EUCAST in 2011
www.eucast.org

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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) and some breakpoints have been revised to meet the demands of new resistance mechanisms, extended indications or new administration forms or dosages. Breakpoints for various less common fastidious organisms are being developed in collaboration with European expert groups. Multiple ‘rationale documents’ giving the rationale for EUCAST breakpoints have been published and are available online (www.EUCAST.org/documents/rd).

All EUCAST breakpoints and documents are freely available from the EUCAST website, which also gives details of EUCAST organisation, activities and guidelines. From there users can access another webpage (www.eucast.org/mic) which presents MIC distributions of bacteria and fungi, with wild type populations highlighted and epidemiological cut-off values (ECOFFs) included for surveillance. The MIC website now includes collated data from over 22’000 MIC distributions from worldwide sources. The online information continues to be expanded with new sections on national antibiotic susceptibility testing committees (NACs, see below), frequently asked questions about EUCAST breakpoints and methods, and a table detailing changes to the website (Figure 1). In the last quarter of 2010 there were over 70’000 visitors to the EUCAST websites (Figure 2).

The EUCAST methodology and breakpoints for a disk diffusion method are available on the EUCAST website. The MIC website includes zone diameter distributions based on the new EUCAST disk diffusion method and MIC-zone correlations (e.g. Figure 3). EUCAST breakpoints continue to be implemented in various automated susceptibility testing systems and details of the current compliance of manufacturers with EUCAST breakpoints and methods are available on the website.

NACs are intended to provide a national strategy for antimicrobial susceptibility testing and to help implement EUCAST breakpoints and methods as appropriate. NACs are long established in some countries and more recently have been formed or are being set up in several countries where there was previously no such group (Figure 4). The EUCAST Statutes are being revised so that in the future representatives of NACs will constitute the EUCAST General Committee.

EUCAST is accepted as the European antimicrobial breakpoint committee by the profession, by national breakpoint committees in Europe, the European Medicines Agency (EMA), the European Centre for Disease Control (ECDC), the European Food Safety Authority (EFSA), the pharmaceutical industry and the susceptibility testing devices industry. In Europe, the trend from using other breakpoint guidelines to using EUCAST breakpoints and methods continues. EUCAST breakpoints have now been adopted by the majority of laboratories in several countries, and several more are in the process of changing or plan to change within the next year – the situation is changing rapidly (Figure 5). There has been considerable interest in EUCAST breakpoints from outside Europe and it has been agreed that countries in which a substantial proportion of laboratories follow EUCAST breakpoints may be represented on the EUCAST General Committee.

The EUCAST subcommittee dealing with antifungal agents (EUCAST-AFST) continues to work on breakpoints for antifungal agents and to investigate technical aspects of methods for fungi. The subcommittee on expert rules has completed an update to the published expert rules and a computer program to apply the rules has been developed. The anaerobe subcommittee advises the Steering Committee on breakpoints for anaerobes and is currently running a project on methods for susceptibility testing of anaerobes.
Figure 2. Total number of visitors to EUCAST webpage per quarter from autumn 2009 through 2010

Figure 3. Zone diameter distribution and MIC-zone diameter correlation for *E. coli* with gentamicin. Numbers in circles are the numbers of bacterial isolates with the same results for both MIC and zone diameter.

Figure 4. Implementation of National Antimicrobial Susceptibility Testing Committees in Europe

Figure 5. Implementation of EUCAST breakpoints in Europe