

15TH HOST PATHOGEN INTERACTION FORUM 2025 - AGENDA

MONDAY (November 10, 2025)

- 4:00 – 5:45pm *Arrival of participants, Registration and helpdesk open* (Entrance hall, *hotel Chateau Třešť*)
- 6:00 – 6:30pm Keynote lectures
- Lokesh Joshi** - National Center for Biomedical Engineering Science, University of Galway, IE
- 06:30 – 12:00pm *Welcome party* (Entrance hall/Auditorium, *hotel Chateau Třešť*)

TUESDAY (November 11, 2025)

8:30am – 10:15am

Session I.

Chairmans: Gediminas Drabavicius, Ján Matiašovic

- 8:30 – 9:00am **Gediminas Drabavicius** – Dissecting Host-Pathogen Interactions Using CRISPR Screens: Insights into CDC Toxicity (Vilnius University, Medical Sciences Center, LT)
- 9:00– 9:15am **Ján Matiašovic** – Current view on the taxonomy of *Streptococcus suis* (Veterinary Research Institute, CZ)
- 9:15– 9:30am **Monika Zouharová** – Genomic Survey of *Streptococcus parasuis* Isolates from Clinical Cases in Cattle (Veterinary Research Institute, CZ)
- 9:30– 9:45am **Petra Špidlová** – HU protein, inconspicuous player in *Francisella* virulence (Military Faculty of Medicine, UoD, CZ)
- 9:45– 10:00am **Eva Velecká** – Bacterial HU protein as a regulator of host cell gene expression (Military Faculty of Medicine, UoD, CZ)
- 10:00– 10:15am **Věra Vozandychová** – Host Macrophage Deubiquitinating Enzymes Exhibit Altered Activity Upon *Francisella tularensis* Infection (Military Faculty of Medicine, UoD, CZ)
- 10:15– 10:45am *Coffee break – Conference foyer*

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- 10:45 – 11:00am **Andreja Zubković** – Long-Term Survival and Encystment Modulation of *Francisella novicida* in *Acanthamoeba castellanii* (University of Rijeka, Medical Faculty, HR)
- 11:00 – 11:15am **Lucie Balonová** – Role of glycoconjugates in the development of protective immunity against *Francisella tularensis* infection (Military Faculty of Medicine, UoD, CZ)
- 11:15 – 11:30am **Jana Pavlosková** – In Vitro Characterization of *Francisella tularensis* Infection and Early Immunopeptidomic Insights (Military Faculty of Medicine, UoD, CZ)
- 11:30 – 11:45am **Pavčina Lásková** – Identification and Validation of CD4+ T Cell Epitopes of the Intracellular Pathogen *Francisella tularensis* (Military Faculty of Medicine, UoD, CZ)
- 11:45 – 12:00pm **Paulína Mathéová** – Identification of SPI-2 T3SS effectors inhibiting T cell activation (Institute of Microbiology of CAS, CZ)
- 12:00 – 12:15pm **Alona Dreus** – Role of flagella in translocation of *Salmonella* T3SS effectors (Institute of Microbiology of CAS, CZ)
- 12:15 – 1:30pm *Lunch – hotel Chateau Třešť*

1:30pm – 3:30pm

Session II.

Chairmans: Jana Kamanová, Ivan Rychlík

- 1:30 – 2:00pm **Milada Pospíšilová** – Bimodal Expression of Type 3 Secretion System 2 and its Effectors Enables Division of Labour (Institute of Microbiology of CAS, CZ)
- 2:00 – 2:30pm **Jana Kamanová** – Functional specialization of the type III secretion systems (Institute of Microbiology of CAS, CZ)
- 2:30 – 3:00pm **Ivan Rychlík** – Chickens as model for host-gut microbiota studies (Veterinary Research Institute, CZ)
- 3:00 – 3:30pm *Coffee break – Conference foyer*
- 3:30 – 3:45pm **Jiří Volf** – Mucus-associated microbiota in chicken caecum (Veterinary Research Institute, CZ)

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- 3:45 – 4:00pm **Lenka Vlasatíková** – Influence of experimental probiotic mixtures on chicken cecal metabolome (Veterinary Research Institute, CZ)
- 4:00 – 4:15pm **Jana Rájová** – Cecum and Bursa Proteomes in Day-Old Broilers (Veterinary Research Institute, CZ)
- 4:15 – 4:45pm **Darina Čejková** – Temporal Dynamics of Plasmid-Associated Antibiotic Resistance in the Chicken Gut Microbiome (Brno University of Technology, CZ)
- 4:45 – 5:00pm **Company presentation**
- 5:00 – 5:15pm **Company presentation**

WEDNESDAY (November 12, 2025)

9:15 – 12:00pm

Session III.

Chairmans: Jana Schwarzerová, Ryan Rego

- 9:15 – 9:30am **Jana Schwarzerová** – Evaluating Sequence Clustering Tools in PCR Primer Design Pipelines: A Case Study of CD-HIT and MMSeqs2 (University of Technology, CZ)
- 9:30 – 10:00am **Jiří Zahradník** – The Shape of Adaptation: What SARS-CoV-2 Taught Us About Protein Plasticity and Viral Evolution (Faculty of Medicine, Charles University and BIOCEV, CZ)
- 10:00 – 10:15am **Katarína Matiašková** – Effectiveness of polyphenol-based formulations in treatment of *Staphylococcus hyicus* skin infection in pigs (Veterinary Research Institute, CZ)
- 10:15 – 10:45am *Coffee break – Conference foyer*
- 10:45 – 11:00am **Helena Langhansová** – *Borrelia burgdorferi* modulates immune tolerance through PD-1/PD-L1 pathway (Faculty of Science, University of South Bohemia, CZ)
- 11:00 – 11:15am **Ryan Rego** – Grabbing On and Letting Go - Motility of the Lyme Disease Bacterium (Biology Centre of CAS, CZ)

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11:15 – 11:30pm	Company presentation
11:30 – 11:45pm	Company presentation
12:00 – 1:30pm	<i>Lunch – hotel Chateau Třešť</i>
2:30pm – 6:00pm	<i>Social program</i>
6:00pm – 12:00pm	<i>Conference Reception (restaurant Panský dvůr, Telč)</i>

THURSDAY (November 13, 2025)

9:00 – 12:15pm

Session IV.

Chairmans: Ivana Malcová, Ondřej Staněk

9:00 – 9:30am	Jakub Držmíšek – Flagella-derived Regulation of the Type III Secretion System in <i>Bordetella pertussis</i> (Institute of Microbiology of CAS, CZ)
9:30 – 9:45am	Jana Prošková – The Adhesion Mechanism of <i>Bordetella pertussis</i> : A Critical Role of the Mature C-terminal domain of FhaB (Institute of Microbiology of CAS, CZ)
9:45 – 10:00am	Ladislav Bumba – Extreme C-terminus of the FhaB prodomain is essential for interaction of <i>Bordetella pertussis</i> with nasal ciliated epithelial cells (Institute of Microbiology of CAS, CZ)
10:00 – 10:15am	Jana Holubová – <i>Bordetella pertussis</i> Toxin Drive the Emergence of a Unique CD8+ T Cell Subset in the Respiratory Tract (Institute of Microbiology of CAS, CZ)
10:15 – 10:30am	Denisa Petráčková – Comparative Insights into <i>Bordetella pertussis</i> Intracellular Survival in THP-1 Cells and Primary Macrophages (Institute of Microbiology of CAS, CZ)
10:30 – 11:00am	<i>Coffee break – Conference foyer</i>
11:00 – 11:30am	Ivana Malcová – Environmental signals shape the T3SS tip filament structure and expression in <i>Bordetella</i> (Institute of Microbiology of CAS, CZ)

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- 11:30 – 12:00am **Michaela Burešová** – Identification of residues involved in fatty acylation of *Bordetella pertussis* adenylate cyclase toxin (Institute of Microbiology of CAS, CZ)
- 12:00 – 12:15am **Ondřej Staněk** – The Dermonecrotic Toxin of *Bordetella*: A highly Toxic Protein with an Unknown Role in Pertussis Infection (Institute of Microbiology of CAS, CZ)
- 12:15 – 2:00pm *Closing the conference, lunch at hotel Chateau Třešť*
Departure of participants