

European Committee on Antimicrobial Susceptibility Testing (EUCAST)

Minutes of the General Committee Meeting on 11 April 2016 at 26th European Congress of Clinical Microbiology and Infectious Diseases, Amsterdam, The Netherlands

A list of attendees who signed the register is appended.

1. Apologies for absence

None.

2. Minutes of meeting in Copenhagen, 27 April 2015

With minor corrections, the unratified minutes were approved as a true record.

3. Matters arising

None.

4. EUCAST Chairman's report

Rafael Cantón summarised activities over the past year, covering all agenda items except where indicated.

5. EUCAST General Committee membership

The current membership list was presented and the list is updated on the EUCAST website (the current list is appended). Representatives should inform the Scientific Secretary (email derek.brown222@btinternet.com) if the representative for their country has changed.

6. EUCAST Steering Committee membership

- 6.1 The current membership of the Steering Committee was presented and is appended. After this meeting Christian Giske will take over as Chairman, Rafael Cantón will be Clinical Data Coordinator and Gunnar Kahlmeter will be Technical Data Coordinator and Website Manager. Arjana Tambic Andrasevic (Croatia) and Deniz Gür (Turkey) will replace Iztok Strumbelj and Jan Verhaegen as General Committee representatives.
- 6.2 Up to two additional "visiting" General Committee members may attend each Steering Committee meeting by prior agreement. Details are on the EUCAST website. There have been such attendances at Steering Committee meetings in the past year by members in Australia and the USA.
- 6.3 There are five annual ESCMID observerships, each with a maximum value of 1000 Euros, to support attendance of European visiting members to EUCAST Steering Committee meetings. In addition, ESCMID has agreed to fund an additional five observerships of up to 1000 Euros to support attendance by non-European visiting members. Applications should be made by email to the Chairman or Scientific Secretary of EUCAST.

7. EUCAST and ECDC

The current EUCAST framework contract with ECDC runs for four years from November 2015.

8. Structure and organisation

The structure and organisation of EUCAST were reviewed. In the last year there have been five meetings of the Steering Committee. The General Committee meets once a year, at ECCMID.

9. EUCAST National Antimicrobial Susceptibility Testing Committees (NACs)

9.1 The role of National Antimicrobial Susceptibility Testing Committees (NACs) was presented. New NACs linked to EUCAST continue to be proposed and there are now very few European countries without a NAC. Countries outside Europe continue to show interest in joining EUCAST and in the past year Canada and Ukraine have joined.

9.2 Dr Robert Rennie presented the structure and goals of the newly established Canadian NAC.

9.3 Rafael Cantón reminded the Committee that members of the EUCAST Steering Committee are willing to travel and give presentations to national meetings in countries interested in forming EUCAST-associated NACs.

10. Implementation of EUCAST breakpoints

An updated map based on a survey undertaken by EUCAST at the start of 2016 showed that EUCAST breakpoints continue to be implemented widely, but to various degrees, in most European countries and some outside Europe. In the UKNEQAS External Quality Assessment Scheme, 88% of participating laboratories reported that they followed EUCAST breakpoint guidelines. A map showing use of the EUCAST disk diffusion method indicates wide uptake in many countries.

11. New breakpoint tables

11.1 Version 6.0 (January, 2016) of breakpoint tables is on the EUCAST website. Changes from version 5.0 were reviewed.

11.2 Several breakpoint notes have been reworded and some new notes added.

11.3 There are new or revised breakpoints for several organisms.

11.4 There is a new table giving dosages on which breakpoints are based.

12. EUCAST subcommittee reports

12.1 Antifungal Susceptibility Testing Subcommittee (AFST)

Maiken Cavling Arendrup, the subcommittee chairperson, presented a summary of activity of the subcommittee over the past year. Membership of the subcommittee is appended.

12.1.1 There were three meetings of the AFST Steering Committee and one of the AFST General Committee in the past year.

12.1.2 The contribution of the AFST Network Laboratories was acknowledged. Representatives included Jesús Guinea (Spain), Eric Dannaoui (France), Caroline Moore (UK), Manuel Cuenca-Estrella (Spain), Oliver Kurzai (Germany), Wendy van de Sande (Netherlands), Joseph Meletiadis (Greece) and Aristeia Velegraki (Greece), Paul Verweij (Netherlands), Cornelia Lass-Flörl (Austria) and Mihai Mares (Romania).

12.1.3 The EUCAST Development Laboratory for fungi is led by Maiken Cavling Arendrup at the Statens Serum Institute, Unit for Mycology, building 211, 1st floor, Artillerivej 5 DK-2300 Copenhagen S, Denmark. See http://www.eucast.org/organization/network_laboratories for further details.

12.1.4 Current breakpoints were reviewed and it was noted that technical documents on susceptibility testing of yeasts and conidia-forming moulds have been updated. Details are on the AFST section of the EUCAST website.

- 12.1.5 An App “FungiMICs” has been released recently. It includes the EUCAST breakpoints for fungi and gives MIC distributions.
- 12.1.6 There were numerous presentations by EUCAST AFST subcommittee members in the past year.
- 12.1.7 Applications from new NAC representatives for the AFST General Committee were invited. Letters should be sent to Maiken Cavling Arendrup and should include a formal letter of support from the NAC.
- 12.2 **Veterinary antimicrobial susceptibility testing subcommittee (VetCAST)**
- 12.2.1 Dik Mevius, the subcommittee chair, presented a summary of activity of the subcommittee over the past year. Membership of the subcommittee is appended.
- 12.2.2 A working relationship has been established with EMA and there is slow but continuous process. EMA concerns regarding VetCAST activity include:
- Independence of the subcommittee
 - Data availability for “old” drugs
 - Effect of clinical breakpoints on dosage regimens (International Federation for Animal Health)
 - Data requirements for new drugs
 - Responsibilities for clinical breakpoints in SmPCs
- 12.2.3 Funding of VetCAST is unlikely from EMA, ECDC or EFSA. Funding through the EU COST-action programme is being investigated. Gunnar Kahlmeter agreed to discuss with VetCAST the possible approaches to funding.
- 12.2.4 Priorities for 2016-17 are:
- Liaison with EU agencies (EMA, CVMP). An SOP covering working relationships will be based on the EUCAST mode.
 - Data collection (MIC and PK data) for generic agents. It was noted that for tetracyclines there are hundreds of veterinary marketed products, various animal species and various administrations routes. Collection of PK data will be led by Ludovic Pelligand and collection of MIC data by Kees Veldman. The first rationale document is targeted for 2016.
 - An SOP for PK data collection will be prepared
 - A position paper will be drafted on clinical breakpoint definitions
- 12.2.5 There will be closed and open meetings of VetCAST at ECCMID this year.
- 12.3 **Subcommittee on the role of whole genome sequencing (WGS) in AST of bacteria**
- 12.3.1 Neil Woodford, the subcommittee chair, presented a summary of activity of the subcommittee over the past year. Membership of the subcommittee is appended.
- 12.3.2 The remit of the subcommittee is:
- To perform a review of the literature describing the role of WGS in antimicrobial susceptibility testing (AST) of bacteria.
 - To assess the sensitivity and specificity of WGS compared with standard phenotypic AST.
 - To consider how WGS for AST may be applied in clinical microbiology laboratories and the likely implications for phenotypic and other genotypic methods in use.
 - To consider the epidemiological implications of using WGS.
 - To consider the clinical implications of WGS for the selection of antimicrobial therapy.
 - To consider the principles of how the results of WGS for AST could be presented to clinical users.
 - To describe the drivers and barriers to routine use of WGS.
- 12.3.3 The focus of the preparation of a report over the past year has been:
- Quality metrics for WGS.
 - Categories of systematic errors in WGS.
 - Predictions of AMR and the need for standardised, open-access databases.
 - The epidemiological implications of using WGS.

- Clinical & wider impacts.

12.3.4 Concluding comments are:

- At present there are insufficient data to present a definitive document on the topic
- The state-of-the-art has been reviewed as a first approach.
- The report is presented as a baseline discussion document; it marks where we are now.
- The report will require updating as sequencing technologies become more affordable and more widely applied. It is expected that the report will be updated every two years.

12.3.5 The subcommittee report will be released for open consultation.

- A draft will be posted on the EUCAST website in the near future.
- Final revisions will be made after the consultation period.
- The report will be submitted for publication.
- Future versions will include systematic review of the literature, grading of the quality of evidence, and proposals for QC metrics and analytical criteria.

12.4 Subcommittee on antimycobacterial susceptibility testing

12.4.1 Rafael Canton, presented a report on behalf of the subcommittee chair, Emmanuelle Cambau. Membership of the subcommittee is appended.

12.4.2 The background to the subcommittee was a workshop on recommendations for pharmaceutical companies regarding data required for new anti-tuberculous drugs. The workshop, in November 2014, included representatives of the EUCAST Steering Committee, the ESCMID study group for mycobacterial infections (ESGMYC) and the European Medicines Agency (EMA). The workshop concluded that a reference method against which other methods can be calibrated is of utmost importance in the development of new agents and that pharmaceutical companies should be given clear instructions regarding what data must be brought to EUCAST for the process of setting breakpoints for *Mycobacterium tuberculosis*. The report from the workshop is available from the EUCAST website (<http://www.eucast.org/mycobacteria>).

12.4.3 The remit of the subcommittee is:

- To draft an SOP for a reference MIC method.
- To define a set of quality control strains.
- To organise the assembly of a set of reference strains to comprise approximately 100 wild type isolates and 50 identified as resistant to one or two agents (but not MDR *Mycobacterium tuberculosis*).
- To organise studies to establish reproducibility of the reference method in at least three laboratories.
- To organise the preparation of MIC distributions for the reference strains. The reference MICs will be performed in at least three reference laboratories.
- To interact with the EUCAST Steering Committee in the setting of breakpoints for antimycobacterial agents.
- To define the relevance of molecular testing and mutation frequencies.

12.5 Subcommittee on wild-type MIC distributions and ECOFFs

12.5.1 Gunnar Kahlmeter, the subcommittee chair, reported that the subcommittee was set up in 2015. Membership of the subcommittee is not yet completed but will include wide representation.

12.5.2 The remit of the subcommittee is:

- To define standards for data required for ECOFF calculation.
- To define the methods used to set ECOFFs.
- To define the conditions for revision of ECOFFs.

12.5.3 A draft is being prepared for input by the subcommittee.

13. The EUCAST disk diffusion method

13.1 A summary was presented by Erika Matuschek from the EUCAST Development Laboratory, Växjö, Sweden.

- 13.2 For breakpoint tables version 6.0, zone diameter breakpoints for ceftobiprole 5 µg and ceftolozane-tazobactam 30-10 µg were added, several zone diameter breakpoints were evaluated and some were updated, and almost all the “calibration and validation” files on the website were updated.
- 13.3 For QC tables v 6.1, some new agents were added, several zone diameter ranges were evaluated and some revised, including two in collaboration with CLSI (meropenem 10 µg for *E. coli* ATCC 25922 and cefepime 30 µg for *P. aeruginosa* ATCC 27853)
- 13.4 “Compliance of manufacturers” and “Frequently asked questions” documents have been updated.
- 13.5 Educational videos on the EUCAST disk diffusion method are in preparation in collaboration with the WHO
- 13.6 Some warnings concerning antimicrobial susceptibility testing products or procedures have been added to the website.
- Evaluation of disks from nine manufacturers highlighted poor performance of some (see ECCMID Poster 824, Åhman et al)
 - Problems with piperacillin-tazobactam gradient tests were noted.
- 13.7 Ongoing work at the EDL includes:
- Disk mass studies, QC criteria and MIC-zone diameter correlates to establish zone diameter breakpoints for new agents.
 - Zone diameter breakpoints for “old agents”, nitroxoline (uncomplicated UTI) and temocillin.
 - Disk diffusion test method and zone diameter breakpoints for fosfomycin.
 - Zone diameter breakpoints for early reading (4-8 h incubation) of disk diffusion tests (see ECCMID Poster 850, Jonasson et al)
 - Evaluation of available methods for colistin susceptibility testing.
 - Organisms lacking EUCAST breakpoints and a disk diffusion method.
 - MIC-zone diameter correlations are available and breakpoints are to be established during 2016 for *Aerococcus urinae*, *Aerococcus sanguinicola* and *Kingella kingae* (see ECCMID Poster 804, Åhman et al).
 - Method evaluation and MIC-zone diameter correlations are planned for 2016 for *Aeromonas* spp, *Plesiomonas shigelloides* *Vibrio* spp *Nocardia* spp.
 - Other organisms to be addressed in 2017 include:
 - HACEK organisms other than *Kingella kingae*
 - Streptomyces* spp.
 - Leuconostoc* spp.
 - Lactobacillus* spp.
 - Abiotrophia* and *Granulicatella* spp.
 - Gemella* spp.
 - Achromobacter* spp.
 - Bacillus* spp. other than *B. anthracis*
 - Pediococcus* spp.
- 13.8 ESCMID / EUCAST Observer visits to EDL in 2014 – 2016 included:
- Claire Fitzgerald and Patrick Stapleton, Waterford, Ireland,
 - Natasa Krtolina Banjac, Sarajevo, Bosnia/Herzegovina
 - Fathiah Zakhm, Hodeida, Yemen
 - Silva Fataj, Tirana, Albania
 - Walaa Hazzah, Alexandria, Egypt
 - Serap Süzük, Ankara, Turkey
 - Kashi nath Prasad, Lucknow, India

14. EUCAST website

- 14.1 The EUCAST website continues to be frequently updated with new and revised documents and data. The number of visitors to the website has gradually increased and exceeded 60,000 per month by the end of 2015, with about 60% of visits from within the EU.
- 14.2 Some EUCAST documents are available in several languages and there have been updates and new translations added in the past year.

15. EUCAST documents and publications

- 15.1 Two Standard Operating Procedures (SOPs) have been revised and are on the EUCAST website:
- SOP 3.1, Review and revision of breakpoints
 - SOP 4.4, EUCAST committees and subcommittees
- 15.2 EUCAST publications in scientific journals were as follows:
- Kahlmeter G. EUCAST- are we heading towards international agreement? *J Antimicrob Chemother* 2015; 70: 2427–29.
 - Brown DFJ, Wootton M, Howe RA. Antimicrobial susceptibility testing breakpoints and methods from BSAC to EUCAST. *J Antimicrob Chemother* 2016; 71: 3-5.
- 15.3 Several documents on the website have been updated including:
- MIC vs. zone diameters files
 - Disk diffusion manual and slide show
 - Breakpoint v 6.0 and QC tables
 - Compliance of manufacturers
 - Guidance documents
 - Frequently asked questions
 - Compliance of manufacturers

16. EUCAST statutes

Proposals for changes to EUCAST Statutes were approved as follows (changes in red text).

- **Steering Committee**
ESCMID appoints the Chair, Scientific Secretary, Clinical Data Coordinator **and Technical Data Coordinator. These posts will be limited to a maximum of eight years. With the approval of ESCMID,** National Breakpoint Committees decide on 4-6 members representing National Antimicrobial Susceptibility Testing Committees (NACs) with experience in determining breakpoints (currently France, Germany, Norway, Sweden, the Netherlands and the UK) and, **on recommendation from the Steering Committee,** ESCMID approves 2-4 members from the EUCAST General Committee. Steering Committee members **other than General Committee representatives** serve for two years and may be reappointed. Those representing the General Committee **serve for two years** and may not be reappointed for consecutive periods unless there are no other applicants. Expertise in breakpoint setting, antimicrobial resistance, susceptibility testing, pharmacokinetics and pharmacodynamics must be guaranteed. Observers from ECDC and EMA are free to attend Steering Committee meetings. **Experts from outside the committee may be co-opted to participate in discussion of specific topics as agreed by the Steering Committee.**
- **Applications for General Committee representative positions may be made in response to notifications of forthcoming vacancies to General Committee members and on the EUCAST website.**
- **General Committee**
The General Committee consists of one representative from each European country and each country outside Europe interested in advocating and developing EUCAST guidelines. Countries that have formally applied through their NAC or a national society of clinical microbiology and/or infectious diseases and/or medicine are appointed to the General Committee. Representatives of ECDC and EMA will be *ex officio* General Committee members.
- **New applications to the EUCAST General Committee ~~are tendered at least one month prior to the annual General Committee meeting~~ may be submitted to the Steering Committee at any time.**

EUCAST Decisions

- EUCAST proposals will, unless restricted by confidentiality agreements, be distributed for consultation to EUCAST General Committee members **and, when appropriate, to other interested parties through “wide consultation” announced through email networks on the EUCAST website.**
- EUCAST proposals for breakpoints as part of the approval process of new antimicrobial agents

will be disclosed only to the applicant and to EUCAST Steering Committee members who have signed a confidentiality agreement (when such an agreement has been required).

- The Steering Committee will make final decisions.
- EUCAST will maintain email address lists of expert groups and individual experts in specific fields. ~~and contacts at pharmaceutical companies and contacts at companies marketing antimicrobial susceptibility testing devices.~~ These groups will be consulted on and informed of EUCAST activities as appropriate. ~~Other interested parties will, when confidentiality permits, be consulted via "wide consultations" posted on the EUCAST website. Email network contacts at pharmaceutical companies and companies marketing antimicrobial susceptibility testing devices are responsible for provision of their current contact details.~~

17. What is coming in 2016-2017?

Rafael Canton reviewed plans for activity in the coming year.

- New breakpoints (with EMA):
 - Ceftazidime-avibactam
 - β -lactam- β -lactamase inhibitor combinations,
 - new cephalosporins
 - new aminoglycoside
 - pleuromutilin
- Colistin breakpoints and methodology (with CLSI).
- Breakpoint review with NACs:
 - temocillin
 - nitroxoline
 - spiramycin
 - tigecycline
 - sulbactam
- Review of breakpoints for fluoroquinolone, carbapenem and aminoglycoside groups.
- Disk diffusion recommendations for fosfomycin.
- Disk diffusion breakpoints for :
 - *Kingella kingae*
 - *Actinomyces* spp.
 - *Aerococcus* spp.
 - *Eikenella corrodens*
- Educational videos for the disk diffusion method (with WHO).
- Rationale documents for new agents and agents with revised breakpoints.
- Updated guidelines for the detection of resistance mechanisms.
- Updated intrinsic resistance and expert rules tables.
- ESCMID Postgraduate Technical Workshop on antimicrobial susceptibility testing and surveillance, 20-23 September 2016, Bochum, Germany.

News of all new EUCAST activities is included in the News section accessed from the EUCAST home page. Notifications of website changes are listed on a "Website changes" page, also accessed from the EUCAST home page.

18. Any other business

None.

- 19. Next meeting of the EUCAST General Committee**
Scheduled to be held during the 27th ECCMID, Vienna, Austria, 22-25 April, 2017



EUCAST General Committee Meeting attendees signing the register, 11 April 2016

Jenny Åhman	Sweden
Michael Buhl	Germany
Maiken Cavling Arendrup	Denmark
Dominique Boissinot	i2a
Fabio Brocco	Liofilchem
Derek Brown	UK
Rafael Canton	Spain
Olga Derovic	South Africa
Michael Dowzicky	Pfizer
Julie Elston	ThermoFisher Scientific
Ana Gales	Brazil
Christian Giske	Sweden
Jesus Guinea	Spain
Antti Hakanen	Finland
Hakan Hanberger	Sweden
Pat Hogan	Pfizer
Marina Ivanova	Estonia
Ron Jones	USA
Manette Juvin	Bio-Rad
Gunnar Kahlmeter	Sweden
Blaine Leppanen	Blaine Healthcare Associates
Luis Martinez-Martinez	Spain
G. Kampinga	The Netherlands
Daniela Ohlasova	Slovakia
Onur Karatuna	Turkey
Yoram Keness	Israel
Christoffer Lindemann	Norway
Sally Maysent	ThermoFisher
Maureen Mansfield	MM Consulting
Erika Matuschek	Sweden
Jolanta Miciuleviciene	Lithuania
Dik Mevius	Netherlands
Milan Niks	Slovakia
David Paisey	ThermoFisher
Ruth Powell	ThermoFisher
Robert Rennie	Canada
Jorge Sampaio	Brazil
Martin Steinbakk	Norway
Iztok Štrumbelj	Slovenia
Greg Stone	Astra Zeneca
Marina Sukhorukova	Russia
Arjana Tambic	Croatia
Hay Thijssel	MCS Diagnostics
Susan Thomson	Mast
Akos Toth	Hungary
John Turnidge	Australia
Thierry Vidalenc	Bio-Rad
Neil Woodford	UK

EUCAST Steering Committee 11 April 2016

Chair	Dr Rafael Canton	Spain
Scientific Secretary	Dr Derek Brown	UK
Clinical Data Coordinator and Webmaster	Prof Gunnar Kahlmeter	Sweden
BSAC	Prof Alasdair MacGowan / Dr Robin Howe	UK
SWAB	Prof Johan W. Mouton	Netherlands
NWGA	Christoffer Lindemann	Norway
CA-SFM	Prof François Jehl / Prof Gerard Lina	France
SRGA	Dr Christan Giske	Sweden
General Committee	Prof Sören Gatermann	Germany
General Committee	Prof. Jan Verhaegen	Belgium
General Committee	Dr Iztok Strumbelj	Slovenia

EUCAST General Committee 11 April 2016

Chair	Dr Rafael Canton
Scientific Secretary	Dr Derek Brown
Clinical Data Coordinator and Webmaster	Prof Gunnar Kahlmeter

National representatives

Australia	Prof. John Turnidge
Austria	Dr Petra Apfalter
Belgium	Prof. Jan Verhaegen
Bosnia	Dr Selma Uzunovic-Kamberovic
Brazil	Prof Jorge Luiz Mello Sampaio
Bulgaria	Prof. Krassimir Metodiev
Canada	Dr Bob Rennie
Croatia	Dr Arjana Tambic-Andrasevic
Czech Republic	Dr Helena Zemlickova
Denmark	Dr Robert Skov
Estonia	Dr Marina Ivanova
Finland	Dr Antti Hakkanen
France	Prof. Luc Dubreuil
Germany	Prof. Sören Gatermann
Greece	Prof. Alkiviadis Vatopoulos
Hungary	Dr Ákos Tóth
Iceland	Dr Karl Gustaf Kristinsson
Ireland	Dr Michael Mulhern
Israel	Dr Yoram Keness
Italy	Prof. Pietro Varaldo
Latvia	Dr Arta Balode
Lithuania	Dr Jolante Miciuleviciene
Luxemburg	Dr Monique Perrin
Morocco	Dr Amina Benaouda
Netherlands	Dr Greeta Kampinga
Norway	Dr Christofer Lindemann
Poland	Prof. Waleria Hryniewicz
Portugal	Prof. Jose Melo Cristino
Romania	Dr Irina Codita
Russia	Dr Marina Sukhorukova
Serbia	Dr Lazar Ranin
Slovak Republic	Prof. Milan Niks
Slovenia	Dr Iztok Strumbelj
South Africa	Dr Olga Perovic
Spain	Dr Luis Martinez-Martinez
Sweden	Prof Håkan Hanberger
Switzerland	Prof. Reinhard Zbinden
Turkey	Dr Deniz Gür
Ukraine	Prof Aidyn Salmanov
UK	Prof Alasdair MacGowan
USA	Prof Paul Ambrose

ISC FESCI

Dr Paul Tulkens
Dr David Livermore

EUCAST subcommittee on Antifungal Susceptibility Testing

Steering Committee

Maiken Cavling Arendrup, Denmark (Chair)
Susan Howard, UK (Secretary)
Joseph Meletiadiis, Greece (Data Coordinator)
Jesús Guinea, Spain (NAC representative)
Katrien Lagrou, Belgium (NAC representative)
Johan Mouton, The Netherlands (EUCAST Steering Committee Representative)

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-Kähkölä (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)
C Torp Andersen (Norway)
A Velegraki (Greece)

EUCAST Subcommittee on Veterinary Antimicrobial Susceptibility Testing

Steering committee

Dik Mevius (Chair)
Peter Damborg (Secretary)
Kees Veldman (Data Manager)
Pierre-Louis Toutain (pharmacologist)
Ludovic Pelligand (pharmacologist)

Additional members

Peter Lees (pharmacologist, UK)
Pierre Louis Toutain (pharmacologist, France)
Alain Bousquet-Melou (pharmacologist, France)
Jean Yves Madec (veterinary microbiologist, France)
Marisa Haenni (veterinary microbiologist, France)
Luca Guardabassi (veterinary microbiologist, Denmark)
Jürgen Wallmann (veterinary microbiologist, Germany)
Heike Kaspar (veterinary microbiologist, Germany)
Andrea T. Feßler (veterinary microbiologist, Germany)
Stefan Schwarz (veterinary microbiologist, advisor, Germany)
Vincent Perreten (veterinary microbiologist, Switzerland)
Christina Greko (veterinary microbiologist, Sweden)
Björn Bengtsson (veterinary microbiologist, Sweden)
Antonio Battisti (veterinary microbiologist, Italy)
Annet Heuvelink (Veterinary microbiologist, Netherlands)
Two veterinary microbiologist nominees from Czech Republic
Lisbeth Rem Jessen (veterinary clinician for companion animals, small animal practitioner, Denmark)
Christophe Hugnet (veterinary clinician for food-producing animals, (small/large animal practitioner, France)
Thomas Fritsche (liaison with CLSI as observer)
Marcus Rose (liaison with CLSI as observer)

EUCAST Subcommittee on the role of whole genome sequencing (WGS) in AST of bacteria

Neil Woodford (UK, Chair)
 Frank M. Aarestrup (Denmark)
 Rafael Canton (Spain)
 Michel Doumith (UK)
 Oskar Ekelund (Sweden)
 Matthew J. Ellington (UK)
 Christian Giske (Sweden)
 Henrik Hasman (Denmark)
 Katie L. Hopkins (UK)
 Matt Holden (UK)
 Jon Iredell (Australia)
 Gunnar Kahlmeter (Sweden)
 Claudio U. Koser (UK)
 Alasdair MacGowan (UK)
 Dik Mevius (Netherlands)
 Mike Mulvey (Canada)
 Thierry Naas (France)
 Tim Peto (UK)
 Jean-Marc Rolain (France)
 Ørjan Samuelsen (Norway)

EUCAST Subcommittee on antimycobacterial susceptibility testing

Emmanuelle Cambau (chair)	France	ESGMYC
Thomas Schön	Sweden	ESGMYC
Miguel Viveiros	Portugal	ESGMYC
Miguel Santin	Spain	ESGMYC
Daniela Cirillo	Italy	ERLnet-TB
Sven Hoffner	Sweden	ERLnet-TB
Gerard Lina	France	EUCAST
Johan Mouton	Netherlands	EUCAST