



EUCAST

EUROPEAN COMMITTEE  
ON ANTIMICROBIAL  
SUSCEPTIBILITY TESTING

European Society of Clinical Microbiology and Infectious Diseases



# Antimicrobial susceptibility testing with EUCAST criteria and methods - kokkuvõte

ESCMID PGC Tallinn

27.09.-30.09.2022

ELMÜ üldkoosolek Jõhvis 08.12.2022



# Ajalugu, plaanid ja tegelikkus

- EUCAST pöördus Eesti NAC (ELMÜ mikrobioloogia sektsioon) poole ettepanekuga viia läbi Eestis täienduskursust 2019.aastal
- COVID korrigeerib plaane ja kavatsusi
- Üritasime organiseerida kursust 2020, 2021 ja lõpuks 2022 see õnnestub
- ESCMID toetus: 12 granti, 10 lektorit
- ECDC toetus: 1 lektor
- ELMÜ toetas kursust 5 stipendiumiga (5x500 EUR), mille taotlesid ja said Pärnu, IVKH, Rakvere ja ITK
- Eestist on 4 lektorit
- Bochum, Madrid kursused on eelnevalt korraldatud ESCMID-I poolt
- Eesti läks EUCAST-ile üle 2010.a., seega meil on 12 aastat praktilist kogemust



# Kursuse eesmärk ja ülesehitus

- Selgitada kriteeriumid ja meetodid, mida kasutatakse antibiootikumide murdepunktide (*breakpoints*) välja töötamiseks ning tutvustada meetodeid nende juurutamiseks ja kontrollimiseks mikrobioloogia laborites
- Kursuse teoreetiline osa oli toetatud EUCAST, ECDC, EPASG ja ESGARS poolt
- Kursuse praktiline osa oli viidud läbi kolmes erinevas mikrobioloogia laboris, kusjuures igas laboris on demonstreeritud spetsiifilisi meetodeid ja kursantidel oli võimalik külastada kaks laborit oma valikul. Laborite valik oli representatiivne: regionaalne, kesklabor, eralabor

# Labori sessioonile registratsioonilehe näidis

EAST-Tallinn Central Hospital microbiology lab

East-Tallinn Central Hospital laboratory is mainly serving municipal hospital and also family doctors and medical specialists.

Demonstrated methods:

1. Disk diffusion RAST method
2. Phenotypical methods for resistance mechanisms detection
3. Broth microdilution test for MDR
4. VITEK automated AST
5. Amplex LAMP technology for resistance genes detection
6. MALDI-Tof ESBL enzymatic assay
7. Colorimetric tests for ESBL and carbapenemase detection
8. Microfluidic automated method for direct MIC detection from positive blood culture

MAXIMAL number of participants is 14

# Kursuse eesmärk ja ülesehitus

## Course Programme

### Tuesday, 27 September 2022

- 14:30 – 15:00 **Arrival, welcome coffee and registration**  
*Marina Ivanova*  
**Presentation of the course**  
*Christian Giske, Gunnar Kahlmeter*
- 15:00 – 15:30 **EMA perspective: Requirements for approval of new antibacterials in the EU**  
*Radu Botgras (Online)*
- 15:30 – 16:00 **The EUCAST system**  
*Christian Giske*
- 16:00 – 16:30 **The EUCAST breakpoint tables – how to use them?**  
*Gunnar Kahlmeter*
- 16:30 – 17:00 **Pharmacokinetics and -dynamics**  
*Shampa Das*
- 17:00 – 17:30 **Integrating available information – how clinical breakpoints are set**  
*John Turnidge*
- 17:30 **End of teaching**
- 18:30 **Welcome dinner in the city center**

### Wednesday, 28 September 2022

- 08:00 – 08:30 **New definitions of S, I and R and the ATU**  
*Gunnar Kahlmeter*
- 08:30 – 09:30 **Antimicrobial phenotypic susceptibility testing**  
*Erika Matuschek*
- 09:30 – 10:15 **Quality control in the laboratory**  
*Jenny Ahman*
- 10:15 – 10:45 **Coffee break**

- 10:45 – 11:15 **Intrinsic resistance, exceptional phenotypes, expert rules and the process of interpretive reading of antibiograms**  
*Sören Gatermann*
- 11:15 – 11:45 **The role and use of Guidance documents, what to do when there are no breakpoints?**  
*Robin Howe*
- 11:45 – 12:15 **Rapid AST from positive blood cultures**  
*Emma Jonasson*
- 12:15 – 12:30 **Discussion**
- 12:30 – 13:30 **Lunch break**
- 13:30 – 14:30 **AST for anaerobes**  
*Robin Howe*
- 15:00 – 18:00 **Laboratory sessions**  
*Marika Jürna-Ellam, Anastasia Bilozar, Maria Viiklepp, Kaspar Ratnik, Marina Ivanova*  
**Manual and automated methods: disk diffusion, RAST, microdilution, gradient tests, genotypic methods, MALDI-ToF detection of resistance**  
**(20 participants per site maximum)**
- 18:00 **Sightseeing in the old Town with tasting local snacks on Town Hall Square**

### Thursday, 29 September 2022

- 09:00 – 09:45 **Novel phenotypic methods for AST (besides molecular methods) and detection of resistance**  
*Oskar Ekelund*
- 09:45 – 10:30 **WGS for AST and AMR detection**  
*Maido Remm (Online)*
- 10:30 – 11:00 **Coffee break**

- 11:00 – 11:30 **AST of mycobacteria: news from the AMST subcommittee**  
*Jim Werngren (Online)*
- 11:30 – 12:00 **Challenges in fungal AMR detection**  
*Helle Järv*
- 12:00 – 13:00 **Lunch break**
- 13:30 – 16:30 **Laboratory sessions**  
*Marika Jürna-Ellam, Anastasia Bilozar, Maria Viiklepp, Kaspar Ratnik, Marina Ivanova*  
**Manual and automated methods: disk diffusion, RAST, microdilution, gradient tests, genotypic methods, MALDI-ToF detection of resistance**  
**(20 participants per site maximum)**
- 16:30 **End of day**

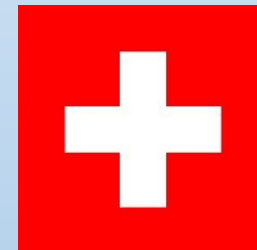
### Friday, 30 September 2022

- 09:30 – 10:15 **Susceptibility testing for AMR surveillance – problems and possibilities**  
*Liselotte Diaz Högberg (Online)*
- 10:15 – 11:00 **ESBL- and carbapenemase-producing Gram-negative bacilli: epidemiology in North-Eastern Europe**  
*Anastasia Bilozar*
- 11:00 – 12:00 **Application of AMR data in treatment guidelines**  
*Tim Eckmanns*
- 12:00 **Closing remarks, farewell coffee and take away lunch**





# Osalejate ja lektorite geograafia



45 osalejat 20 riigist







# Eesti kursuse korraldajad

- Anastasia Bilozor – kursuse administraator
- Paul Naaber – teadusprogramm
- Marina Ivanova – kursuse koordinaator
- Marika Jürna-Ellam – PERH labor
- Maria Viiklepp, Kaspar Ratnik, Paul Naaber - Synlab
- Marina and Anastasia – ITK labor



# ESTONIA, Tallinn



The capital city Tallinn

Population of just over 1.3 million



The barn swallow is the national bird of Estonia

Total area of 45,339 square kilometres



The Estonian Song Festival is UNESCO's Masterpiece of the Oral and Intangible Heritage of Humanity



# Tagasiside osalejatelt

- 29 N, 10 M vastasid (65%)
- Erialad:
  - Mikrobioloogid -20
  - Klinitist/mikrobioloog – 6
  - Klinitist – 2
  - Farmatseut – 1
  - Muu (loomaarst, PK/PD spetsialist, laboriarst, laborimeditiini resident, epidemioloog)
- Vanuse grupid:
  - Alla 35a. – 16
  - 36-45a. – 9
  - Üle 45a. – 14

# Tagasiside osalejatelt - ettepanekud

- I expected little more from the interactive sessions, e.g. some insight on the laboratories workflow
- Would've liked to do some practical work
- Online lectures are harder to focus on but that can't be helped and may be a personal preference
- Screens for presentations were quite small
- That I could not visit all 3 laboratories, only 2

# Tagasiside osalejatelt – positiivsed momendid

- That there were not too many participants so you really got the opportunity to talk to both the students and the presenters/course leaders
- I loved the atmosphere there and the cooperation of the lecturers and how much they love to share their knowledge and experiences
- Practical information, laboratory visits, informal atmosphere, warm welcome, quality and expertise of speakers
- A lot of different information and subjects
- The EUCAST parts and visiting the labs
- Organization committee was very nice
- Very well organized



# ESCMID PGC in Tallinn 2022

