

BSMM News

Autumn/winter 2002



BSMM Award Awarded to Derek Sullivan

The BSMM makes an occasional award to an outstanding young scientist who has "made an exceptional contribution in any area of mycopathology". The Prize has been awarded twice, to Neil Gow and Andy Hamilton. In November 2002 the BSMM Executive Committee awarded the Prize to Derek Sullivan, Microbiology Research Unit, Trinity College, Dublin. Derek has written the following, in response to the award:

"I would like to express my sincere gratitude to the membership and the executive committee of the British Society for Medical Mycology for awarding me the BSMM Award for Young Medical Mycologist. This award is certainly a great honour for me, particularly when considering who it has been awarded to before. However, I have to acknowledge that I would not be in a position to receive such an award without the help of many friends and colleagues. In particular, I would like to thank David Coleman, who first introduced me to the field of mycology a little over ten years ago and with whom I have worked closely ever since. Then of course there are my lab mates, past and present, who have actually performed most of the work! These are Gary Moran, Des Bennett, Samantha Donnelly, Sarah Gee, Emmanuelle Pinjon, Claire Vaughan, Cheryl Stokes and Asmaa Al Mosaid.

My first introduction to the BSMM was the



Derek Sullivan
BSMM Award
Recipient

meeting held in Manchester in 1993. At that time I had recently returned to Dublin having completed my PhD in the Department of Microbiology, Newcastle upon Tyne, and in doing so had changed the direction of my research interests from the molecular analysis of virulence in Gram-positive bacteria to *something* called *Candida*. This, in hindsight, was a tremendous leap in the dark as my knowledge of things mycological was embarrassingly limited (largely due to the complete absence of mycology in my undergraduate and postgraduate education). However, David Coleman proved to be a great teacher and before I knew it I was off to Manchester to give my first talk at a meeting. Of course giving a talk at a meeting is always a daunting prospect, however, since Medical Mycology was still largely a mystery to me (some might argue that it still is!) and since this was my first ever presentation of any sort at a

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meeting I was as nervous and insecure as it is possible to be. Fortunately, I have little recollection of my talk, however, I will never forget how welcoming and hospitable the medical mycology community were. Indeed, this is where I first met the likes of Ken Haynes (Imperial College, London) and Neil Gow (University of Aberdeen), who have since become great friends and inspirational collaborators. It is wonderful to see that the BSMM Annual Meeting is still such a welcoming and informal gathering and I sincerely hope that it will continue like this and that it will remain a forum for neophyte mycologists to present their research data in a supportive and appreciative environment.

When I first arrived in Dublin my original project was designed to investigate the presence of viral sequences in *Candida albicans*, however, I soon got sidetracked and became involved in the analysis of the epidemiology of oral candidosis in Irish HIV-infected individuals. This was a particularly interesting time as we became aware quite early on that *Candida* species other than *C. albicans* (in particular *Candida glabrata*) were increasingly being identified in our samples. At the same time we also began to happen upon an increasing number of unusual strains that appeared, on the basis of germ tube- and chlamyospore-production, to be *C. albicans*, but whose DNA failed to hybridise to *C. albicans*-specific DNA fingerprinting probes. To make matters even more confusing carbohydrate assimilation profiles obtained using the API ID32C system suggested that many of these unusual strains were *Candida sake*. When I presented these data at my next BSMM meeting (Cambridge, 1995) it became clear that a number of delegates in the audience had also come across clinical strains of what they thought were *C. sake*. Although, the fact that *C. sake* is unable to grow at 37°C indicated that this identification was erroneous. In fact at this stage we thought that perhaps we were working with an atypical variant of *C. albicans* or *C. stellatoidea*. However, following a thorough phenotypic and genotypic analysis of a number of strains from Ireland, the UK and Australia it became increasingly clear that we were dealing with something more unusual than that. This was indeed confirmed when, with the help of Ken Haynes, we performed a phylogenetic analysis using the large rRNA gene sequence. These data, and the subsequent analysis of a wide range of separate genes, have demonstrated

categorically that the unusual strains we had identified were unmistakably distinct from *C. albicans*. Therefore, this knowledge left us with the obvious conclusion that these organisms represented a novel species, which we decided to name after the city of Dublin, hence *Candida dubliniensis*. This in itself was a major learning experience, requiring the help of our local Classics scholars in deciding the exact spelling of the name and in translating the species description from Latin into English (I'm not sure the Romans were particularly interested in terms such as germ tube and oligonucleotide!).

Since our first description of this species in 1995 many labs around the world have confirmed our conclusions and *C. dubliniensis* has since been identified in a wide range of patients on every continent and in strain collections dating from the 1950s. Epidemiological data from our own laboratory suggest that *C. dubliniensis* is particularly prevalent in the oral cavities of HIV infected individuals but that it is rarely found in the oral cavities of normal healthy individuals. Interestingly, despite the great phenotypic similarities between *C. albicans* and *C. dubliniensis*, the latter is only very rarely associated with systemic disease. Our current research on *C. dubliniensis* is directed towards (i) further examination of its epidemiology, (ii) trying to identify the molecular basis of azole-resistance in *C. dubliniensis* and (iii) the comparative analysis of virulence of *C. albicans* and *C. dubliniensis*, in particular trying to determine what makes *C. albicans* a better colonizer and cause of infections in humans. We hope that these studies will help mycologists to gain a fuller understanding of how *Candida* species cause disease.”

2003 Annual Scientific Meeting

1st-3rd March 2003

All arrangements are now well underway for our forthcoming annual scientific meeting, which is to be held jointly with the British Mycological Society. The organisers look forward to welcoming you all to Manchester for a more extensive meeting than usual, commencing at around 3.00pm on Saturday 1st March and concluding at 4.00pm on Monday 3rd March.

The local organising committee, assembled from members of both societies and headed by David Denning, has put together a stimulating array of speakers as detailed below. All scientific sessions will take place in Whitworth Hall within The University of Manchester.

Equally exciting social activities are organised; a welcome reception will be held on Saturday evening at The Manchester Museum. Enjoy wine and nibbles amongst over a quarter of a million specimens in the Fossil Gallery. On Sunday evening our annual dinner will be held at one of Britain's newest venues - the dramatic Imperial War Museum North - on the banks of the Manchester Ship Canal.

Don't miss the opportunity of singing along with Frank on the piano amidst such objects as a Russian T34 tank, a harrier jump jet, and a Trabant estate car!

Registration forms and offered paper application forms are both included with this newsletter, **register early for significantly discounted** rates. Remember that travel grants are available for this meeting; the deadline for applications is 15th January 2003.

For further information on the meeting, contact:

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ECMM 2002

Budapest, Hungary

Report from Annabelle Ballsdon, BSMM Travel Grant recipient

This year's ECMM meeting was held in the beautiful city of Budapest in Hungary. Despite the advice of colleagues to pack a snorkel and flippers, the weather was hot and the River Danube very well behaved!

The first day of the conference began with a series of lectures from the recipients of special mycology honours, the first being the Drouhet Lecture, given by Prof Dupont regarding the French study of *Histoplasma duboisii*. This was followed by presentation of David Gruby Awards to Prof Torok, who talked about this

eminent scientist's life and work, and also to Prof Muller who presented his own EM studies of *Paracoccidioides* interaction with the human host. Topics including new developments in diagnostic methods, treatment of invasive fungal infections in high-risk patients and special aspects of medical mycology were discussed in the various symposia. A gentle cruise down the Danube concluded the day's events, allowing all the delegates to take in all the magnificent floodlit sights.

Dermatomycology was the subject of the oral presentations given the following day, with the plenary lecture from Prof Simon who gave us an insight into the evolution of anthropophilic behaviour, taking the dermatophyte *Trichophyton rubrum* as his example. Host-fungus interactions were considered in the next symposium with highlights including SEM and TEM observations of invasion and adhesion of *Trichophyton mentagrophytes* in a skin model by Prof Berdicevsky, and Dr Warn's model for the translocation of *Candida* spp. across the gut wall. Posters covering a vast number of the different aspects of medical mycology were displayed in the conference venue, provoking both interest and discussion in delegates.

With a brass band to send us off, a steam train carried delegates to the Gala dinner, which was held at the Hungarian Railway Heritage Park. After a tour of the museum, we were treated to delicious Hungarian cuisine and lively music; much to the enjoyment of all who attended.

The final day of the meeting covered a wide array of different subjects ranging from molecular epidemiology of *Cryptococcus neoformans* to fungal allergy and hospital identification of toxic macrofungi. However, onychomycosis was a predominant subject of many of the sessions. Dr Ellis' presentation focused on dermatophytes as primary pathogens in this type of infection. Treatment failures encountered in this disease were also discussed, with Dr Hanke's lecture emphasising fungus and drug factors, alongside Dr Farkas' who spoke about host factors and diagnosis. Prof McGinnis' lecture entitled 'The Three Clades', which gave the audience a superb visual insight into the different tissue morphologies of the dimorphic fungi, brought proceedings to an end.

The Hungarian Society for Dermatology, are to be congratulated for organising a congress, which was both informative and highly

enjoyable, and for making us all feel so very welcome. I gained a great deal from this meeting as it enabled me to obtain feedback on my own work from those working in my field of interest, and also to learn about the most recent developments in projects that I have been following in the literature.

I am extremely grateful to the BSMM for their support in the form of a travel award, which afforded me opportunity to participate in this meeting.

The BSMM prints reports from Travel Grant recipients in the Newsletter, and is grateful to Kathleen Rafferty, who also submitted a report from the ECMM in Hungary.

Noticeboard

Changes to the Constitution?

At the moment the constitution of the BSMM states that the accounts must be audited annually, but the cost of this is increasing. The committee is therefore looking into changing the status of the society such that we do not have to pay audit fees. Further information will be presented at the AGM.

BSMM Mycology Training Course Postponed

The next BSMM mycology training course was due to be held in Leeds in April 2003. Due to a departmental relocation, this course will be postponed until March/April 2004. Anyone who has applied for details of the next course will be notified of the new arrangements closer to the date. For further details of the course, please contact the BSMM Hon. Secretary, details below.

BSMM Committee Vacancy Meetings Secretary

The three-year term of office of the present Meetings Secretary, Derek Sullivan, comes to an end next year, and an election for a replacement will be held at the Annual General Meeting on 1 March 2003.

“The main role of the Meetings Secretary is to ensure that there is continuity in the organisation of Annual and One Day Meetings. This involves making sure that local organisers of meetings are chosen in due time to organise meetings (usually at least three years in advance of the meeting date). The Meetings Secretary then acts as an advisor to the local organiser and co-ordinates in the selection of dates, venues and requirements. One year in advance of the meeting the Meetings Secretary in close cooperation with the local organiser and the Executive Committee decide on the symposium topics and speakers and the Foundation Lecturer. The Meetings Secretary is then responsible for sending out invitations to the invited speakers. Finally in cooperation with the local organiser the Meetings Secretary draws up the final programme.”

Nominations may be made by the Committee or by any two BSMM members, and should be sent, together with the written consent of the nominee, to the Hon. Secretary, as soon as possible.

BSMM Travel Grants

Travel grants are awarded three times each year. The upcoming deadlines for submission of applications are 15th January and 15 June 2003. Application forms are available from the BSMM website (www.bsmm.org).

Is there anything you want to tell BSMM members? Why not contribute to the Newsletter? There will be three issues a year and members are welcome to send in information for inclusion. The next Newsletter will be Spring 2003 and contributions should be submitted to the Hon. Secretary (Ruth Ashbee, e-mail h.r.ashbee@leeds.ac.uk) by 15 March 2003.

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