EUCAST-AFST Activities
EUCAST AFST Subcommittee meeting
ECCMID 2016

Saturday 9th April 18:00 – 19:00
RAI, G106
Amsterdam, The Netherlands
Chairman’s report: Agenda

1. Meetings
2. Organisation
3. Methods and QC
4. Breakpoints
5. Publications
6. Website updates
   • www.eucast.org
   • http://mic.eucast.org/Eucast2/
7. Future activities
Chairman’s report: Meetings

• AFST Steering Committee Meetings
  – 25th of April 2015 during ECCMID in Copenhagen, DK
  – 22nd -23rd of August 2015 in Edinburgh, UK
  – 23rd -24th of January 2016 in Copenhagen DK

• AFST General Committee Meetings
  – ECCMID 2015 in Copenhagen, DK

• Meetings with the EUCAST-SC-chair
  – 14th-15th of January 2016 in Växjö, Sweden
Chairman’s report: Organisation

SOP 4.1→4.2: http://www.eucast.org/documents/sops/
Chairman’s report: Organisation

AFST SC organisation 2015-16 (SOP 4.1)

<table>
<thead>
<tr>
<th>Role</th>
<th>Appointed by</th>
<th>Appointed for</th>
<th>Name and year</th>
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<tbody>
<tr>
<td>Chairman</td>
<td>EUCAST SC</td>
<td>3 y with possible reappointment</td>
<td>Maiken Cavling Arendrup 2014-17</td>
</tr>
<tr>
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<td>EUCAST SC + AFST Chair</td>
<td>3 y with possible reappointment</td>
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<td>EUCAST SC representative</td>
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<td>Johan Mouton 2014-</td>
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## Chairman’s report: Organisation

### AFST SC organisation 2016 → (SOP4.1)

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**EUCAST AFST SC proposal pending EUCAST SC approval**

MC Arendrup (chair), S Howard (secretary), J Meletiadis (data coordinator), J Mouton (EC repr.), J Guinea & K Lagrou (NACs)
Chairman’s report: Organisation

AFST SC organisation 2016 → (SOP4.1)

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<td>2014-</td>
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Candidate:
Petr Hamal, Czech Republic (Also pending EUCAST SC approval)

MC Arendrup (chair), S Howard (secretary), J Meletiadis (data coordinator), J Mouton (EC repr.), J Guinea & K Lagrou (NACs)
Chairman’s report: Organisation

EUCAST Network Laboratories document

- EUCAST Network Laboratories:
  - Jesús Guinea (Spain), Eric Dannaoui (France), Caroline Moore (UK), Manuel Cuenca-Estrella (Spain), Oliver Kurzai (Germany), Wendy van de Sande (Netherlands), Joseph Meletiadis (Greece), Aristeia Velegraki (Greece), Paul Verweij (Netherlands), Cornelia Lass-Flörl (Austria), Mihai Mares (Romania)

- EUCAST Development Laboratory for fungi:
  - Maiken Cavling Arendrup, Statens Serum Institute, Unit for Mycology, building 211, 1st floor, Artillerivej 5 DK-2300 Copenhagen S, Denmark
  - http://www.eucast.org/organization/network_laboratories/
Chairman’s report: Agenda

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Chairman’s report: Methods and QC

- E.Def 7.3 & 9.3 (yeast and mould documents)
- Updated December, 2015
  - Acknowledge
    - concentration ranges for testing have been revised for optimised detection of wild-types as well as mutant populations
    - wording has been harmonised between the two method documents (E.Def 7.3 and E.Def 9.3)
    - QC MIC ranges have been removed to acknowledge the new QC document
Chairman’s report: Methods and QC

New QC document & new QC MIC ranges

“Routine and extended internal quality control for antifungal susceptibility testing as recommended by EUCAST. Version 1.0”
Chairman’s report: Breakpoints

Aspergillus and isavuconazole (October 2015)

- A. fumigatus BP set at the PK/PD breakpoint (1 mg/L), which is 1 step lower than the ECOFF
- MIC of 2 mg/L: 2.9% of the isolates
- May represent wild type or mutants (fx. 17.5% TR34/L98H)
- Repeated MIC testing strongly recommended
- Including itra- & voriconazole strongly recommended
- Cyp51A sequencing might be adopted to identify if such isolates harbour target gene mutations
Chairman’s report: Agenda

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Chairman’s report: Publications

Technical note 2016

Clinical Microbiology and Infection
Available online 3 February 2016
In Press, Accepted Manuscript — Note to users

Research Note
EUCAST Technical Note on Aspergillus and isavuconazole, Candida and itraconazole and updates for the method documents E.Def 7.3 and 9.3

M.C. Arendrup1, S.J. Howard6, the Subcommittee on Antifungal Susceptibility Testing (AFST) of the ESCMID European Committee for Antimicrobial Susceptibility Testing (EUCAST) Co-authoring EUCAST-AFST members, M.C. Arendrup1 (Chairman, Denmark), J. Meletiadis2,3 (Scientific data coordinator), S.J. Howard6 (Scientific Secretary, UK), J. Mouton3,4 (Steering Committee, ESCMID SC repr.), J. Guinea5 (Steering Committee, Spain), K. Lagrou7 (Steering Committee, Belgium), S. Arikan-Akdagli6, F. Barchiesi10, P. Hamal11, H. Järvi12, C. Lass-Flörl13, M. Mares14, T. Matos15, K. Muehlethaler16, T.R. Rogers17, C.Torp Andersen18, P. Verweij4

MC Arendrup (chair), S Howard (secretary), J Meletiadis (data coordinator), J Mouton (EC repr.), J Guinea & K Lagrou (NACs)
EUCAST-AFST documents overview

Reference Methods & a QC document

- **Yeast**
  - E.Def 7.3 *(2015)*, TN- E.Def 7.3 *(2016)*
  - E.Def 7.2 *(2012)*, TN- E.Def 7.2 *(2012)*
  - E.Def 7.1 *(2008)*, TN- E.Def 7.1 *(2008)*

- **Conidia forming moulds**
  - E.Def 9.2 *(2014)*

### Breakpoints

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<tr>
<td>Voriconazole</td>
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Chairman’s report: Publications - App

In preparation
Chairman’s report: Agenda

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Chairman’s report: Web site update
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Antifungal susceptibility testing (AFST)

Methods for susceptibility testing of Candida and Aspergillus are developed and validated by the EUCAST AFST Subcommittee on AFST.

New and revised documents open for consultation will until accepted be published in the EUCAST News section together with all other consultations from EUCAST.

Information on Subcommittee organisation and members are available on the webpage describing the Organisation of EUCAST.

Information for industry aiming to bring agents to EUCAST for review and revision of breakpoints or a new agent to EMA for registration is available at Information for industry.

Development of new methods and validation and calibration of existing methods is performed at the EUCAST Development Laboratory for AFST.

The EUCAST Development Laboratory for Antifungal Susceptibility Testing with the help of

The EUCAST AFST Network Laboratory

Contacting EUCAST AFST
Chairman Martin Caven-Andersrup (martin.c.andersrup@ecmm.org)
Scientific Secretary Susan J Howard (susan.j.howard@ecmm.org)
Clinical Data Coordinator Joseph Meletiadis (joseph.meletiadis@ecmm.org)

EUCAST Development Laboratory for fungi
c/o Unit of Mycology
Dept Microbiology & Infection Control
Statens Serum Institut, Building 211
Artilleryvej 5
DK-3300 Copenhagen
Denmark
Phone: +45 3258 3323 or +45 3258 3116
Email: info@eucast.org

QC AFST Tables

Rationale documents for antifungals
Documents for discussion in AFST
Publications in journals
Meetings and Minutes

MC Arendrup (chair), S Howard (secretary), J Meletiadis (data coordinator), J Mouton (EC repr.), J Guinea & K Lagrou (NACs)
Chairman’s report: Web site update

The European Committee on Antimicrobial Susceptibility Testing (EUCAST) is a standing committee within the European Society of Clinical Microbiology and Infectious Diseases. EUCAST is an independent, non-profit organization that provides recommendations for the selection and interpretation of antimicrobial susceptibility testing methods and cut-off values. It also coordinates international efforts to standardize and improve antimicrobial susceptibility testing, and it promotes the appropriate use of antimicrobial agents.

EUCAST’s website includes a variety of resources for antimicrobial susceptibility testing, including guidelines, antimicrobial resistance maps, and training materials. The website also includes a section for frequently asked questions (FAQ) and a forum for discussion.

EUCAST deals with breaks in antimicrobial susceptibility, EMA and ECDC. EUCAST has also been engaged in the development of rapid point-of-care tests for detection of antimicrobial resistance.

EUCAST has a number of working groups and committees, including the Anti-Fungal Susceptibility Testing Subcommittee, which is responsible for developing guidelines and recommendations for the testing of antifungal agents.

The Anti-Fungal Susceptibility Testing Subcommittee includes the following members:
- MC Arendrup (Chair)
- WW Hope (Secretary)
- M Cuenca-Estrella
- C Lass-Flörl
- S Howard (Secretary)
- J Meletiadis (Data Coordinator)
- J Mouton (EC repr.)
- J Guinea & K Lagrou (NACs)

The Subcommittee focuses on developing guidelines for the testing of antifungal agents, including the development of standardized methods and cut-off values for the interpretation of test results.

In addition to the Anti-Fungal Susceptibility Testing Subcommittee, EUCAST has several other working groups, including those for the testing of antibiotics, vaccines, and other therapeutic agents.

EUCAST also collaborates with other international organizations, such as the European Centre for Disease Prevention and Control (ECDC), to promote the appropriate use of antimicrobial agents and to improve the effectiveness of healthcare systems.

EUCAST’s website includes a section for frequently asked questions (FAQ) and a forum for discussion.
EUCAST related talks (by the AFST SC)

- **Antifungal susceptibility testing workshop.** ISHAM conference, 3-8 May 2015, Melbourne. Australia.


- **News from EUCAST-AFST.** 12th NSMM (Nordic Society for Medical Mycology) meeting 21 May 2015, Helsinki, Finland.

- **News from EUCAST.** TIMM-7 conference, 9-12 October 2015, Lisbon, Portugal.

- **Susceptibility testing for Fungal infections,** ESCMID Postgraduate Education Course: “Microbiology for Diagnosis of Infectious Diseases: ABC and XYZ” 20-21 Nov 2015, Beijing China.

- **Antifungal susceptibility testing.** Medical Mycology Course, Institute Pasteur, 29 March 2016, Paris, France

- **Where does TDM make sense?** (E016), 25th European Congress of Clinical Microbiology and Infectious Diseases, Copenhagen, Denmark, 2015.

- **Commercial tests.** Symposium16: Antifungal susceptibility testing. 7th Trends in Medical Mycology, Lisbon, Portugal, 2015

- **PK/PD of antifungal drugs.** National Mycology Course for Clinical Microbiologists in training. 22nd June 2015, Nijmegen, Netherlands.

- **Management of Resistant Candida & Aspergillus from bench to bedside.** TIMM-7 conference, 9-12 October 2015, Lisbon, Portugal

- ..... and many more including EUCAST MICs but not with EUCAST as the main topic
Oral EUCAST AFST presentations past Y

ISHAM conference 2015, Melbourne, Australia; NSMM meeting 2015, Helsinki, Finland; TIMM conference 2015, Lisbon, Portugal; ESCMID Postgraduate Education Course 2015, Beijing, China, Med Mycol Course Institute Pasteur, Paris, France 2016, National Mycology Course for Clinical Microbiologists in training 2015, Netherlands.

MC Arendrup (chair), S Howard (secretary), J Meletiadis (data coordinator), J Mouton (EC repr.), J Guinea & K Lagrou (NACs)
Future areas requiring attention

The following Rationale documents are undergoing revision

- Posaconazole vs. *Candida* v 1.0 2010
- Posaconazole vs. *Aspergillus* v 1.0 2012

→ 1 RD, +ECOFFs for more *Candida* spp., *C. gattii* & *C. neoformans*

Subsequently the Amphotericin B and Voriconazole RDs will be updated following the same principle.

Agar screening method

Multicentre evaluation of azole agar screening as a future EUCAST reference method for detection of *A. fumigatus* isolates with potential resistance against azoles

Microtiter plate study

Provide data on optimal type of polystyrene-plates to be included in future E.Def 7 and 9 updates, in order to reduce MIC variability due to different binding of the antifungals to the plastic.

In vitro PK/PD model

Help investigate posaconazole and voriconazole activity against *C. glabrata* – could *C. glabrata* be an appropriate target? (Supported by an ESCMID grant)

In vitro MIC testing of echinocandins against *Aspergillus*

Development of a colorimetric method using the tetrazolium salt XTT for *in vitro* antifungal susceptibility testing of *Aspergillus* spp. against caspofungin, micafungin and anidulafungin
EUCAST AFST subcommittee

**Steering Committee**
MC Arendrup, Chair (Denmark)
S Howard, Scientific Secretary (UK)
J Meletiadis, Data Coordinator (Greece)
Jesús Guinea (Spain)
Katrien Lagrou (Belgium)
Johan Mouton (EUCAST-SC)

**General committee**
S Arikan-Akdagli (Turkey)
F Barchiesi (Italy)
M Castanheira (The US)
E Chryssanthou (Sweden)
P Hamal (Czech Republic)
H Järv (Estonia)
N Klimko (Russia)
P Koukila-Kähökä (Finland)
O Kurzai (Germany)
K Lagrou (Belgium)
C Lass-Flörl (Austria)
O Lortholary (France)
M Mares (Romania)
T Matos (Slovenia)
C Moore (UK)
K Muehlethaler (Switzerland)
T Rogers (Ireland)
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