

Back to the future: a brief history of the BSMT and a conference preview

The British Society for Microbial Technology has adapted to changing circumstances throughout its 37-year existence. Evolving from its origins in multipoint technology, it now organises annual microbiology conferences covering a wide range of topics related to diagnostic microbiology. Here, Jim Lindsay and Michael Croughan reflect on the society's origins and early development, while David Westrip previews this year's conference.

The BSMT began life as the British Society for Multipoint Technology. In April 1985 John Oliver, the late founder and managing director of Mast, invited eight biomedical scientists and clinical microbiologists to a meeting in Liverpool. The purpose was to create a credible forum for the exchange of information on multipoint technology methods and applications, most notably in breakpoint antibiotic susceptibility

testing and bacterial identification. The eight attendees formed the basis of the original committee.

Multipoint technology is a relatively simple technique that offers benefits of cost-effective testing of large numbers of isolates and also lends itself to automation. In the early 1980s hospitals were being centralised and laboratories were getting bigger, having to process increasing numbers of specimens on

a daily basis. At that time, compared to the situation in disciplines such as clinical chemistry, automation in microbiology was limited or non-existent. The conditions were right for many laboratories to look at introducing multipoint technology.

There were problems, however. Apart from some necessary re-organisation of workload with processes focused around the multipoint inoculator(s), there were



Previous BSMT presidents, Professor Eric Bolton and Dr Robert George.



Current BSMT President Dr Kate Templeton.



At the last face-to-face conference in 2019 there were 20 sponsors exhibiting their latest products.

technical issues such as there being very few published recommended antibiotic breakpoints and no multipoint-derived identification databases. In addition, there were few if any control organisms specifically targeted at various breakpoint/organism combinations.

Publications

The Committee members started to address these issues. In 1986 Peter Clayton and colleagues from Leicester Royal Infirmary published a paper in the *Journal of Clinical Pathology* entitled 'Constructing a database for low cost identification of Gram-negative rods in clinical laboratories', based on multipoint inoculation technology. Peter was the first Chair of the Committee and a real driving force in the development of the Society. Sadly, Peter died in 1991 at the too early age of 49.

More research work and publications were produced around a BSMT Collaborative Study that involved sending strains to over 20 laboratories for identification and antibiotic susceptibility testing. The aim was to assess reproducibility between laboratories and the selection of suitable quality control (QC) organisms.

The work was finally brought together in *Multipoint Methods in the Clinical Laboratory*, a 96-page handbook published in 1991. The authors were committee members Dr Mary Faiers, Dr Robert George, Julian Jolly and Philip Wheat. The handbook covered all aspects of multipoint technology including proposing recommended breakpoints for multipoint urine testing and exploring opportunities for automation.

A new name

Once the definitive handbook was published there was very little else to discuss around multipoint technology. The decision was taken therefore to broaden the Society's remit and change the name to the British Society for Microbial Technology. The new Society was (and still is) a not-for-profit organisation of healthcare scientists and medical microbiologists working mainly in the NHS and Public Health Laboratory Service (PHLS), now the UK Health Security Agency (UKHSA). The BSMT's aim is to promote an exchange of information on laboratory practices in clinical microbiology, and it does this mainly by organising an Annual Microbiology Conference in London, usually in the Spring. The BSMT has also held occasional regional Autumn Conferences in Leicester, Birmingham, Sheffield and Liverpool.

Conferences

The renowned BSMT Conferences are aimed at senior biomedical and clinical scientists, medical microbiologists and other healthcare professionals. They are particularly relevant for bench microbiologists to provide up-to-date information about organisms and techniques especially with regard to

molecular methods. Generally, each conference has attracted 150–200 delegates.

Over the years the conference themes have included infections of different parts of the body (eg Skin, Enteric, Urine, CNS, Respiratory, Sexually Transmitted Diseases) as well as specific organisms such as Enterobacteriales, staphylococci, mycobacteria and *Campylobacter*. More general themes have included antimicrobial resistance, laboratory turnaround times, the impacts of new technology on global epidemiology, rapid diagnostics, and near-patient testing.

In 2021, due to the global pandemic, the BSMT organised a four-day virtual conference on COVID-19 which generated nearly a thousand participants.

Presidents

The BSMT has been guided and supported by a number of influential microbiologists who graciously accepted the position of Society President.

In addition, the BSMT is indebted to Professor Brian Duerden CBE, former Inspector of Microbiology and Director and Medical Director of the PHLS. Professor Duerden has chaired numerous lecture sessions at many of the Conferences.

Sponsors

Since the first Conference in Nottingham in 1985, the BSMT has been fortunate to attract a loyal list of commercial sponsors, many of whom return year on year. At the last face-to-face conference in 2019 there were 20 sponsors exhibiting their latest products, and the same number is expected for the 2022 event in July. Special mention must go to Mast Group, Medical Wire and Equipment, BioConnections, Pro-Lab Diagnostics, bioMérieux UK, Launch Diagnostics, Becton Dickinson, and Don Whitley Scientific, who have supported most if not all conferences since 1985.

Following the re-organisation of last year's scientific meeting to an online format due to pandemic restrictions, the committee is pleased to confirm that this year's meeting will be face to face on 19 July at the RAF Museum at Hendon. It will focus on the genomic and microbiology revolution, with speakers confirmed from

Date	President
1985–1988	Professor Francis O'Grady (Nottingham)
1988–1997	Professor Alan Percival (Liverpool and Manchester)
1997–2012	Dr Robert George (Colindale)
2012–2021	Professor Eric Bolton (Preston and Manchester)
2021 to date	Dr Kate Templeton (Edinburgh)

Dr Mark Wilks and Dr Riccardo Alagna pictured during the 2019 conference held at the Royal Air Force Museum in Hendon, North London.

UKHSA, NIHR and several NHS trusts and academic institutions. Those who have attended previous meetings will know that another attraction is the opportunity to network with speakers, other delegates and commercial colleagues at the trade show. And now to the future. See below for a preview of the conference, with further information scheduled to be published in subsequent issues of *Pathology in Practice*.



The Genomic & Microbiology Revolution: In Technology We Trust?

Throughout its history, the BSMT has sought to reflect the changing world of diagnostic clinical microbiology and in particular has focused its conferences on novel technological solutions and their applications. Recent meetings have covered topics as diverse as the need for improved diagnostic testing for invasive fungi, molecular diagnostics for enteric infections, and metagenomic evaluation of the urinary tract microbiome.

The BSMT regularly manages to select speakers and topics that are right on the edge of what is currently possible in routine microbiology departments, which makes its annual conference directly relevant to those working in and using the services of these areas of pathology. The quality of the conferences is dependent upon those who choose to speak at the conference and the BSMT has always seemed able to attract highly regarded speakers from across the UK and globally.

The COVID-19 pandemic resulted in significant difficulties in organising many events including scientific conferences, resulting in many being delayed or cancelled. In 2021 the BSMT faced these issues head on with a determination to ensure some form of conference was able to be held that year. Eventually this took the form of a completely revised format and moved online, which threw up its own unique challenges but was nonetheless a successful and engaging event. The recordings remain accessible on the BSMT website (www.bsmt.org.uk).

Continuing uncertainty and fluctuating SARS-CoV-2 infection rates earlier this year meant that the committee had to take the difficult decision to postpone the 2022 event from its usual May slot. However, the committee is pleased that this year's event is now confirmed and is scheduled for 19 July at the RAF Museum in Hendon. This will represent a welcome return to face-to-

face events and will host speakers covering a range of topical subjects around the theme of molecular diagnostics and their growing role and impact in the routine diagnostic laboratory. Covering such a large, complex and constantly evolving topic is a significant challenge in a one-day conference, but a fascinating selection of speakers and topics has been confirmed. We are also pleased to be able to host a comprehensive trade show with 20 loyal commercial supporters in attendance.

2022 speakers

This year, speakers will include Professor Paul Dark, newly appointed as National Deputy Medical Director, NIHR Clinical Research Network, speaking on the impact and role of molecular technologies in the diagnosis of sepsis, a subject likely to be relevant to many microbiology laboratories that still rely on culture-based techniques and the inherent delays/limitations these involve. Genomic techniques such as next-generation sequencing (NGS) can be applied both directly to clinical samples to determine the presence of pathogens – particularly valuable in cases where the pathogens may not be culturable using traditional techniques – but also to characterise isolates further in terms of their genomic capacity and characteristics. Aspects of both of these applications will be covered by Adela Alcolea-Medina and Dr Natasha Weston, respectively.

The importance of standardisation and good QC protocols is a major consideration for laboratories and essential to those with or seeking UKAS accreditation. However, applying these principles to novel and innovative technologies and techniques can be challenging. Dr Elaine McCulloch from QCMD will discuss the need for quality assurance and its role and application in genomic techniques and maybe address some of these challenges.

Looking beyond the current COVID-19

pandemic the next great challenge in microbiology is likely to be addressing the impact of increasing antimicrobial resistance. This year's BSMT conference will include two speakers who will discuss aspects of this. Antimicrobial susceptibility testing is always an area of keen debate by balancing the needs of the clinician, limitations of interpretive guidelines, and technical limitations of existing methodologies. This is all in the context of a desire to reduce time to results to allow more targeted antimicrobial therapies to be used. Dr Katie Hopkins from UKHSA has over 20 years' experience working in this area considering these problems and will speak on current methods and their limitations. An international perspective on antimicrobial resistance and stewardship in the context of healthcare-associated Infections will be provided by Dr Esmita Charani.

No scientific conference, particularly one focused on infection and microbiology, can escape from the massive impact of the SARS-CoV-2 virus in recent years, and the ongoing work to understand its clinical and epidemiological impact. The COVID-19 Genomics UK consortium (COG) has had a significant and leading role in much of this work, both on a national and global scale. Dr Dinesh Aggarwal, who has worked on transmission and evolution of SARS-CoV-2 in care homes and hospitals will describe his work.

The committee is also pleased that the conference will be chaired by Professor Brian Duerden CBE and Dr Kate Templeton, who has recently taken over as President of the BSMT from Professor Eric Bolton.

Further details and registration are available through the BSMT website (www.bsmt.org.uk), and also look out for further information on some aspects of the conference in the next issue of *Pathology in Practice*.