

PROGRAM

October 7, Monday

12:00 – 13:00 Lunch and mingle

13:00 – 13:10 Welcome words

Oliver Billker, Head of DDLS Epidemiology and Biology of Infection research area
Anna Székely and Johan Bengtsson-Palme, Scientific organizers

Session I: Aquatic and wastewater-based assessment of health threats

Chair: Anna Székely

13:10 – 13:50 Keynote lecture 1

Frank Møller Aarestrup, Technical University of Denmark

Title: Global surveillance of antimicrobial resistance (and other health threats) using metagenomics and waste-water

13:50 – 14:15 Invited short talks

Anna Székely, SLU-SEEC

Title: Challenges and lessons of wastewater-based Covid variant surveillance

Björn Berglund, Uppsala University

Title: Pandemic Preparedness for Antibiotic-Resistant Bacteria by Wastewater-based Epidemiology

Sofia Persson, SLU

Title: Pepper Mild Mottle Virus as a human faecal indicator

14:15 – 14:30 Short break

14:30 – 15:10 Keynote lecture 2

Andreas Bergthaler, Medical University of Vienna

Title: In Latrina Veritas

15:10 – 15:35 Coffee break

15:35 – Session II: Air and clinical sampling of pathogens

Chair: Antonio Rothfuchs

15:35 – 16:15 Keynote lecture 3

Malin Alsved, Lund University

Title: Detection of airborne microorganisms in indoor and outdoor aerosol

16:15 – 16:40 Invited short talks

Chaitanya Tellapragada, Karolinska Institute

Title: Resistance to novel antimicrobial agents among clinical isolates of carbapenemase producing *Escherichia coli* is mainly driven by altered penicillin binding proteins

Praneeth Karempudi, Uppsala University

Title: Rapid Detection of Antimicrobial Resistance: A Novel 2-Hour Method for Species Identification and Antibiotic Susceptibility in Mixed Infections

Rickard Hammarén, SciLifeLab Data Center

Title: The Swedish Pathogens Portal

16:40 – 16:55 Short break

16:55 – 17:45 Twin keynote lectures

Per Stenberg, Umeå University

Title: Monitoring organisms through air

Antonio Rothfuchs, Karolinska Institutet

Title: Monitoring airborne pathogens

17:45 – 18:30 Panel discussion with lecturers of day 1 (Frank Møller Aarestrup, Andreas Bergthaler, Malin Alsved, Per Stenberg and Antonio Rothfuchs)

Moderator: Johan Bengtsson-Palme

Topic: Effective approaches to indirect disease surveillance in the human population (and potentially the relation to the upcoming EU directive on AMR monitoring in WWTPs)

18:30 – End-of-day 1, Opportunity to mingle in Bishops Arms (Bäverns gränd 17, Uppsala); food & drinks at own cost

October 8, Tuesday

9:00 – Welcome, day 2

Session III: Environmental surveillance of animal health

Chair: Laura Carroll

9:00 – 9:40 Keynote lecture 1

Susanna Sternberg Lewerin, Swedish University of Agricultural Sciences (SLU)

Title: Some challenges in reflecting animal health by environmental sampling

9:40 – 10:05 Invited short talks

Buu Minh Tran, Uppsala University

Title: 12-hour phenotypic drug susceptibility testing for Mycobacterium tuberculosis variant bovis BCG using single-cell imaging and a deep neural network

Johanna Lindahl, Swedish Veterinary Agency

Title: Zoonotic disease risks in live-animal and wet markets

Marcus Wenne, Chalmers

Title: Evaluating Common Approaches for Monitoring Environmental Antimicrobial Resistance

10:05 – 10:20 Short break

10:20 – 10:45 Keynote lecture 2

Johan Bengtsson-Palme, Chalmers, DDLS Fellow

Title: Monitoring of antimicrobial resistance in the environment: Why? Where? How? – Insights from the EMBARK program

10:45 – 11:30 Panel discussion with experts (Johan Bengtsson-Palme, Laura Carroll, Oliver Billker, Staffan Svärd and Rickard Hammarén)

Moderator: Anna Székely

Topic: How could data-driven life sciences, AI and the DDLS program in particular contribute towards (environmental) monitoring of infectious diseases?

11:30 – 13:00 Lunch and mingle

Session IV: Challenges and advancements in data-driven pathogen and health marker assessment

Chair: Johan Bengtsson-Palme

13:00 – 13:40 Keynote lecture 3

Windi Muziasari, Resistomap

Title: An advanced platform for quantitative monitoring and management of environmental antimicrobial resistance

13:40 – 14:05 Invited short talks

Vishnu Raghuram, Umeå University

Title: Blurry Bacillus Boundaries: Using pangenomics to improve species delineation within *Bacillus cereus sensu lato*

Samuel Lampa, Karolinska University Hospital

Title: SciCommander - provenance reports for outputs of ad-hoc analyses

Christian Tellgren-Roth, NGI/UGC/SciLifeLab

Title: Sequencing Services at NGI

14:05 – 14:20 Short break

14:20 – 14:50 Keynote lecture 4

Laura Carroll, Umeå University, DDLS Fellow

Title: Data-driven methods for anthrax surveillance

14:50 – 15:10 Reflecting on day 2 with present lecturers (Susanna Sternberg Lewerin, Johan-Bengtsson Palme, Windi Muziasari, Laura Carroll)

Moderator: Oliver Billker

Topic: When and where is disease surveillance outside of the clinics and sewage useful and worthwhile?

15:10 – 15:15 End-of-day-2, closing words, and departure

Anna Székely and Johan Bengtsson-Palme, Scientific organizers