

Program 9th International Influenza Meeting

„From Bench to Bedside“

Thursday, September 5, 2024

15:00 Registration

17.00 – 22.00 OPENING

17.00 Welcome notes by the organizers

17.15 Opening lecture

Richard Webby (St. Jude Children's Research Hospital) The impact of A(H5N1) viruses in North America

18.00 Poster slam

19 Uhr *Poster viewing & Reception at the meeting site (food and drinks)*

Friday, September 6, 2024

09:00 – 10:30 Session 1: **Evolution and emerging viruses**

Colin Russel (Amsterdam UMC) TBA

Romain Volmer (Universite de Toulouse) The risk of evolution to high pathogenicity avian influenza is determined by the thermodynamic stability of the HA cleavage site product-template primary sequences within the polymerase catalytic site.

Sriram Kumar (Universität Münster) Evaluating the Zoonotic Potential of Avian H5Nx Viruses of Clade 2.3.4.4b from 2016-2021 in Primary Human Lung Tissue

Elisabeth Hellec (French Agency for Food, Environmental and Occupational Health and Safety (ANSES)) Longitudinal study of two farrow-to-finish pig herds permanently infected with swine influenza A viruses suggested viral maintenance or successive introductions depending on the genotype

10:30 *Coffee break*

11:00 – 12:30 Session 2: **Virus Replication**

Nadja Naffakh (Institute Pasteur) Influenza vRNP trafficking and virus-induced remodeling of cellular endomembranes

Janin Schokolowski (Hubrecht Institute, Oncode Institute, TU Delft) Identifying determinants of IAV infection success using real-time single vRNP imaging

Redmond P. Smyth (Helmholtz Institute for RNA-based Infection Research, Würzburg) Visualizing the transcription and replication of influenza viral RNAs in cells by direct RNA padlock probing and in-situ sequencing

Sebastien SOUBIES (INRAE) Contribution of feather epitheliotropism to high pathogenicity avian influenza ecology

12:30 – 13:30 *Lunch*

13:30 – 14:30 *Poster Viewing*

14:30 – 15:30 Session 3: **Virus host cell interaction I**

Florence Kwaschik (University of Zurich) Detection of RNA:DNA Hybrids during influenza virus infection

Hannah Mischo (King's College London) Host-cell shut-off mechanisms of influenza A virus

Thurid Lauf (University Hospital Jena) Age-dependent alterations of macrophage function leads to increased viral load during influenza A virus infection

15.30 – 16:00 *Coffee break*

16:00 – 17:00 Session 4: **Virus-host cell interaction II**

Iuliia Kotova (EMBL Hamburg) A snapshot of in-cell influenza A virus protein-protein interactions

Patricia Martinez Barragan (Institute of Medical Virology, University of Zurich) H5Nx influenza A viruses can possess dual receptor specificity for sialic acid and MHC-II

Neda Hosseini (Institute of Virology, Medical Center University of Freiburg) Inactive variants of the glycosyltransferase B4GALNT2 increase human susceptibility to avian influenza A virus infections

17:00 Special lecture

Olivier Terrier (Centre International de Recherche en Infectiologie) Respiratory coinfections: when the whole is greater than the sum

19:00 Conference Dinner (location: „Schlossgarten“, Münster)

Saturday, September 7, 2024

09:00 – 10:10 Session 5: **Viral Pathogenesis I**

Gülsah Gabriel (Leibniz Institut of Virology) SARS-CoV-2 infection beyond the respiratory tract: lessons learned from influenza

Lisa Kern (Institute of Virology, University Medical Centre of Freiburg) Lung epithelial cells can survive an acute Influenza A virus infection in an interferon-dependent manner and persist far beyond viral clearance in vivo.

Duygu Merve Caliskan (Institute of Virology, University of Münster, Germany) Molecular characterisation of influenza B virus from 2017/18 season in primary models of the human lung reveals improved adaption to the lower respiratory tract

10:10 – 11:00 *Coffee break and Poster viewing*

11:00 – 12:00 Session 6: **Viral Pathogenesis II**

Stephan Pleschka (Justus Liebig University Giessen, Institute of Medical Virology) Influenza A virus replicates productively in primary human kidney cells and induces factors and mechanisms related to kidney pathology observed in virus-infected patients

Pierre Hostyn (Sciensano, Belgium) Pathobiology and viral transmission in poultry flocks of punctually introduced clade 2.3.4.4b H5N8 strains

Elise Bruder (INRAE) The role of PB1-F2 in the pathogenicity induced by avian influenza virus H5N8 in mice.

12:00 – 13:00 Lunch

13:00 – 14:50 Session 7: **Antivirals and vaccines**

Hiroki Kato (University of Bonn) Antiviral Strategies Targeting Methyltransferases

André Schreiber (Institute of Virology, Muenster) The MEK1/2 inhibitor ZMN efficiently blocks HPAIV infections

Sebastian Beck (Leibniz Institute of Virology) T-705-derived prodrugs show high antiviral efficacies against a broad range of influenza A viruses with synergistic effects when combined with oseltamivir

Jens Lohmann (Institute for Computational Systems Biology, University of Hamburg, 22607 Hamburg, Germany) Toward improved antiviral therapies: Computational meta-analysis of genome characteristics and strategy for prioritization of defective interfering particles

Gert Zimmer (Institute of Virology and Immunology (IVI)) Evaluation of a novel intramuscular prime/intranasal boost vaccination strategy against influenza in the porcine animal model

14.50 – 15.10 Poster Prize and Closing Remarks