania Ackermann, Antje Munder
- 13.30 – 13.40 **The challenge of long-term cultivation of human precision-cut lung slices** | Eike Preuß
- 13.40 – 13.50 **Reprogramming of bone marrow mesenchymal stem cells during viral lung infection is mediated by Type I Interferon signaling and Interleukin 11 AXIS** | Margarida Barroso
- 13.50 – 14.00 **Stem cell derived designer macrophages as a cell-based immunotherapy to treat bacterial airway infections** | Mania Ackermann
- 14.00 – 14.10 **Fibroblasts drive the differentiation of murin pneumocytes in air-liquid interface cultures** | Yiwen Yao
- 14.10 – 14.50** **Session: Asthma and Allergies**
Chairs: Michaela Schedel, Christoph Tabelaing
- 14.10 – 14.20 **Plasticity of naturally occurring regulatory T cells in allergic airway disease is modulated by the transcriptional activity of IL-6** | Michaela Schedel
- 14.20 – 14.30 **In an acute allergic airway disease murine model, H. pylori derived VacA treatment attenuates the asthma phenotype of adult mice** | Jonas Raspe
- 14.30 – 14.40 **Cytokine production of leukocytes in response to respiratory syncytial-virus is impaired in severe asthma** | Kaschin Jamal Jameel
- 14.40 – 14.50 **Differential Regulation of Interferon Signaling Pathways in CD4+ T Cells of the Low Type-2 Obesity-Associated Asthma Phenotype** | Fahd Alhamdan
- 14.50 – 15.30** **BREAK**



DGP



Deutsches Zentrum für
Lungenforschung



15.30 – 16.30

Session: Infections and Pneumonia – PART 1

Chairs: Anna Lena Jung, Hortense Slevogt

15.30 – 15.40

WNK1 and downstream signaling after loss of CFTR function in pneumonia-induced lung barrier failure | Laura Kneller

15.40 – 15.50

Screening for eukaryotic motives in Legionella pneumophila reveals bacterial Smh1 as functional host histone de-acetylase | Stefanie M. Herbel

15.50 – 16.00

Single-cell RNA-seq to improve the pathomechanistical understanding of community acquired pneumonia | Peter Pennitz

16.00 – 16.10

Effect of α -1 antitrypsin deficiency versus augmentation therapy on pneumococcal pneumonia in mice | Lena Ostermann

16.10 – 16.20

Repetitive exposure to bacteriophage cocktails against multidrug-resistant P. aeruginosa or E. coli does not induce pronounced immunity in naïve mice | Chantal Weißfuß

16.20 – 16.30

Impact of Klebsiella pneumoniae OMVs on antibiotic resistance | Marie Wiegand

16.30 – 17.00

BREAK

17.00 – 17.50

Session: Infections and Pneumonia – PART 2

Chairs: Birgitt Gutbier, Ulrich Maus

17.00 – 17.10

Overexpression of macrophage inducible C-type lectin Mincle aggravates proinflammatory responses to Streptococcus pneumoniae with fatal outcome in mice | Femke D. Hollwedel

17.10 – 17.20

MicroRNA-223-regulated neutrophilic inflammation in Community Acquired Pneumonia | Cengiz Gökeri

17.20 – 17.30

Multi-omics analysis reveals the NAD⁺ salvage pathway as defense mechanism against Streptococcus pneumoniae infection with potential for therapeutic exploitation | Björn Klabunde

17.30 – 17.40

In vitro and ex vivo methods for assessing the efficacy of bacteriophages against Pseudomonas aeruginosa biofilms | Magdalena Bürkle

17.40 – 17.50

Non-hematopoietic IL-33 negatively regulates IFN γ - and IL-22-dependent antibacterial immune response in pneumonia | Ivo Röwekamp



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17.50 – 18.00

Human lungs show limited permissiveness for SARS-CoV-2 due to scarce ACE2 levels but virus-induced expansion of inflammatory macrophages | Morris Baumgardt

19.00

Dinner at Mercure Hotel, Feodor-Lynen-Str. 1, 30625 Hannover

the poster gallery will be open at all times

Saturday, November 13th

9.00 – 9.30

Keynote Lecture: **Gene therapy strategies targeting hematopoietic stem cells** | Prof. Dr. Axel Schambach, Institute of Experimental Hematology, Hannover Medical School (MHH)

9.30 – 10.40

Session: COVID-19 and ARDS
Chairs: Felix Ritzmann, Bernd Schreck

9.30 – 9.40

The EV core facility in Marburg – Proven and new vesicle technologies for lung research | Anna Lena Jung

9.40 – 9.50

Bacterial outer membrane vesicles induce antiviral signaling in macrophages and reduce viral replication via Mx1 induction | Jeff Bierwagen

9.50 – 10.00

The Potential of monoclonal antibodies and Dexamethasone as combinative therapy against COVID-19 | Julia Adler

10.00 – 10.10

Modulation of angiotensin converting enzyme 2 (ACE2) expression in airway epithelial cells and its regulatory role in NLRP3 inflammasome activation of macrophages | Nataliia Artysch

10.10 – 10.20

Circadian Rhythms in Alveolar Epithelial Cells | Sebastian Ferencik

10.20 – 10.30

High tidal ventilation increases DNA damage in alveolar macrophages | Jingjing Li

10.30 – 11.00

BREAK



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Deutsches Zentrum für
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11.00 – 11.50

Session: Lung Fibrosis

Chairs: Antje Prasse, Jonas Schupp

11.00 – 11.10

Enhanced activity of NLRP3 inflammasome caspase-1 pathway and its induction by efferocytosis of A549 cells in idiopathic pulmonary fibrosis and acute exacerbation | Benedikt Jäger

11.10 – 11.20

Role of Matrix Metalloproteinase-2 and -9 in experimental lung fibrosis in mice | Tina Bormann

11.20 – 11.30

Ex-vivo modelling of human lung fibrogenesis and drug mode of action screens using single cell RNA-seq in precision-cut lung slices | Niklas Jonathan Lang

11.30 – 11.40

Ultrastructural and transcriptional profiling of intralesional mesenchymal cells in Pleuro-parenchymal Fibroelastosis | Jannik Ruwisch

11.40 – 11.50

B cells are not involved in the regulation of adenoviral TGF- β 1- or bleomycin-induced lung fibrosis in mice | Marie Moog

11.50 – 12.30

Session: COPD, Emphysema and Lung Cancer

Chairs: Christoph Besswenger, Sabine Wrenger

11.50 – 12.00

OR2AT4 and OR1A2 interfere with functions in alveolar macrophages critical for non-type 2 obstructive lung diseases | Daniel Weidinger

12.00 – 12.10

Pro-coagulant extracellular vesicles mediate smoking-induced pulmo-vascular inflammation | Katrin Bedenbender

12.10 – 12.20

Influence of alpha1-antitrypsin and the factors released by degranulated neutrophils on the cancer cell responses to chemotherapeutic drugs | Anna Gründung

12.20 – 12.30

Function for TRPC1 in a model of Kras-driven lung cancer | Felix Ritzmann

12.30

Closing remarks

12.35

Snack / Lunch boxes

End of event