



NEXT GENERATION SEQUENCING WORKSHOP

Bacterial typing and antimicrobial resistance

Vienna, Austria
23. - 25. November 2022

www.ages.at

ORGANIZERS

- Austrian Agency for Health and Food Safety (AGES), Vienna Austria
- Universitätsklinikum Münster

COURSE COORDINATORS

- Philipp Hofer, Vienna, Austria
- Werner Ruppitsch, Vienna, Austria

COURSE OBJECTIVES

Provide an updated overview of Next Generation Sequence based for identification, typing, detection of antimicrobial resistances and plasmids

Participants will be trained in use of Next Generation Sequencing data and comparative genomics for epidemiological investigations and detection of antimicrobial resistances using Illumina and Oxford Nanopore sequence data and Ridom SeqSphere+ and AresGenetics software

CONTACT

Contact Person [Scientific Program]

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COURSE

Wednesday, 23 November 2022

- 12:00 Registration (lunch and coffee provided in registration area)
- 13:00 Welcome and introduction (Bernhard Benka & Thomas Kickinger)
- 13:15 Tips and tricks for Illumina & Oxford Nano pore whole genome sequencing workflow (Karola Prior & Gabriel Lichtenegger-Wagner)
- 15:00 Coffee Break
- 15:15 Bioinformatic tools/ AGES pipelines for who-
le genome sequencing data analysis (Patrick Hyden)
- 16:30 End of day 1
- 19:00 Social event in an inner city restaurant.

Thursday, 24 November 2022

- 09:00 *Bordetella pertussis – a comparison of Il-
lumina and OxfordNanopore WGS
data (Gabriel Lichtenegger-Wagner)*
- 09:30 *Part I Hands-on: comparative genomics on
Listeria monocytogenes using Ridom
SeqSphere+(Dag Harmsen, Ariane Pietzka,
Adriana Cabal, Karola Prior, Werner
Ruppitsch)*
- 11:00 Coffee Break
- 11:15 Part II Hands-on: continued
- 12:30 Lunch Break

- 13:45 Part III Hands-on: continued
- 15:15 Coffee Break
- 15:30 Clinical utility of whole genome sequencing
of AMR pathogens: unlocking the benefits of
long read data for surveillance and infection
prevention and control.
Demo of AREScloud web application for the
analysis of nanopore long read data.
(Arne Materna, Stephan Beisken)
- 16:45 End of day 2
- 19:00 Dinner with guest lecture by Franz Allerber-
ger: „NGS and Public Health“

Friday, 25 November 2022

- 09:00 AMR and plasmid analysis from genome
data (Dag Harmsen)
- 09:30 Hands-on: AMR and plasmid analysis
using Ridom SeqSphere+ (Dag Harmsen,
Ariane Pietzka, Adriana Cabal, Karola Prior
Werner Ruppitsch)
- 10:30 Coffee Break
- 10:45 Antimicrobial resistance – the situation in
Austria (Petra Apfalter)
- 11:30 Validation and clinical evaluation of ARES
software and NGS assay for AMR detection
(Arne Materna, Stephan Beisken)
- 12:50 Closing remarks
(Dag Harmsen, Werner Ruppitsch)
- 13:00 Lunch

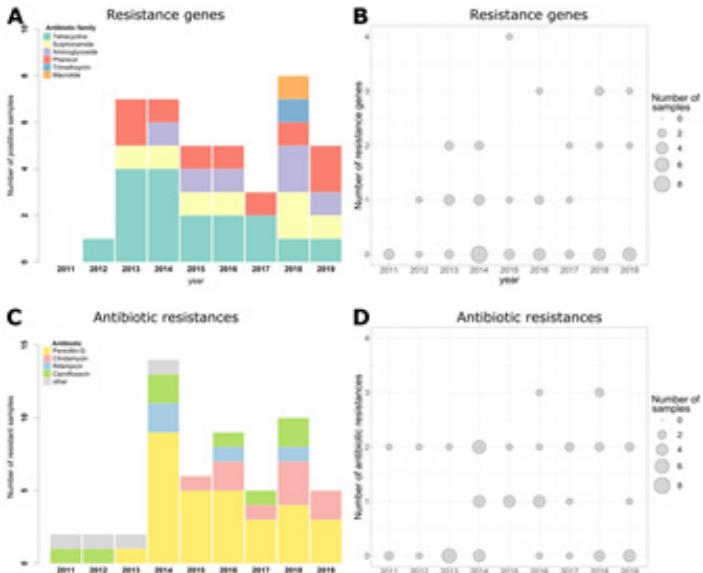
TARGET AUDIENCE

Staff of reference laboratories and scientists interested in Next Generation Sequencing, who want to get an updated overview of the theoretical and practical use of Next Generation Sequencing for bacterial typing, detection of plasmids and antimicrobial resistances.

Limited places available

Maximum capacity theory (day 1) 60 participants

Maximum capacity theory & hands-on (day 1 2 - & 3) 20 participants



Picture: Antibiotic resistances in *Corynebacterium diphtheriae*. Schaeffer et al. 2020 J clin Microbiol

faculty members:

Franz Allerberger, Vienna, Austria

Petra Apfaltrer, Linz, Austria

Adriana Cabal, Vienna, Austria

Dag Harmsen, Münster, Germany

Ariane Pietzka, Graz, Austria

Karola Prior, Münster, Germany

Werner Ruppitsch, Vienna, Austria

Gabriel Lichtenegger-Wagner, Graz, Austria

Arne Materna, Vienna, Austria

Stephan Beisken, Vienna, Austria

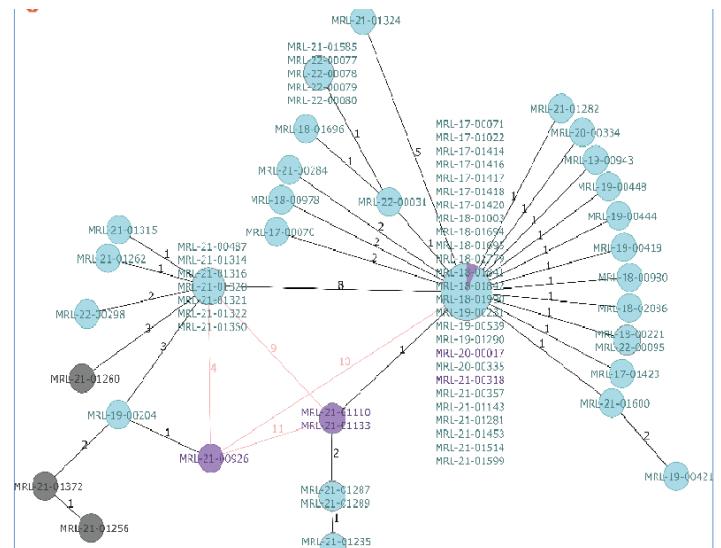
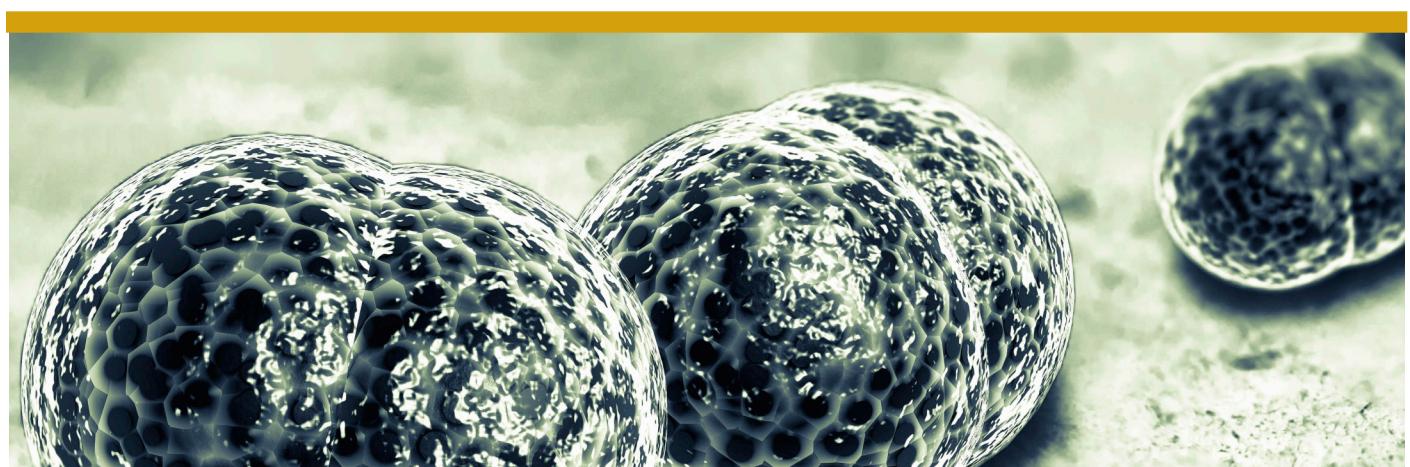


Figure: Minimum-spanning tree illustrating the phylogenetic relationship based on cgMLST + allelic profiles of *Listeria monocytogenes*



ORGANIZATION

Course Venue

AGES Headquarters
Spargelfeldstraße 191
1220 Vienna

REGISTRATION FORM FOR „NGS WORKSHOP „2022“

Please send to ages-akademie@ages.at or fax to
+43 (0)5 0555-25209

REGISTRATION PROCEDURE

Please register online on the AGES website at www.ages.at/en/service/ages-academy/event-schedule

„23.-25.11.2022 - Next Generation Sequencing Workshop“

Registration deadline

is either 10.11.2022 or date reaching sold-out status.
Slots are allocated in order of payment.

Registration fee for all days (incl. VAT) EUR 630
Registration fee day 1; Theoretical overview (incl. VAT) EUR 125

The fee includes scientific sessions (lectures, hands-on, working material), coffee breaks, lunches and dinners. Accommodation and travel costs are not included.

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