EUCAST in 2010

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EUCAST is the European Committee on Antimicrobial Susceptibility Testing. It aims to provide common European breakpoints and antimicrobial susceptibility methodology. Over the years ESCMID has provided the administrative, financial and scientific framework for EUCAST, which is currently supported (3 years from September 2008) by ECDC.

EUCAST now has harmonised breakpoints for all widely used existing antibacterial agents. In addition, breakpoints have been set for several new agents as part of the licensing process by the European Medicines Agency (EMEA). Work has begun on setting breakpoints for less commonly used agents. There is a clear need for revision of breakpoints to meet the demands of new resistance mechanisms, extended indications or new administration forms or dosages. For these reasons the glycopeptide breakpoints have been reassessed and modified breakpoints published recently (www.eucast.org/clinicalbreakpoints).

All European breakpoints are freely available on the EUCAST website. It also gives details of EUCAST organisation, activities and guidelines, and copies of all EUCAST publications for download. MIC distributions of bacteria and fungi, with wild type populations highlighted and epidemiological cut-off values included for surveillance (Figure 1) can be found at www.eucast.org/mic. The MIC website now includes collated data from over 20000 MIC distributions from worldwide sources.

Responses to consultation on implementation of EUCAST breakpoints indicated that there was a need to provide a disk diffusion method calibrated to EUCAST clinical MIC breakpoints and in December 2009 EUCAST published methodology and breakpoints for a disk diffusion method (available on www.eucast.org/diskdiffusion). The MIC website has been extended to include zone diameter distributions based on the new EUCAST method (Figure 2) and breakpoints are supported by graphs relating MIC to zone diameter distributions (Figure 3). In addition, EUCAST breakpoints have been or are currently being implemented in various automated susceptibility testing systems.

EUCAST is promoting the establishment of national antibiotic committees (NAC) in countries where there is currently no such group. Several countries have already formed a NAC. The most important task of the NAC is to provide a national strategy for antimicrobial susceptibility testing and help implement EUCAST breakpoints and methods. For the future the Steering Committee hopes that representatives of NAC constitute the EUCAST General Committee.

The EUCAST subcommittee dealing with antifungal agents continues to work on breakpoints for several antifungal agents and to investigate technical aspects of methods for fungi. The subcommittee on expert rules is working on an update to the published expert rules and a computer programme to apply the rules is in the late stages of development. The anaerobe subcommittee advises the Steering Committee on breakpoints for anaerobes.

Today, EUCAST is accepted as the European antimicrobial breakpoint committee by the profession, by national breakpoint committees in Europe, the European Medicines Agency (EMEA), the European Centre for Disease Control (ECDC), the European Food Safety Authority (EFSA), the pharmaceutical industry and the susceptibility testing devices industry. In Europe there is currently an accelerating trend to use EUCAST breakpoints and methods instead of others.
How EUCAST is structured

The Steering Committee carries out the majority of the work of EUCAST and directs EUCAST activity. It consists of a central management team (Chair, Scientific Secretary and Clinical Data Co-ordinator), one representative of each of the six founding national antibiotic breakpoint committees in Europe and two representatives of the EUCAST General Committee.

The EUCAST General Committee constitutes a European network with each European country invited to appoint a member. The General Committee meets once yearly at the ECCMID and between meetings is consulted on all matters of importance. EUCAST also has consultative networks of experts in the antimicrobial chemotherapy field, and representatives of the pharmaceutical industry and susceptibility device manufacturers. The networks are consulted by email on relevant matters. They are invited to attend the annual open General Committee meeting. EUCAST also consults more widely on proposals via the EUCAST website.

1) MIC, 10829 observations (57 data sources); Epidemiological cut-off: WT ≤ 0.25 mg/L
   Clinical breakpoints: S ≤ 1 mg/L, R > 2 mg/L

2) EUCAST disk diffusion method. Disk content: 5; 4879 observations (2 data sources); Epidemiological cut-off: –; Clinical breakpoints: S ≥ 2 1 mm, R <18 mm

3) Establishment of the zone diameter breakpoints (left line indicates S breakpoint, right line R) corresponding to the clinical MIC breakpoint. E. coli/Cefotaxime 5 µg; MIC S ≤ 1 mg/L, R > 2 mg/L; zone S ≥ 21 mm, R < 18 mm; WT = wild type MIC 0.016 – 0.25 mg/L

All data is from the EUCAST website (www.eucast.org).