Recent developments in EUCAST 2015 - 2016

EUCAST Chairman (2015 – 2016)
Clinical data coordinator (2016 – )
Visits:
- 55,000-60,000 visitors/month
- 60% from EU
- Pages more visited (each visitor may see each page more than once)
  - home 45.9%
  - clinical breakpoints 69.2%
  - MIC/zone distributions 5.5%
  - expert rules 3.3%
  - resistance mechanisms 3.2%
Number of visitors per month (http://www.eucast.org)
- Yearly evolution of publications: EUCAST in the title or abstract (PubMed)

*January-March, 2016*
EUCAST - google trends

https://www.google.com/trends/explore#q=eucast
Uptake of EUCAST guidelines by participants in UKNEQAS

Curtesy of Derek Brown and Christine Walton
EUCAST General Committee (GC)
All European Countries + Countries from outside

EUCAST Steering Committee
BSAC, CA-SFM, CRG, NWGA, SRGA, NAK-Germany
+ 2 reps from the GC ± 1-2 “visiting” members from the GC

Subcommittees
Antifungals (AFST), VetCAST
Whole genome sequencing, ECOFFs
Antimycobacterials

EUCAST Development and EUCAST Networks Laboratories

Experts (ECDC Networks, ESCMID Study Groups) Industry

Contract 2016-19

National Breakpoint Committees
F, N, NL, S, UK, DE

NACs = National Antimicrobial Susceptibility Testing Committees

ECDC eLibrary by author
National Antimicrobial Committees (NACs) outside Europe

Countries with a NAC operating under EUCAST standards
Countries with interest to establish a NAC under EUCAST standards
Updated EUCAST translations and new translations
嗜麦芽窄食单胞菌

**EUCAST**折点中，甲氨喋呤-磺胺甲噁唑是唯一一个针对嗜麦芽窄食单胞菌的药物。要获取更多的信息，请参考 [www.eucast.org](http://www.eucast.org) 中的指南目录。

纸片扩散法（**EUCAST**标准的纸片扩散法方法）

**培养基：**MH 琼脂

**接种：**0.5 麦氏浊度

**孵育：**空气，35±1°C，18±2 h

**阅读：**在黑色背景下，通过反射光，观察细菌完全不生长的区域测量抑菌圈直径

**质量控制：**大肠杆菌 ATCC 25922

<table>
<thead>
<tr>
<th>其它抗生素</th>
<th>MIC 折点 (mg/L)</th>
<th>纸片含量 (μg)</th>
<th>抑菌圈直径折点 (mm)</th>
<th>注释</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S &lt; R &gt;</td>
<td>S &lt; R &gt;</td>
<td>S &lt; R &gt;</td>
<td></td>
</tr>
</tbody>
</table>
| 甲氨喋呤-磺胺甲噁唑 | 4 4 | 1.25-23 | 15A 16A | 1. 甲氨喋呤和磺胺甲噁唑的比例是 1:19。折点是依据甲氨喋呤的浓度制定的。
| 甲氨喋呤 1 |  | 0.75 |  | 2. 如果抑制圈直径 > 16 mm，则报告为敏感。
|            |  | 16 |  | 3. 仅柱状菌株可培养，不易生长。
|            |  | 16 |  | 4. 平板上完全生长，并且看不到抑菌圈，报告为耐药。

【图片说明】

甲氨喋呤-磺胺甲噁唑对嗜麦芽窄食单胞菌的抑菌圈直径的示例

a-c) 可以看到一个外部的圈，如果抑制圈直径 < 16 mm，则报告为敏感。

d) 平板上完全生长，并且看不到抑菌圈，报告为耐药。
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(ECDC Networks,
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Industry

Contract 2016-19
EUCAST subcommittees, 2015-2016

**Former subcommittees**

Subcommittee on Expert Rules and Intrinsic Resistance.  
*Established in 2007, disbanded 2011*

Subcommittee on Anaerobe Susceptibility Testing.  
*Established in 2007, disbanded 2011*

Subcommittee on the detection of resistance mechanisms of clinical and/or public health importance.  
*Established in 2011, disbanded 2014*

**Current Subcommittees**

Subcommittee on Antifungal Susceptibility Testing  
(EUCAST AFST).  *Established in 2002*

Veterinary Subcommittee on Antimicrobial Susceptibility Testing  
(VetCAST).  *Established in 2015*

Subcommittee on the role of whole genome sequencing in antimicrobial susceptibility testing.  *Established in 2015*

Epidemiological cut-off values (ECOFFs).  *Established in 2015*

Antimycobacterial susceptibility Testing.  *Established in 2016*
Veterinary committee on AST (VetCAST)

- 2015, AST of bacterial pathogens of animal origin and zoonotic bacteria
- **Remit** ...

- Cooperate with EU professionals in veterinary medicine (EMA, ECDC, EFSA)
- Determine antimicrobial breakpoints specific to the veterinary field
- Harmonize veterinary AST in the EU
- Provide AST/antimicrobial therapy education in the veterinary field
- Coordinate EU research aimed at filling the current gaps in veterinary AST
  - Missing or insufficient veterinary specific breakpoints
  - Optimized methods for AST of bacterial pathogens of animal origin
- Ensure AST protocols and criteria freely accessible (EUCAST web)

- Chair (Dik Mevious), Secretary (Peter Damborg), ...
Subcommittee on the role of whole genome sequencing (WGS) in AST of bacteria

- systematic literature review: role of WGS in AST (excluding mycobacteria)
- define sensitivity and specificity of WGS compared with standard AST
- determine how WGS may be applied in clinical laboratories and the likely implications for phenotypic and other genotypic methods in use
- epidemiological implications of using WGS
- clinical implications of WGS for the selection of antimicrobial therapy
- how WGS results for AST would be best presented to clinical users
- drivers and barriers to routine use of WGS

Chair: Neil Woodford
Subcommittee on Wild Type MIC distributions ECOFFs

- Define standards for data required for ECOFF calculation
- Define the methods used to set ECOFFs
- Define the conditions for revision of ECOFFs
- Prepare a preliminary report by April 2016

Chair: Gunnar Kalhmeter

- Relevant for surveillance (WHO)
- Collaboration with CLSI (i.e. Neisseria gonorrhoeae)

- Draft an SOP for a reference MIC method and define QC strains
- Assembly of a set of reference strains (≈100 WT isolates and 50 resistant isolates to one or two agents (but not MDR MTb))
- Establish reproducibility studies of the reference method (at least 3 labs)
- Prepare MIC distributions for the reference strains
- Determine reference MICs in at least 3 reference laboratories
- Interact with EUCAST-SC for setting antimycobacterial agents breakpoints
- Define the relevance of molecular testing and mutation frequencies

Chairman: Emmanuelle Cambau
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Contract 2016-19

Experts
(ECDC Networks,
ESCMID Study Groups)

Industry

by author
EUCAST Development Laboratories

- Development and maintenance of EUCAST AST methods
  - Bacteria (Växjö, Sweden)
  - Fungi (Statens Serum Institut, Copenhagen, Denmark)
- Coordination of the EUCAST Network Laboratories in the development and validation of EUCAST methods, training, education and technical support to other laboratories.

EUCAST network laboratories

- Microbiology laboratories with particular expertise and training in EUCAST AST for bacteria and/or fungal isolates
- Develop, validate and troubleshoot EUCAST methods and/or train and educate other laboratories
- Assist clinical breakpoint development by providing species-specific MIC datasets
### EUCAST Development & Network Laboratories

#### Bacteria

**EUCAST Development Laboratory for bacteria, Växjö, Sweden**

**Network Laboratories (n=14)**
- Southmead Hosp., Bristol, **UK**
- Karolinska University Hosp., Stockholm, **Sweden**
- Acibadem Labmed Clinical Lab. Istanbul, **Turkey**
- Clinical microbiology, Kalmar Hosp., **Sweden**
- Aarhus Univ. Hosp., **Denmark**
- Hosp. Univ. Ramon y Cajal, Madrid, **Spain**
- analyse BioLab, Linz, **Austria**
- Haukeland University Hosp. Bergen, **Norway**
- Stavanger University Hosp. Stavanger, **Norway**
- Univ. of Verona, **Italy**
- Provincial Lab. for Public Health Alberta, **Canada**
- University Hospital of North **Norway**
- Ist. Zooprofilattico Sperimentale, Sassari, **Italy**
- Vestfold Hospital Trust, Tønsberg, **Norway**

#### Fungi

**EUCAST Development Laboratory for fungi, SSI, Copenhagen, Denmark**

**Network Laboratories (n=11)**
- Spanish Mycology Ref. Laboratory, **Spain**
- Hopital Européen Georges Pompidou, **France**
- Gregorio Marañón Hosp., Madrid, **Spain**
- National Ref. Centre Invasive Mycoses, **Germany**
- Clinical Microbiology Lab. Athens, **Greece**
- Mycology Reference Centre, Manchester, **UK**
- Erasmus MC, **The Netherlands**
- University of Athens, **Greece**
- Radboud MC, **The Netherlands**
- Medical University of Innsbruck, **Austria**
- Lab. Antimicrobial Chemotherapy, **Romania**
Template for RDs, 41 documents
(Drafted: ceftolozane-tazobactam, tedizolid, dalbavancin, televancin, macrolides, penicillins, cephalosporins, SXT, aztreonam, chloramphenicol)

SOP 3.1. Review and revision of antimicrobial breakpoints

SOP 4.2. EUCAST committees and subcommittees

- EUCAST- are we heading towards international agreement? JAC 2015;70: 2427–29
- AST breakpoints and methods from BASAC to EUCAST. JAC 2016; 71:3-5
The 2014 Garrod Lecture: EUCAST – are we heading towards international agreement?

Gunnar Kahlmeter
Clinical Microbiology, Central Hospital, 351 85 Växjö, Sweden

Antimicrobial susceptibility testing breakpoints and methods from BSAC to EUCAST

Derek F. J. Brown, Mandy Wootton and Robin A. Howe

1EUCAST, Peterborough, UK; 2Public Health Wales, University Hospital of Wales, Cardiff, UK
Several updated sections

- MIC vs zone diameters files
- Disk diffusion manual and slide show
- Breakpoint v6.0 and QC tables
- Compliance of manufacturers

Guidance documents

Frequently Asked Questions
EUCAST breakpoints, 2016 (version 6.0)

European Committee on Antimicrobial Susceptibility Testing

Breakpoint tables for interpretation of MICs and zone diameters

Version 6.0, valid from 2016-01-01
EUCAST breakpoints, 2016 (version 6.0)

- Links to different pages (microorganisms) and EUCAST documents:
  - guidance documents, expert rules, detection of resistance mechanisms
  - breakpoints for topical use of antimicrobial agents

<table>
<thead>
<tr>
<th>Content</th>
<th>Page</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Guidance on reading EUCAST breakpoint tables</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Changes</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Enterobacteriaceae</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Pseudomonas sp.</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Stenotrophomonas maltophilia</td>
<td>15</td>
<td>Link to Guidance Document on Stenotrophomonas maltophilia</td>
</tr>
<tr>
<td>Burkholderia cepacia</td>
<td>-</td>
<td>Link to Guidance Document on Burkholderia cepacia</td>
</tr>
<tr>
<td>Acinetobacter spp.</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Staphylococcus spp.</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Enterococcus spp.</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Streptococcus groups A, B, C and G</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>Streptococcus pneumoniae</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Viridans group streptococci</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Haemophilus influenzae</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Moraxella catarrhalis</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Neisseria gonorrhoeae</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Neisseria meningitidis</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Gram-positive anaerobes</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>Clostridium difficile</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Gram-negative anaerobes</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Helicobacter pylori</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>Listeria monocytogenes</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Pasteurella multocida</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>Campylobacter jejuni and coli</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Corynebacterium spp.</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>Mycobacterium tuberculosis</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>PCVFD (Non-species related) breakpoints</td>
<td>34</td>
<td>Link to EUCAST Expert Rules</td>
</tr>
<tr>
<td>Dosages</td>
<td>38</td>
<td>Link to EUCAST Guidelines on Detection of Resistance Mechanisms</td>
</tr>
<tr>
<td>Expert Rules</td>
<td>-</td>
<td>Link to EUCAST Guidelines on Detection of Resistance Mechanisms</td>
</tr>
<tr>
<td>Detection of Resistance Mechanisms</td>
<td>-</td>
<td>Link to EUCAST Guidelines on Detection of Resistance Mechanisms</td>
</tr>
<tr>
<td>Breakpoints for Topical Use of Antimicrobial Agents</td>
<td>-</td>
<td>Link to Guidance Document on Topical Agents</td>
</tr>
</tbody>
</table>

ESCMID eLibrary by author
**EUCAST breakpoints, 2016 (version 6.0)**

- **Guidance on reading EUCAST breakpoint tables**

**Guidance on reading EUCAST Breakpoint Tables**

- **Breakpoints with a species name apply only to that particular species (in this example S. aureus)**

<table>
<thead>
<tr>
<th>Antimicrobial agent</th>
<th>MIC breakpoint (mg/L)</th>
<th>Disk content (μg)</th>
<th>Zone diameter breakpoint (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent A</td>
<td>S ≤ R &lt;</td>
<td>X</td>
<td>26</td>
</tr>
<tr>
<td>Agent B</td>
<td>4 mg/L, 23-25 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agent G</td>
<td>1-2 mg/L, 24-20 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

- Numbered notes relate to general comments and/or MIC breakpoints.
- Lettered notes relate to the disk diffusion method.

1. Comment on MIC breakpoints
2. New comment
3. Removed comment
4. Comment on disk diffusion

**Changes from previous version highlighted in yellow**

- New and revised breakpoints
- New and revised comments

**EUCAST method for antimicrobial susceptibility testing by disk diffusion and recommendations for quality control**
### EUCAST breakpoints, 2016 (version 6.0)

- **New place for notes, new notes, rewording of notes and QC aspects**

<table>
<thead>
<tr>
<th>Issue</th>
<th>New</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comments on rare / not yet reported resistance</td>
<td>Moved from MIC breakpoint to name of antimicrobial</td>
</tr>
<tr>
<td>Comments on dosages</td>
<td>Moved from MIC breakpoint to name of antimicrobial</td>
</tr>
<tr>
<td>Breakpoints comments for specific species</td>
<td>Moved from comment section to name of antimicrobial</td>
</tr>
<tr>
<td>β-lactam inhibitor-combination disk QC</td>
<td>Added</td>
</tr>
<tr>
<td>Glycopeptides and lipoglycopeptides</td>
<td>In separate headers</td>
</tr>
<tr>
<td>Oxazolidinones (linezolid and tedizolid)</td>
<td>New section (linezolid moved from miscellaneous agents)</td>
</tr>
<tr>
<td>β-lactams, glycopeptides, oxazolidinones, aminoglycosides, tetracyclines, miscellaneous</td>
<td>New and revised comments and QC data</td>
</tr>
<tr>
<td><em>H. influenzae</em> NCTC 8468</td>
<td>Removed from QC recommendations</td>
</tr>
</tbody>
</table>
## Rewording of ESBL and carbapenemase detection and characterization

<table>
<thead>
<tr>
<th>2015 (v5.0)</th>
<th>2016 (v6.0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In many areas, ESBL detection and characterisation is recommended or mandatory for infection control purposes</td>
<td>ESBL detection and characterisation are recommended for public health and infection control purposes</td>
</tr>
<tr>
<td>In many areas, carbapenemase detection and characterisation is recommended or mandatory for infection control purposes</td>
<td>Carbapenemase detection and characterisation are recommended for public health and infection control purposes</td>
</tr>
</tbody>
</table>
EUCAST breakpoints, 2016 (version 6.0)

Viridans group streptococci

In endocarditis, refer to national or international endocarditis guidelines for breakpoints for viridans group streptococci.

EUCAST Clinical Breakpoint Tables v. 6.0, valid from 2016-01-01

Disk diffusion (EUCAST standardised disk diffusion method)
- Medium: Mueller-Hinton agar + 5% defibrinated horse blood and 20 mg/L β-NAD (MH-F)
- Inoculum: McFarland 0.5
- Incubation: 5% CO₂, 36±1°C, 19±2h
- Reading: Read zone edges as the point showing no growth viewed from the front of the plate with the lid removed and with reflected light.
- Quality control: Streptococcus pneumoniae ATCC 49819

This group of bacteria includes many species, which can be grouped as follows:
- S. anginosus group: S. anginosus, S. constellatus, S. intermedius
- S. sanguinis group: S. sanguinis, S. parasanguinis, S. gordonii
- S. bovis group: S. equinus, S. gallolyticus (S. bovis), S. infantarius
- S. salivarius group: S. salivarius, S. vestibulans, S. thermophilus
- S. mutans group: S. mutans, S. sobrinus

New information on species
EUCAST breakpoints, 2016 (version 6.0)

- New and revised breakpoints

<table>
<thead>
<tr>
<th>Antimicrobial</th>
<th>Microorganisms</th>
<th>Breakpoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceftolozane-tazobactam</td>
<td>Enterobacteriaceae</td>
<td>MIC, Ø, PK/PD</td>
</tr>
<tr>
<td></td>
<td><em>Pseudomonas</em> spp.</td>
<td></td>
</tr>
<tr>
<td>Ceftobiprole</td>
<td>Enterobacteriaceae</td>
<td>Ø</td>
</tr>
<tr>
<td>Ceftazidime</td>
<td><em>Pseudomonas</em> spp.</td>
<td>Ø</td>
</tr>
<tr>
<td>Dalbavancin, oritavancin, tedizolid</td>
<td><em>Staphylococcus</em> spp.</td>
<td>MIC, PK/PD</td>
</tr>
<tr>
<td></td>
<td><em>Streptococcus</em> A,B,C,F Viridans group streptococci</td>
<td></td>
</tr>
<tr>
<td>Ceftazidime</td>
<td><em>Pseudomonas</em> spp.</td>
<td>Ø</td>
</tr>
<tr>
<td>Ciprofloxacin, levofloxacin</td>
<td><em>Enterococcus</em> spp.</td>
<td>Ø</td>
</tr>
<tr>
<td></td>
<td><em>Moraxella catarrhalis</em></td>
<td></td>
</tr>
</tbody>
</table>

Ø: disk diffusion

- Reviewed **breakpoints with no change**: oxacillin and coagulase negative staphylococci
### EUCAST breakpoints, 2016 (version 6.0)

**New sheet:** dosages from Rational Documents (Section 8) and new dosages for several agents

<table>
<thead>
<tr>
<th>Penicillins</th>
<th>Standard dose</th>
<th>High dose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Benzylpenicillin</strong></td>
<td>600 mg x 4 iv</td>
<td>2.4 g x 8 iv</td>
</tr>
<tr>
<td><strong>Ampicillin</strong></td>
<td>600 mg - 1 g x 3-4 iv</td>
<td>1 - 2 g x 4-8 iv</td>
</tr>
<tr>
<td><strong>Amoxicillin-sulbactam</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Amoxicillin</strong></td>
<td>500 mg x 3 iv</td>
<td>2 g x 6 iv</td>
</tr>
<tr>
<td><strong>Amoxicillin-clavulanic acid</strong></td>
<td>Oral dosage under discussion</td>
<td>Oral dosage under discussion</td>
</tr>
<tr>
<td><strong>Piperacillin</strong></td>
<td>4 g x 3 iv</td>
<td>4 g x 4 iv</td>
</tr>
<tr>
<td><strong>Piperacillin-tazobactam</strong></td>
<td>4 g x 3 iv</td>
<td>4 g x 4 iv</td>
</tr>
<tr>
<td><strong>Ticarcillin</strong></td>
<td>2 g x 4 iv</td>
<td>3 g x 6 iv</td>
</tr>
<tr>
<td><strong>Ticarcillin-clavulanic acid</strong></td>
<td>3 g x 4 iv</td>
<td>3 g x 6 iv</td>
</tr>
<tr>
<td><strong>Phenoxymerphylpenicillin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oxacillin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clavuloxin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dicloxacillin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flucloxacin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mexillinam</strong></td>
<td>200 - 400 mg x 3 oral</td>
<td>None</td>
</tr>
</tbody>
</table>
# EUCAST compliance of manufacturers

## Phoenix/EpiCenter automated system (BD)

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>In computer database</th>
<th>In reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ablek</td>
<td>S ≤ Yes</td>
<td>R &gt; No (R ≥)</td>
</tr>
<tr>
<td>BD</td>
<td>- Yes</td>
<td>- Yes</td>
</tr>
<tr>
<td>bioMérieux</td>
<td>IE Yes</td>
<td>- Yes</td>
</tr>
<tr>
<td>Liochem</td>
<td>IE Yes</td>
<td>- Yes (MICs reported for agents with no EUCAST breakpoints)</td>
</tr>
<tr>
<td>MAST Group</td>
<td>IE Yes</td>
<td>- Yes (MICs reported for agents with no EUCAST breakpoints)</td>
</tr>
<tr>
<td>Thermo Fish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosco</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### EUCAST terminology implemented

- All rules incorporated. There are additional rules but EUCAST rules have priority.

#### EUCAST organism groups with no test in the system

- H. influenzae
- M. catarrhalis
- N. meningitidis
- N. gonorrhoeae

#### Agents in EUCAST tables but not available in the system

- Ampicillin-sulbactam (fixed 4 mg/l sulbactam)*
- Cefotaxime
- Cefotolezine-tazobacantam

#### Agents available but EUCAST breakpoints not implemented in the system

- Rifampcin (*Staphylococcus spp. cannot be reported susceptible*
- Trimethoprim (*Enterococcus spp. cannot be reported susceptible*
- Trimethoprim-sulfamethoxazole (*Enterococcus spp. cannot be reported susceptible*)

*Tests with the agent/inhibitor in a 2:1 ratio are not acceptable using EUCAST methods and breakpoints.

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The accuracy of data in these tables is not verified by EUCAST and the inclusion of any materials or devices does not indicate endorsement by EUCAST.
- No EUCAST daptomycin breakpoints for enterococci in Europe
- Daptomycin only marketed in EU for:
  - adult cSSTI (4 mg/kg/day)
  - *S. aureus* right-sided endocarditis (6 mg/kg/day)
- Staphylococci and streptococci group A, B, C, G daptomycin MIC breakpoints
  - $S \leq 1 \text{ mg/L}$, $R > 1 \text{ mg/L}$
- Insufficient evidence (IE) to set PK-PD and enterococci breakpoints
- Recent publications relating to use of daptomycin in enterococcal endocarditis
  - need for high dose ($\geq 8 \text{ mg/kg/day}$)
Use of daptomycin to treat enterococcal endocarditis

- Serious infectious due to wild type *Enterococcus* spp. (daptomycin MIC≤4 mg/L) are unlikely to be successfully treated with licensed dosages (4 mg/kg/day)
- If daptomycin **MICs ≤4 mg/L**, infections may be successfully treated with high daptomycin doses (at least 8 mg/kg/day)

Monte Carlo simulation with licensed daptomycin dose (4 mg/kg/day)*

<table>
<thead>
<tr>
<th>Datomycin MIC (mg/L)</th>
<th>% target attainment with an AUC/MIC target of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>373 (-1 SD)</td>
</tr>
<tr>
<td>&lt;0.25</td>
<td>100.0</td>
</tr>
<tr>
<td>0.5</td>
<td>100.0</td>
</tr>
<tr>
<td>1</td>
<td>96.8</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>&gt;4</td>
<td>0</td>
</tr>
</tbody>
</table>

* A. MacGowan (upublished)

**Serious infectious due to wild type Enterococcus spp. (daptomycin MIC≤4 mg/L) are unlikely to be successfully treated with licensed dosages (4 mg/kg/day)**

**If daptomycin MICs ≤4 mg/L, infections may be successfully treated with high daptomycin doses (at least 8 mg/kg/day)**
EUCAST: What is coming for 2016-17?

- New and ongoing **breakpoints (BP)** and **methodology**
  - EMA ceftazidime-avibactam, new cephalosporin, new aminoglycoside, and pleuromutilin guidelines for companies submitting anti-mycobacterial agents
  - CLSI colistin breakpoints and ECOFFs (with CLSI)
  - NACs temocillin, nitroxoline, spiramycin, tigecycline, sulbactam
  - Antimicrobial groups: **fluoroquinolones, carbapenems, aminoglycosides**
  - Disk diffusion recommendations for fosfomycin
  - Disk diffusion breakpoints for **Kingella kingae**, **Actinomyces spp.**, **Aerococcus spp.**, **Eikenella corrodens**
- Educational video: EUCAST disk diffusion method (with WHO)
EUCAST: What is coming for 2016-17?

- Guidance documents
  - microorganisms without breakpoints
  - testing of *Neisseria gonorrhoeae*
  - implications of splitting wild type and resistant populations in breakpoint setting
  - testing of *Legionella pneumophila*

- Definition of the intermediate category and ECOFF

- New documents
  - Rationale documents for new drugs
  - Guidelines for the detection of resistance mechanisms and specific resistances of clinical and/or epidemiological importance (v2)
  - Intrinsic resistance tables and expert rules (v3)
EUCAST: What is coming for 2016-17?

- New ESCMID Postgraduate Technical Workshop

ESCMID Postgraduate Technical Workshop 20-23 September 2016, Bochum
## Acknowledgements

- Christian Giske (Sweden)  Chairman (2016–2020)
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- Gunnar Kahlmeter (Sweden)  Technical Data Coordinator, responsible for the EUCAST website (2016–)

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- Deniz Gur (Turkey), Arjana Tambic Andrasevic (Croatia) (2016–2018)

## More information

- Sunday, 10 April 2016  07:45 - 08:45, Hall J
  
  **E039 - EUCAST: frequently asked questions**
  Meet-the-Expert Session

- Monday, 11 April 2016  13.00 – 14.30, Hall G109
  
  **EUCAST General Committee meeting**