

# Zoonoses 2023

International Symposium on Zoonoses Research

Zoonoses 2023  
Monday, October 9th 2023

**13:00 Registration & Snacks**

**14:00 Welcome Note**

**14:30 Keynote I Göran Kauermann**

**15:00 Break & Poster Viewing**

## **15:30 Session I: Epidemiology & Secondary Data Use**

15:30 Thirty invasive listeriosis outbreaks and ready-to-eat fish products (Raskit Lachmann | RKI)

15:45 Linking human and veterinary routine data on *Campylobacter* spp. - A One Health approach using secondary data (Anne Schnepf | TiHo)

16:00 Development of forecasts and quality control charts for *Campylobacter* spp. cases in Lower Saxony, Germany using the One Health Approach (Alina Kirse | TiHo)

16:15 Horses as sentinels for the circulation of flaviviruses in eastern-central Germany (LMR Gothe | Universität Leipzig?)

16:30 Seroprevalence of Crimea-Congo Hemorrhagic Fever in Dromedary Camels and Human Occupational Contacts in the United Arab Emirates (Mohamud Sheek-Hussein | United Arab Emirates University)

16:45 Detection of pathogenic *Leptospira* spp. serogroups in Europe between 2017 and 2020 applying a gene-based molecular approach (Jasmin Wenderlein | LMU München)

## **15:30 Session II: Vaccines & Immunology**

15:30 Exploring bat innate immune cell responses to filoviruses (Ivet Yordanova | RKI)

15:45 *Toxoplasma gondii* attenuated by low energy electron irradiation induces protective immune responses (Julia Finkensieper | Fraunhofer Institute for Cell Therapy and Immunology)

16:00 Mice immunized with different recombinant West Nile virus proteins show varying levels of serological cross-reactivity and protection from infection (Rebecca Weiß | Fraunhofer Institute for Cell Therapy and Immunology)

16:15 Neutralization of the hepatitis E virus by porcine serum antibodies in a cell-culture based assay (Nele Gremmel | TiHo)

16:30 Improving Clinical Trials for Candidate Vaccines Against AMR Infections: Perspectives from the COMBINE Project (Linda Marchioro | Paul-Ehrlich-Institut)

16:45 Consequences of Ascaris-Salmonella co-infection on immune functions in the pig (Ankur Midha | FU Berlin)

**17:00 Coffee Break & Poster Viewing**

**17:30 – 18:30 One Health Pioneers: Würdigung Thomas Mettenleiter & Lothar Wieler**

**18:30 Session III: Pathogenesis & Pathology of Zoonotic Infections**

18:30 Identification of possible peripheral routes for borna disease virus 1 (BoDV-1) infection (Kore Schlottau | FLI –Greifswald)

18:45 Zoonotic potential of animal sarbecoviruses related to SARS-CoV-1 and SARS-CoV-2 (Lu Zhang | Deutsches Primatenzentrum)

19:00 In vivo models for rustrela virus (RusV) infection in potential reservoir and spill-over hosts (Dennis Rubbenstroth | FLI-Greifswald)

19:15 Omicron subvariant BA.5 efficiently infects lung cells (Stefan Pöhlmann | Deutsches Primatenzentrum)

19:30 Less Pronounced Immunopathological Responses Following Oral Butyrate Treatment of Campylobacter jejuni-Infected Mice (Stefan Bereswill | Charité Berlin)

19:45 Using population dynamics and transposon-directed insertion site sequencing (TraDIS) to identify bacterial factors essential for the egress from the neonate epithelial cell (Christine Lemke | Freie Universität Berlin)

**18:30 Session IV: Host-pathogen interactions 1**

18:30 Cross-talk between glyphosate resistance, bacterial stress response and pathogenicity traits in Salmonella enterica (Olga Makarova | FU Berlin)

18:45 Cell-intrinsic genomic reassortment of pandemic H1N1 2009 and Eurasian avian-like swine influenza viruses results in potentially zoonotic variants (Marcel Edgar Friedrich | University of Muenster)

19:00 Multivesicular bodies and the hepatitis E virus life cycle – more than just release? (Mirco Glitscher | Paul-Ehrlich-Institut)

19:15 Cryo-electron tomography of influenza A and Ebola virus cell infection (Petr Chlanda | Heidelberg University Hospital)

19:30 A study of the interaction of insect-specific viruses from Bunyvirales with the mosquito host and the mosquito-transmitted Rift Valley Fever Virus (Swati Jagtap | BNITM)

19:45 NETosis during Influenza: A potential risk factor for severe bacterial co-infection in pigs? (Simon Lassnig | TiHo)

**20:00 Poster Slam I**

**21:00 Get-Together**

## Tuesday, October 10th 2023

**10:30 Keynote II**

### 11:00 Session V: Environmental factors & Ecology of Zoonotic Infections

11:00 Establishment of an endemic West Nile virus maintenance cycle in Berlin (Corinna Patzina-Mehling | Charité Berlin)

11:15 Human land-use change alters immunogenetic-pathogen links in a generalist rodent and zoonotic reservoir (Ramona Fleischer | Ulm University)

11:30 Role of a novel pilus protein in DNA uptake and natural transformation of *Campylobacter jejuni* (Julia Golz | BfR)

11:45 Mathematical modeling of mosquito borne diseases in Germany (Pride Duve | BNITM)

12:00 Human-to-human transmission of Andes hantavirus modeled in the Syrian hamster (Silke Riesle Sbarbaro | RKI)

12:15 Integrative early-warning modelling of West Nile virus transmission in Germany (Sara Margarida Martins Afonso | BNITM)

### 11:00 Session VI: Public Health & Pandemic Preparedness

11:00 Advancing European research on viral zoonoses through the new One-Health-driven programme, “Integrated Services for Infectious Disease Outbreak Research” (ISIDORE) (Jonathan Ewbank | European Research Infrastructure on Highly Pathogenic Agents )

11:15 Mosquito ID: sequencing out of the mobile suitcase lab as an early warning system for emerging infectious diseases (Arianna Ceruti | Leipzig University)

11:30 Strengthening One Health research capacity in Guinea through characterization of acute febrile illness of unknown etiologies (Charlotte Hammer | University of Cambridge)

11:45 Seroprevalence of anti TBE-IgG and anti-NS1-IgG in blood donors in a highly endemic TBE area in south-eastern Germany (Gerhard Dobler | Bundeswehr Institute for Microbiology)

12:00 Assessment of treatments to reduce the amount of antibiotic-resistant bacteria in chicken manure (Aleksandra Atanasova | Leibniz Institute für Agrartechnik und Bioökonomie)

12:15 Knowledge, attitudes and behavior towards tick prevention and tick-borne diseases – a survey among Lyme borreliosis cases in Bavaria in 2019 (Stefanie Böhm | LGL Bayern)

**12:30 Coffee Break & Poster Viewing**

**13:00 Session VII: One Health Intervention Methods + Risk Assessment & Biosecurity**

13:00 Investigating the biomarker potential of host proteins and development of lateral flow assays to detect Mycobacterium bovis infection (Hamza Khalid | University of Edinburgh)

13:15 Emerging crop pathogenic fungi Fusarium threatens hatching success in freshwater turtles – The impact of healthy egg microbiomes in pathogen resistance (Ana Sofia Carranco | Ulm University)

13:30 MERS-CoV–Specific T-Cell Responses in Camels after Single MVA-MERS-S Vaccination (Christian Meyer zu Natrup | TiHo)

13:45 Biological attack causing plague? Yersinia pestis used in simulation exercise for the investigation of an alleged use of biological weapons. (Anja Blasse | RKI)

14:00 The bat-borne influenza A virus H9N2 exhibits a set of unexpected pre-pandemic features (Lea Hamberger | Uniklinik Freiburg)

**13:00 Session VIII: Antimicrobial Use and Resistance**

13:00 Bridging the research gaps on antimicrobial resistance in sub-Saharan Africa - A One Health approach (Rea Kobiaka | Universität Leipzig)

13:15 From heteroresistance to resistance: a single nucleotide polymorphism (SNP) homogenizes population plasticity of gene amplification based heteroresistance (Johannes Kupke | Freie Universität Berlin)

13:30 Pim-kinase inhibitors as antivirals against SARS-CoV-2 (Mirco Glitscher | Paul-Ehrlich-Institut)

13:45 Resistance determinants against therapeutically relevant antibiotics in publicly available genome sequences from *Clostridioides difficile* isolates (Baban Kolte | Leibniz Institute DSMZ)

14:00 Joint analysis of antimicrobial resistance data from human and veterinary sector - results from the project Connect One Health Data (Katja Hille | Department for Infectious Disease Epidemiology, Public Health Agency of Lower Saxony)

14:15 Pathology as read-out for efficacy testing of the benzothiazinone BTZ-043 against *Mycobacterium tuberculosis* in a guinea pig (*Cavia porcellus*) model (Jan Schinköthe | Universität Leipzig)

**14:30 – 15:30 Luch & Poster Viewing**

**15:30 – 16:00 Keynote 3: Timo Falkenberg**

**16:00 – 17:00 Poster Slam II**

**17:00 -17:30 Coffee Break & Poster Viewing**

**18:30 Members assembly: Members assembly of the German Research Platform for Zoonoses with the Election of the Internal Advisory Board**

**20:00 Social Dinner**

**Wednesday, October 11th 2023**

**09:00 Young Scientist Breakfast**

**10:30 Session IX: Zoonoses & Wildlife**

10:30 Lessons Learned from the Old and New World: Exploring the Interplay between Biodiversity and Zoonotic Diseases in Wildlife (Magdalena Meyer | Ulm University)

10:45 Linking immunogenetics to tuberculosis susceptibility and progression in wild meerkats (Nadine Müller-Klein | Ulm University)

11:00 Small but powerful - decoding the virome of selected crocidurine shrew species ( Viola Haring | FLI Greifswald)

11:15 Unraveling the Molecular Evolution of Usutu Virus in Germany using Nanopore Sequencing (Cora M. Holick | FLI Greifswald)

11:30 Viral interaction between West Nile virus and Usutu virus during simultaneous co-infections in frequent German mosquito species (Christin Körsten | FLI Greifswald)

11:45 Proximity loggers to study rodent spatial behaviour and pathogen transfer in farming environments (Florian Huels | Julius Kühn-Institut)

### **10:30 Session X: Bioinformatics, Digitalization and AI in One Health Research**

10:30 From Bits to Insights: Leveraging Multidisciplinary Data for Modern Epidemiological Surveillance and Risk Assessment (Juliane Boenecke | HAW Hamburg)

10:45 Compatibility of WGS data from Illumina and Ion Torrent technology in genome comparison analysis of *Listeria monocytogenes* (Stefanie Lüth | BfR)

11:00 Development of an artificial intelligence-based workflow for the reliable identification of mosquito species by non-expert user groups (Alexandra Falkenhagen | BfR)

11:15 Genomic analysis of *Streptococcus suis* isolated from healthy and diseased birds (Muriel Dresen | TiHo)

11:30 Phenotypic and genotypic antimicrobial resistance of *Streptococcus uberis* isolated from bovine mastitis in Thuringia, Germany (Christine Thomas | FLI Greifswald)

11:45 Towards reliable prediction of significant changes in microbial communities based on time series data (Ann-Kathrin Brüggemann | UK Essen)

### **12:00 – 12:30 Coffee break & Poster viewing**

### **12:30 Session XI: Host-pathogen Interactions 2**

12:30 MHC genes regulate host gut microbiome in bats with acute coronavirus infections (Dominik W. Schmid | Universität Ulm)

12:45 The bat-derived influenza A viruses H18N11 infects and replicates in leukocytes (Susanne Kessler | University Freiburg)

13:00 Therapeutic Oral Application of Carvacrol Alleviates Acute Campylobacteriosis in Mice Harboring a Human Gut Microbiota (Markus Heimesaat | Charité Berlin)

13:15 Differential autophagy and immune signaling in human and Rhinolophus bat cells during SARS-CoV-2 infection (Ivan Nombela | Charité Berlin)

13:30 Zapnometinib – A MEK1/2-inhibitor with broad anti-SARS-CoV-2 activity, synergistic potential and a reduced risk of resistance introduction (André Schreiber | University Muenster)

13:45 Mosquito-specific viruses interfere with Culex-borne arboviruses (Sarah Gothe | BNITM)

#### **12:30 Session XII: Zoonoses & Wildlife II**

12:45 Novel paramyxoviruses are common in South African small mammals (Wolfgang Preiser | University of Stellenbosch)

13:00 Host-species barriers affecting LASV infection in M. natalensis (Chris Hoffmann | BNITM)

13:15 Virulence factors and phylogenetic relationships in Staphylococcus aureus from wild ungulates in Brandenburg, Germany (Tobias Lienen | BfR)

13:30 Hepatitis E virus in wild boars in Brandenburg, Germany, 2018 – 2022 (Katja Schilling-Loeffler | BfR)

13:45 Comparison of human- and rat-derived strains of rat hepatitis E virus in cell lines of both hosts (Jessica Panajotov | BfR)

**14:00 Lunch**

**15:00 Keynote IV: Marion Koopmans**

**15:30 Poster Prize & Farewell**