

BSMM News

Winter 2005



President's Column

It was nice to see many of you at the 'Blood and Fungi' joint meeting of the BSMM and the British Society for Haematology (BSH) held at Dartington Hall in Devon at the beginning of November. It was a true meeting of the clinical with the scientific viewpoint and an excellent array of speakers helped to stimulate thought and discussion around a variety of subjects with a bias towards trying to understand the science underpinning patient management. The venue was stunning, if a little tucked away in deepest, darkest Devon. Elaine Bignell (BSMM Meetings Secretary) and Sarah Lapsley (BSH Conferences Ltd) deserve our warmest thanks for their professional management of the meeting from start to finish. Thanks also to generous pharmaceutical support we were able to offer subsidised places to a number of junior scientists and trainees within our society (see separate report).

The concept of joint meetings with other professional groups is a good one and helps to enhance our perspective whilst also raising our profile with other societies. We therefore intend to arrange a joint meeting with the Royal College of Pathologists to be held at their central London venue in October 2006. The scope of this meeting will be to provide an overview and update on diagnosis and management of superficial as well as systemic fungal infection.

The next BSMM meeting will be the annual meeting to take place at Clontarf Castle in Dublin from 26th-28th March 2006. The local organiser Kevin Kavanagh and the meetings secretary Elaine Bignell have assembled an exceptional programme of international speakers as well as an exciting social programme so this really is one not to be missed.

I am delighted to say that the BSMM web-based registry for invasive fungal infection is slowly beginning to take shape. Funding for the construction and initial running of the database for the first three years has been promised by Gilead, whilst Parexcel, a company with previous experience of running medical registries, will help to design a workable system and seek the required ethical committee approvals.

I wish all of you a happy Christmas and a healthy, happy, prosperous and fruitful New Year.

Liz Johnson, President, BSMM

Blood & Fungi, Dartington Hall, Devon

The Blood & Fungi symposium was a joint venture organised by the BSMM and the British Society for Haematology (BSH). The conference facilities were excellent and housed within Grade 1 listed buildings comprising the 14th century courtyard and the magnificent hammer-beamed Great Hall. The aim of the meeting was to encourage communication between members of both societies and to provide an exchange of expertise and ideas having clinical and practical relevance. The programme consisted of ten symposia, each bringing clinical and scientific viewpoints together on diagnosis, pathogenesis, treatment and epidemiology of *Aspergillus* and *Candida* infections in haematology patients.

Registration began in the Great Hall and the first two presentations by Andreas Groll and Mike Potter highlighted the different clinical presentations of invasive fungal disease and the problems this may cause in both diagnosis and treatment. These were followed by two presentations on diagnosis: David Denning spoke on the Rapid diagnosis of Pulmonary Aspergillosis using characteristic clinical signs on radiography and adjunct laboratory testing and Chris Kibbler described the current state of diagnosis of invasive *Candida* infections including serological testing using mannan and the newly described glucan assays. The meeting then concentrated on the pathogenesis of infection with *Aspergillus* and *Candida* with Elaine Bignell describing *Aspergillus* virulence determinants and Neil Gow illustrating the interaction of *Candida* cell wall residues with the immune response.

The first day concluded with a very interesting discussion between the two disciplines. Dinner that night was taken in the wonderful Great Hall and afterwards most delegates retired to the White Hart Bar for "further discussion" and a taste of the local ale.

The final day of the meeting concentrated on the Epidemiology, treatment and management of invasive fungal infections. Paul Verweij from the University Hospital Nijmegen, Netherlands discussed the changing epidemiology of opportunistic mycoses and Frank Odds the molecular epidemiology of fungal infections in particular invasive *Candida* infections. The final two lectures concerned the Treatment and management of aspergillosis (Marcus Rühnke) and Current advances in the management of *Candida* infections (Jack Edwards).

The meeting was very interesting and provided an opportunity to discuss different aspects of invasive fungal infections with experts from both the mycological and haematological world.

Myself, Alexia Barberat, Claire Rennison and Suzy Turnball are very grateful to the BSMM for the extraordinary travel awards awarded to enable attendance at this meeting.

Michael Collins

Information about BSMM Travel Grants is available at www.bsmm.org

2nd Trends in Medical Mycology, Berlin, 2005

The second TIMM meeting was held in Berlin in October this year. I was pleased to revisit Berlin, having not been there for some years. However, in this age of budget flights, it remains one of the more difficult European capitals to get to from the north of England!

The meeting was held in the Berliner Congress Centre on Alexanderplatz in the former East Berlin. Despite much building work in the area, there remains plenty of evidence of the past in the local architecture. The conference facilities were excellent and it proved a well-run conference. My only gripe is that some very popular sessions were held in the smaller side rooms while those held concurrently in the huge auditorium were sparsely attended.

Highlights of the meeting for me included some excellent interactive clinical sessions (despite being a little earlier in the morning than I'd like), a fascinating review of the spectrum of *Aspergillus* infections and atopy by David Denning and a very good review of zygomycosis by Carol Kauffman. There were useful sessions on fungal infection in the central nervous system and a good opportunity to swot up on the newest data regarding posaconazole and micafungin.

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Frank Odds also impressed with the cheekily titled presentation 'When will amphotericin B die?' I also enjoyed the overview of the history of mycology in Germany from Marcus Rühnke.

The meeting proved a useful opportunity to meet new people and keep in touch with others. It was pleasing to be able to take in some of the sights of the city, both new and old, particularly the massively controversial Holocaust Memorial, which was very impressive.

James Clayton

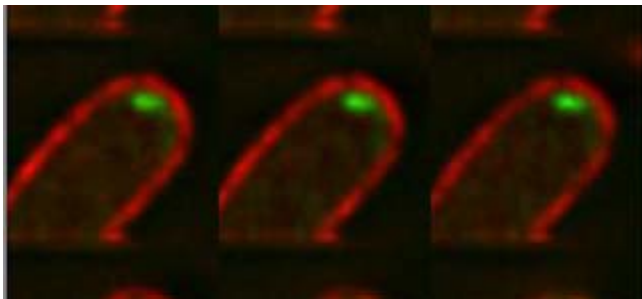
BSMM Glyn Evans Award

We would like to express our thanks to the BSMM for granting us a Glyn Evans Mycology Award. The Award enabled us to visit Dr. Peter Sudbery's laboratory at the University of Sheffield to train in imaging the movement of specific proteins in live fungal cells. Dr. Sudbery's group employ a combination of molecular genetic techniques and high-resolution fluorescence microscopy in order to study cellular morphogenesis in *Candida albicans*. By labelling selected proteins with fluorescent tags, Dr. Sudbery's group lead the field in the identification and localisation of intracellular organelles during fungal cell morphogenesis. They have shown that pseudohyphae and hyphae are fundamentally different morphological states in *C. albicans* and that an organelle called the Spitzenkörper is present only during hyphal growth. A key tool in their work is the DeltaVision microscope and imaging system, which allows them to track tagged proteins during different stages of growth and generate 3-D images of their location within the cell.

We are involved in two projects in the Aberdeen Fungal Group, working in Neil Gow's laboratory. Microbiologists at Aberdeen recently acquired a DeltaVision system via an equipment grant from the Wellcome Trust. One project which will take advantage of this advanced imaging equipment involves the localisation of the four *C. albicans* chitin synthase enzymes during normal growth and when cell walls are stressed, for example by antifungal agents. It is known that additional chitin is deposited in the cell wall as a response to challenge with antifungals but it is not known how this is orchestrated. The second project is concerned with how *C. albicans* hyphae reorient their direction of growth in response to environmental cues, such as surface topography or small electric fields. It is not known whether such

stimuli are involved in tissue invasion but *C. albicans* is a genetically tractable and experimentally robust system for studying the molecular mechanisms underlying the directional movement of eukaryotic cells. The approach in both projects is to compare the behaviour of specific proteins during normal growth and when cells are subjected to stress, external stimuli or mutation. During our visit to Dr. Sudbery's lab, we learned not only how to manipulate the DeltaVision microscope and software but to create the conditions required to maintain growing cells on the microscope stage during time-course fluorescence photography. Over the two days, we imaged the Spitzenkörper in three dimensions and created a movie following the germination and extension of a hypha from a single yeast cell. A DeltaVision system is now installed at the University of Aberdeen and we have already created strains carrying fluorescently-tagged candidate proteins for a variety of studies. The skills we learned on this visit will help us to maximise the output from the experimental approach we have taken.

We are extremely grateful to Dr. Sudbery for giving us so much of his valuable time in order to demonstrate the system and for sharing with us his experience in imaging fungal cells. Our thanks also go to the BSMM for supporting the visit.



Montage of Z-stack images through a *C. albicans* hypha. The YFP-labelled protein, Mlc1p, is localised to the Spitzenkörper (green) at the growing tip. The fungal cell wall is labelled with ConcanavalinA-Texas Red.

Alex Brand & Megan Lenardon

Information about Glyn Evans Mycology Awards is available at www.bsmm.org

BSMM Annual Scientific Meeting 2006

The 2006 BSMM Annual Scientific Meeting will be held on 26th-28th March 2006 in Clontarf Castle Hotel, Dublin (www.clontarfcastle.ie). Registration forms and forms for submission of papers are enclosed/attached with this Newsletter. Clontarf is a

suburb of Dublin and within easy reach of Dublin Airport (about 15 minutes by taxi) and the city centre by bus or taxi. The venue for the meeting is a medieval castle adjacent to Dublin bay that was originally built to protect the inhabitants of the city. The meeting secretary, Elaine Bignell, has compiled an excellent list of speakers and I am sure that the meeting will be a great scientific and social success.

Please note that accommodation at Clontarf castle is limited to 50 rooms, and will be allocated on a first come first served basis. When these are filled, accommodation will be organised at other local venues. The earlier you register, the more likely you are to be able to stay at the castle!

I look forward to welcoming you to Dublin in March.

Kevin Kavanagh, Local Organiser

BSMM Annual Scientific Meeting 2007

Planning has started for the 2007 BSMM Annual Scientific Meeting, which will be held on March 18th-20th 2007 in Leeds. Please put these dates in your diary.

Dick Hobson, Local Organiser

Forthcoming meetings

2nd Advances Against Aspergillosis
February 22nd-25th 2006, Athens, Greece
Details: www.AAA2006.org

8th ASM Conference on Candida and Candidiasis
March 13th -17th 2006, Denver, Colorado
Details: www.asm.org

ASM Conference on Dimorphic Fungal Pathogens
March 13th-17th 2006, Denver, Colorado
Details: www.asm.org

BSMM Annual Scientific Meeting
March 26th-28th 2006, Clontarf Castle, Dublin
Details: www.bsmm.org

Society For General Microbiology 158th Meeting
April 3rd-6th 2006 Warwick, UK
Details: www.sgm.ac.uk/meetings

16th Congress of the International Society for Human and Animal Mycology (ISHAM)
June 25th-29th 2006 Paris, France
Details: www.imedex.com/announcements/isham06.asp

Eighth International Mycological Congress
August 20th-25th 2006, Cairns, Australia
Details: www.sapmea.asn.au/conventions/imc8

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Sixth International Symposium on Coccidioidomycosis
August 23rd-27th 2006, Stanford, C. albicans, USA
 Details: <http://cme.ucsd.edu/cocci/>

Society For General Microbiology 159th Meeting
September 11th-14th 2006 York, UK
 Details: www.sgm.ac.uk/meetings

BSMM Annual Scientific Meeting
March 18th-20th 2007, Devonshire Hall, Leeds
 Details: www.bsmm.org

Society For General Microbiology 160th Meeting
March 26th-29th 2007 Manchester, UK
 Details: www.sgm.ac.uk/meetings

New BSMM members

The BSMM welcomes six new members, who have joined the society since the last issue of the BSMM Newsletter. The new members are Eugene Dwaah-Gyimah (London), Nicole Rennison (Newcastle-upon-Tyne), Hugo Ludlam (Cambridge), Christine Fagan (Newcastle-upon-Tyne), Victoria Maddox (Leeds) and Rachel Williams (London).

Jobs in Medical Mycology

The BSMM website has a Jobs Link section. Members are invited to submit details of relevant posts (scientific, clinical, diagnostic, PhD studentships etc), with web links, to the Hon. Secretary, who will arrange for them to be posted.

Details: www.bsmm.org

News from other organisations

Dr. David Warnock accepts DBMD leadership



The Division of Bacterial and Mycotic Diseases, Centers for Disease Control And Prevention, Atlanta, is pleased to announce the selection of Dr. David Warnock as the new director of the division. Dr. Warnock joined CDC in 1999 as DBMD's chief of the Mycotic Diseases Branch and became the associate director for Laboratory Science in 2001. He is currently an adjunct professor of Pathology and Laboratory Medicine at the Emory University School of Medicine.

Before joining CDC, Dr. Warnock was head of the Mycology Reference Laboratory, Public Health

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Laboratory Service, United Kingdom, and an honorary Senior Clinical Lecturer in medical mycology at the University of Bristol. Dr. Warnock obtained his PhD from the University of Leeds, and is a Fellow of the Royal College of Pathologists, London. He has published more than 200 journal articles and book chapters on the epidemiology and laboratory diagnosis of fungal infections and on antifungal chemotherapy. He has edited three books and co-authored two others on fungal disease.

The Aspergillus website

The *Aspergillus* website team has nearly concluded a major website upgrade on mycotoxins, with the help of Board Member Jens Frisvad. Understanding mycotoxins and accessing information about them is particularly challenging, as much information is old, in books or not in Medline. In addition, a large number of new *Aspergillus* species (some in full technicolor on the website) and mycotoxins have been described lately.

The *Aspergillus* website is always looking for interesting cases of aspergillosis for inclusion. This makes a relatively straightforward 'publication' for young doctors or scientists. The style is designed to educate the reader about the disease manifestations and how it would be assessed if it were part of a clinical study.

David Denning, November 2005



"Yes it is a deep-seated infection but, on the other hand, it does look rather festive!"

Items for the next BSMM Newsletter

Items for publication in the next BSMM Newsletter should be sent to the Hon. Secretary, Dick Hobson: richard.hobson@leedsth.nhs.uk