

BSMM News

March 2018

www.bsmm.org



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The President's Column



Dear BSMM Members,

Last year's annual meeting in Birmingham proved to be a great success, both scientifically and socially. We had a strongly supported 'Sing Song' with a welcome return of

Frank Odds at the piano. Both Gordon Ramage and Riina Richardson completed their terms of office as Secretary and Treasurer, respectively, and we are very grateful for all their hard work on behalf of BSMM over the past few years.

We welcomed Rebecca Gorton and Caroline Moore as our new Secretary and Treasurer, respectively. We also welcomed Duncan Wilson as a new member of the Executive.

The Executive Committee organised a training session for charity trustees which was held last September and was delivered by Ms Anne Moynihan of the National Council for Voluntary Organisations. This was very informative,

especially on the roles and responsibilities of trustees.



Pictures from the training session for charity trustees from September 2017

At the Executive Committee meeting that followed, we identified a number of action points which included a need to review the Constitution and the potential advantages of BSMM applying to become a Charitable Incorporated Organisation (CIO) which is a relatively new form of legal entity designed for non-profit organisations such as ours. We plan to raise this at the coming Annual General Meeting.

You will be aware that University College London will no longer admit new students to the BSMM MSc/Diploma/Certificate course in Medical Mycology. The plan, for some while, has been to transfer this course to University of Aberdeen, where Donna MacCallum has been leading on discussions with BSMM. After several telephone/conference call discussions we now hope it may be possible to start at least one module of the new MSc in the coming academic year; however, it will first be necessary to draw up an agreement with Aberdeen University to ensure the society's interests are protected. Chris Kibbler has continued to oversee the remaining students on the UCL course and we are enormously grateful to Chris for all his efforts in this regard.

Ruth Ashbee ran another successful Leeds Mycology course on behalf of BSMM which had a good attendance with positive feedback from the course participants. This is the 10th course that Ruth has run and we are enormously

appreciative of all her effort put in to maintaining the course at this high standard.

Because of the changeover in officers, and the number of issues to consider for the society 'going forward', we decided to hold an Executive Committee Away Day which was hosted by Caroline Moore in Manchester last December. This was a valuable opportunity to think 'outside the box' on what are the priority issues for BSMM in the coming years. During that event we held a teleconference with Adilia Warris on the proposed bid to hold the TIMM 2021 Conference in Aberdeen. This bid is based on a partnership between Aberdeen Fungal Group and the society. I am pleased that the bid has been submitted and is under consideration.

I attended the Council meeting of the European Confederation for Medical Mycology during TIMM 2017 in Belgrade. Martin Hoenigl has taken over as President, and Jean Pierre Gagneux is new General Secretary. ECMM continues with its academy programme electing Fellows (FECMM) and designating Excellence Centers. The next meeting of ECMM Council will be during ISHAM in July 2018.

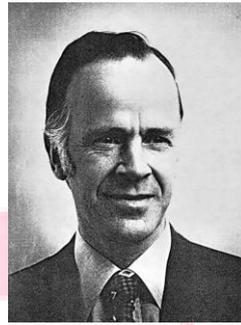
I was saddened to learn of the passing of Donald MacKenzie who was a former President of BSMM, and of ISHAM, and was Director of the Mycology Reference Laboratory. His obituary, co-written by Rod Hay, Frank Odds, and Colin Campbell, is posted on our website and included in the Newsletter.

Finally, I hope you will have noticed the recent dramatic improvements to the website which are largely attributable to the efforts of Margherita Bertuzzi to whom we are very grateful. I hope members will refer to the site increasingly as the amount of information and available resources increases.

I look forward to seeing many of you soon at the 54th BSMM meeting in Bristol.

Tom Rogers, BSMM President

Obituary: Donald MacKenzie 1929-2017



Donald MacKenzie was a distinguished medical mycologist whose long career spanned work in Northern Ireland, New York and London.

Entering the relatively unexplored world of medical mycology as a young postgraduate was a bold decision. At that time in the late 1950s when Donald graduated from Edinburgh University with a PhD on Studies on the biology of pathogenic fungi, mycology was regarded as a remote, arcane branch of medical microbiology. None the less it was a science where he excelled. His first academic job, as a lecturer in medical microbiology in Queens University Belfast in 1959 led him to investigate a large outbreak of scalp ringworm. He developed from the earliest stages a clear understanding that his work on pathogenic fungi was there to benefit patients and in the course of his investigations he developed the brush technique for sampling scalp infections and first pointed out the problems associated with eliminating *Trichophyton tonsurans* from endemic foci of infection. His work was broader than this, encompassing all the mycoses seen in Belfast, information which he reported regularly in the scientific literature. From Belfast Donald went to Cornell University, New York, USA, in 1967, where he extended his interest in medical mycology to a much wider range of deep fungal infections. Here he developed a particular interest in the morphogenesis of *Candida* species during infection.

He returned to the UK in 1972 when he was appointed Director of the Mycology Reference Laboratory (MRL) of the Public Health Laboratory Service (PHLS) located at the London School of Hygiene and Tropical Medicine (LSHTM). Here he combined his scientific interest in investigating and assessing new diagnostic methods, from counterimmunoelectrophoresis and antigen detection to early molecular studies of dermatophyte taxonomy. He developed a wide clinical diagnostic partnership with microbiology laboratories both in the UK and elsewhere. He

had a stream of overseas visitors from Nigeria, Venezuela, France, Iran, Spain, New Zealand, the USA and Sudan – to mention but a few – who spent time in the MRL and were welcomed into his small but highly active diagnostic laboratory. He developed the first mycological collaboration with the World Health Organisation on zoonotic ringworm. He took an almost impish delight in slightly off-centre ideas – fungal viruses and erythrocyte binding of fungal antigens brought a little gleam to his eye. He taught students on the Diploma of Bacteriology and MSc in Medical Microbiology courses in LSHTM and lectured widely in the UK and Europe. Subject to the shifting sands of molecular taxonomy his name and contribution to medical mycology have been commemorated in the nomenclature with *Rhinochlamydia mackenziei*, a cause of cerebral phaeohyphomycosis. Towards the end of his career there were major changes in the organisation of the PHLS and his laboratory moved to Colindale in North London where he continued his work. He made no secret of his belief that the move had distanced him from clinical colleagues and students, both of whom he considered essential for fostering and maintaining scientific and diagnostic progress. He was appointed Visiting Professor at LSHTM in 1978.

To restrict any description of Donald's life to his scientific work would be to pour a half measure. He was tremendous company. His repertoire of stories, tall and otherwise, as well as jokes seemed limitless. All were delivered with a deadpan expression followed in a few minutes by a gentle smile. He was a key member of a large and growing group of international mycologists, becoming the General Secretary (1982–1987) then President (1988–1991) of the International Society of Human and Animal Mycology. Medical Mycology was small enough, yet with the impact of HIV/AIDS and organ transplantation raising the profile of fungal disease, also important enough for this lively international collaboration to play an important role in the changing face of acute medicine. He was also President of the British Society for Medical Mycology (1991–1994), having been

one of its leading lights for many years, participating in the early initiative by the Medical Research Council to strengthen Medical Mycology in the UK.

He was born in Edinburgh and his warmth for his home land remained undiminished throughout his life. A keen athlete, he represented Scotland in the javelin in his early 20s but as his career advanced he developed a keen interest in golf, becoming after retirement a staunch member of the Woburn golf club, where his humour and companionship made him many friends.

Donald leaves a widow, Joyce, who has been a steadfast and sure support throughout his life but even more so in his later years when declining health from Parkinson's Disease restricted his activity; although in characteristic form he made light of this encumbrance. He has three children: Peter, Fiona and Jeremy and 9 grandchildren. He will be greatly missed by his family and his many scientific friends and colleagues. We remember him as an ingenious, hospitable and warm man who made wherever he worked an exciting and challenging place to be.

Prof Roderick Hay, Kings College London, UK
Prof Frank Odds, University of Aberdeen, UK
Dr Colin Campbell, Former Curator of the National Collection of Pathogenic Fungi, UK

BSMM website (www.bsmm.org)

It has been a year since the new website was launched (<http://www.bsmm.org>); we hope that the BSMM members are enjoying it.

Please note that the previous login system for members has been discontinued, but there is still a BSMM members section for accessing the journal *Mycoses*, plus other resources. Login details for accessing the members section will be the same for all members and circulated annually via email. For payment or renewal of the annual membership fee, it is not necessary to have a PayPal account. Before pressing the PayPal button, we invite the members renewing their membership or joining the society to kindly

insert their name in the textbox above the PayPal button, as a reference for the payment.

We welcome feedback and suggestions from the BSMM members, so please get in touch on our Facebook page or email us at info.bsmm@gmail.com. Furthermore, we are looking for some additional images to use, so if you want to showcase your research, please send your images (with a legend) and these will be included on the website.

BSMM 53rd Annual Meeting Picture Gallery

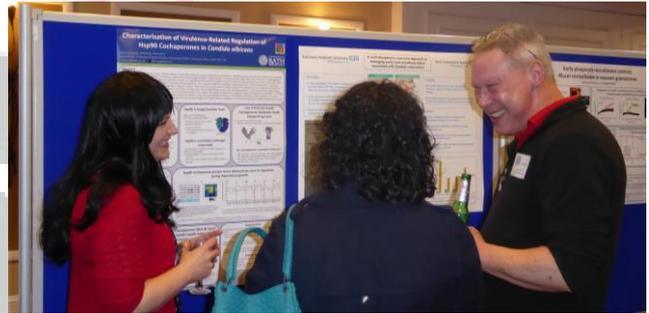
Some pictures of the 53rd Annual meeting held in Birmingham last March.



Poster elevator talk from Mariam Garelnabi



The Dance Sansaar artists teaching some moves to our very keen BSMM members Annual Sing-Along



Poster session

BSMM 54th Annual Scientific Meeting

Meeting Information

All sessions (including posters) will take place in the Great Room, Cadbury House, Frost Hill, Congresbury, Bristol BS49 5AD.



<http://www.cadburyhotelbristol.co.uk>

With many thanks to our generous sponsors. This meeting is Supported by Pfizer Limited, Gilead, MSD, Associates of Cape Cod, OLM diagnostics, Launch Diagnostics, Bio-Rad, SeroSep, BioConnections, PHE culture Collections, Bruker and Elsevier.

Final scientific program Sunday 18th March 2018

From 12.00 Registration, Foyer, Great Room

14.00-16.00 BSMM Executive Committee Meeting, The Master Room (BSMM Executive committee members only)
Session ONE

CHAIR: Prof. Tom Rogers

16.45 Official Welcome

17.00 BSMM Foundation Lecture: **Prof. Tom Patterson** "Letter from America: Clinical Mycology Practice in USA"

18.00 Poster Elevator Session 1

18.00-18.05 **Vanessa Alves da Silva** "The Apt1 flippase is important for *Cryptococcus neoformans* transmigration across endothelial cells"

18.05-18.10 **Dhara Malavia** "Physiological Properties and Drivers of Goliath cell formation in *C. albicans*"

18.10-18.15 **Katherine Pline** "Initiation of cryptococcosis is independent of infective burden at low inocula"

18.15 Poster session 1 (local cheeses, nibbles, refreshments and entertainment)

19.45 Dinner (Hot buffet) and Late Bar

Monday 19th March 2018

Session TWO – Medical Mycology- Emerging fungal pathogens (and what we should call them now)

CHAIR: Dr Richard Barton

9.00 **Keynote Talk: Prof. Sybren de Hoog** "10 reasons why taxonomy currently is a mess"

9.30 **Offered Talk: Helen Heaney** "Comparison of stress resistance in *Candida auris* with other pathogenic *Candida* species"

9.45 **Offered Talk: Herbert Itabangi** "Elucidation and modulation of innate immune responses during mucormycete infections"

10.00 **Invited Talk: Dr Johanna Rhodes** "Genomic epidemiology of *Candida auris* within the United Kingdom"

10.15 **Invited Case Report: Dr Alasdair Bamford** "Intestinal *Basidiobolus* in a child from Dubai"

10.30 Coffee

Session THREE – Medical Mycology- Antifungal drugs and susceptibilities

CHAIR: Dr Elizabeth Johnson

10.50 **Keynote 2: Prof. Maiken Arendrup** "Antifungal susceptibility testing: why, when and how"

11.20 **Invited Talk 2: Ali Abdolrasouli** "Occurrence of triazole resistance in clinical isolates of human fungal pathogen *Aspergillus fumigatus* in Northwest London, United Kingdom"

11.35 **Pfizer Lecture: Dr. Paschalis Vergidis** Title to be confirmed

12.05 **Invited Case Report: Dr. Rajesh Alajangi** "Unresectable invasive mucormycosis of the lungs, treated with Isavuconazole"

12.20 **Gilead Fellows Talk 1: Dr. Laura Ferreras-Antolin** "Antifungal Prescription in Children and Neonates: a multicentre point prevalence study (PASOAP)"

12.35 **Gilead Fellows Talk 2: Dr. Anand Shah** "Determining the impact of azole resistant *Aspergillus fumigatus* on outcome in cystic fibrosis"

12.50 Lunch

Session FOUR – Medical Mycology continued - Diagnostic approaches

CHAIR: Dr. Lewis White

13.45 **Keynote 3: Prof. Katrien Lagrou** "An end to the empirical antifungal era – an update on novel diagnostic strategies"

14.15 Keynote 4: Prof. Russell Lewis “Improved Radiological Imaging of Mould Infections: The Cornerstone of Antifungal and Diagnostic Stewardship in Haematology Units”

14.45 Gilead fellows talk 3: Dr Alida Fe Talento “Moving towards a diagnostic driven approach in the management of invasive candidiasis in critical care”

15.00 Invited Talk 3: Prof. Matthew Burton “Fungal Keratitis: Update on Epidemiology, Diagnosis and Management”

15.15 Coffee

Session FIVE –An update on Whole Genome Sequencing
CHAIR: Prof. Robin May

15.40 Keynote 5: Prof. Matt Fisher “What has fungal whole genome sequencing ever done for us?”

16.10 Offered Talk 4: Dr. Sara Gago “Fungal colonisation of the respiratory airways is controlled by multiple human genetic factors”

16.25 Offered talk 5: Dr. Selinda Orr “Differential susceptibility of Dectin-1 isoforms to functional inactivation by neutrophil and fungal proteases”

16.40 Poster Elevator Session 2 (4 x 5 mins)

16.40-16.45 Daniel Larcombe “Glucose enhanced oxidative stress resistance as an example of adaptive prediction in *Candida albicans*”

16.45-16.50 Aaron Crawford “Adaptation to the host micronutrient environment: *Candida albicans* Zrc1 and its role in zincosomal zinc buffering”

16.50-16.55 Ryan Kean “Transcriptional profiling of *Candida auris* biofilms reveals antifungal resistance mechanisms

16.55-17.00 Debra DeLoach “Does Differential Coregulation of Hsp90 Cochaperones contribute to Morphogenesis in *Candida albicans*?”

17.00 AGM (All BSMM members welcome)

17.45 Poster Session 2 (with refreshments from 18.45)

19.30 BSMM Annual Gala Dinner

Sing-Song and Late Bar

Tuesday 20th March 2018

Session SIX – Fungal biology 1

CHAIR: Prof. Julian Naglik

9.30 Keynote 6: Dr. Mike Bromley “The antifungal drug development pipeline”

10.00 GILEAD LECTURE: Prof. Neil Gow “A journey through outer space: the viscoelastic properties of the fungal cell wall allow traffic of AmBisome as intact liposome vesicles”

10.30 Offered Talk 5: Dr. Jemima Ho “Candidalysin signals through the epidermal growth factor receptor (EGFR)”

10.45 Coffee

Session SEVEN – Fungal biology 2

CHAIR: Prof. Alistair Brown

11.15 Keynote 7: Prof. Laurence Delhaes “The Respiratory Microbiome in CF patients”

11.45 Offered Talk 6: Dr. Ernesto Cota “An aromatic cage in *Candida* Als adhesins enhances selectivity for host cell ligands”

12.00 Offered Talk 7: Dr. Elizabeth Ballou “The *Cryptococcus neoformans* Titan cell is an inducible and regulated morphotype underlying pathogenesis”

12.15 Offered Talk 8: Dr. Alessandra da Silva Dantas “The chitin attenuator: the Ca²⁺/calcineurin pathway maintains the viability of *Candida albicans* cells with supra-normal chitin levels”

12.30 Offered Talk 9: Dr. Duncan Wilson “Intracellular micronutrient mobilisation fuels *Candida albicans* pathogenicity”

12.45 Close

12.50-14.00 Lunch and departure

OR:

14.00 Wellcome Trust Strategic Award for Medical Mycology and Fungal Immunology Symposium

Immediately following the BSMM meeting, the Wellcome Trust Strategic Award for Medical Mycology and Fungal Immunology will be holding a Symposium which will be an afternoon of talks from WTSA post-holders in the same venue.

PLEASE NOTE THAT THIS SYMPOSIUM IS NOW FULLY SUBSCRIBED.

BSMM Travel Grant Applications

Travel Grant applications are reviewed every three months for the coming year. The criteria for eligibility and purpose of the award can be found on the BSMM website (<http://www.bsmm.org/front/grants-funding/>) along with the application form.

Upcoming deadlines: 30/04/2018, 31/07/2018, 31/10/2018.

Travel grant reports from grant recipient

5th Eurobiofilms conference, Amsterdam, The Netherlands, 19th - 22nd September 2017



I am extremely grateful to BSMM for awarding me a travel grant to attend the 5th Eurobiofilms conference held in the city of Amsterdam, the Netherlands between the 19th and 22nd of September 2017. During the conference, I presented a poster entitled ‘*Candida auris* biofilms: implications of antimicrobial therapy’. My poster was well received and allowed me to discuss and gain valuable insight and comments from others within the biofilm field.

The scientific programme spanned three days consisting of parallel oral sessions and poster presentations. Professor Phil Marsh opened the conference with a lecture on oral biofilms and ecological plaque hypothesis. Kim Lewis then delivered the first key note lecture the following morning on his pioneering work on the persister

cell phenomenon. Several sessions then followed including biofilms in medical devices, the biofilm matrix, evolution and adaptation in biofilms and social interactions in mixed species biofilms. Despite being a predominantly bacteria-based meeting, there were several talks and posters highlighting research from the fungal field including work presented from Bastiann Krom, Isle Jacobsen and Jose Lopez-Ribots’ lab group on the interaction between *Candida albicans* and different bacteria within polymicrobial biofilms.



I would like to thank to organising committee for putting on a wonderful conference programme filled with excellent speakers. I look forward to welcoming everyone to Glasgow when we host the Eurobiofilms 2019 meeting!

Ryan Kean

27th European Congress of Clinical Microbiology and Infectious Diseases, Vienna, Austria, 22nd - 25th April 2017



My submitted abstract was chosen for a 10-minute oral presentation at the European Congress of Clinical Microbiology and Infectious Diseases in Vienna, Austria which ran from 22nd April to 25th April 2017. The title of my talk was “Using a novel three dimensional inter kingdom wound biofilm model to assess antimicrobial treatments” in which I showed the creation of the novel *in vitro* model and how it was designed using microbiome data which we had previously published (Smith *et al.*, 2016). I also briefly covered the work done with antiseptic wound washes which showed the novel interkingdom model was significantly different from standard models (Townsend *et al.*, 2016), but focussed on new unpublished data

which looks at the impact of antimicrobials on the model.

I enjoyed seeing other groups' work on biofilms and the different techniques used to analyse the effects of treatments. I was especially interested in the imaging techniques used, such as atomic force microscopy which gave detailed images of punctured cells post-treatment. The importance of persister cells was highlighted in many talks, as well as a keynote lecture by Dr Sophie Helaine from Imperial College London. Her work looks at how persisters are formed and reactivated *in vitro* and *in vivo*. While this focussed on *Salmonella*, it was also shown to apply to *Mycobacterium*, so it would seem it has wider relevance. I'm hoping this can be applied to my work on chronic wound biofilms, where persisters are thought to be highly prevalent.

I also had the opportunity to talk to volunteers from Doctors without Borders in the exhibition hall. This is a charity that I wish to volunteer for in the future, applying my microbiology and mycology skills to help in the medical treatment of individuals living in war-torn regions and developing countries.

SMITH, K., COLLIER, A., TOWNSEND, E. M., O'DONNELL, L. E., BAL, A. M., BUTCHER, J., MACKAY, W. G., RAMAGE, G. & WILLIAMS, C. 2016. One step closer to understanding the role of bacteria in diabetic foot ulcers: characterising the microbiome of ulcers. *BMC microbiology*, 16, 1.

TOWNSEND, E. M., SHERRY, L., RAJENDRAN, R., HANSOM, D., BUTCHER, J., MACKAY, W. G., WILLIAMS, C. & RAMAGE, G. 2016. Development and characterisation of a novel three-dimensional inter-kingdom wound biofilm model. *Biofouling*, 32, 1259-1270.

Eleanor Townsend

Advanced Lecture Course on Human Fungal Pathogens (HFP 2017), Le Colle sur Loup, France, 13th – 19th May 2017

I would like to thank the BSMM for awarding me a travel grant to help financially support my attendance at the Advanced Lecture Course on Human Fungal Pathogens (HFP 2017) which was

held in Le Colle sur Loup in France from 13- 19 May 2017.

The scientific program kicked off with a fantastic keynote lecture by Al Brown on “The complexity of host inputs that affect fungal outputs and hence virulence” followed by sessions on genomics, evolution and epidemiology, host-pathogen interactions, molecular and cell biology, novel antifungal strategies and the mycobiome in health and disease.

During the conference I presented a poster on the work I have been doing on the RNA-guided CRISPR-Cas9 endonuclease system in *Candida albicans*, a gene editing technology that has revolutionized genome editing in eukaryotes.

During the poster session I exchanged experiences and I gained valuable inputs and suggestions from others who are using the CRISPR-Cas9 technology in various fungal species. There were very inspiring discussions about the different approaches and how other groups apply this new state of the art technology depending on their interests within the fungal genetics field.

Overall, this conference provided fantastic academic sessions on the current and most recent advancements conducted on fungal pathogens implemented by social network opportunities in a relaxed atmosphere to meet experts within the mycology field from different parts of the world.

I very much look forward to the next HFP conference in 2019 and would like to thank again the BSMM for their support.

Katja Schaefer

Advanced Lecture Course on Human Fungal Pathogens (HFP 2017), Le Colle sur Loup, France, 13th – 19th May 2017

I would like to thank the BSMM for awarding me a generous travel grant allowing me to attend the Human fungal pathogens Advanced Lecture Course in La Colle sur Loup where I presented a

poster titled “Intracellular zinc transport and dynamics in *C. albicans*”. The scientific program for the conference contained a great mix of prominent figures in the fungal and immunology fields allowing a well-rounded insight into the current progress in both areas and human fungal pathogenic research as a whole. Particular highlights for me were talks from Professor Judith Berman who proposed important new definitions regarding drug resistance, tolerance and perseverance. Also other favourites were Professor Michael Lorenz’s fantastic talk regarding *Candida*-bacterial interaction, Dr Sarah Gaffen’s further insights into IL-17 and a brilliant talk from Professor Kirsten Nielsen about the “dark side” of *Cryptococcus* titan cells. Alongside the big names were some high calibre elevator talks from the next generation of researchers with particular mention of Robert Tams prize winning elevator talk.

The Human Fungal Pathogens conference is renowned throughout the community and has reason to be so. The conference timetable is very well balanced and the localised nature of the resort provides a great environment for networking (helped along by the great food, wine and the beautiful weather). La Colle-Sur-Loup is a beautiful location in the south of France, close to Nice, Monte Carlo and the beautiful medieval town of Saint Paul de Vence all of which were locations available to visit on the organised day trips. I hope I have the good fortune to attend again and would like to thank the organisers for such a wonderful conference and again thank the BSMM for their support.

Aaron Crawford

Advanced Lecture Course on Human Fungal Pathogens (HFP 2017), Le Colle sur Loup, France, 13th – 19th May 2017

I am very thankful to the BSMM for awarding me a travel grant that supported my attendance at the Human Fungal Pathogen (HFP-2017) conference. This conference was held in Nice, France from 13th -19th May 2017.

During the conference I presented a poster on my project discussing the effects of nutritional immunity on morphology and pathogenicity of human fungal pathogen *Candida albicans*. Poster sessions were organised to encourage discussions with fellow scientists and experts in the field of mycology. I was able to interact with people working on topics relevant to my project. These discussions were very helpful as they provided new ideas and suggestions for my PhD project. The conference offered talks on a wide range of topics including interactions between the human immune system and fungal pathogens, fungal cell biology, drug discovery and more. The organisers included discussion sessions to encourage interactions and meet new people. I was able to chat with various scientists working on topics that interest me.

I am glad to have received this opportunity to communicate and network with experts in the field of medical mycology. The conference expanded my knowledge and also provided a direction for my career. I thank the BSMM for supporting my trip to this conference.

Dhara Malavia

8th Advances Against Aspergillosis, Lisbon, Portugal, 1st – 3rd February 2018

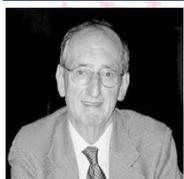
The 8th Advances Against Aspergillosis meeting in Lisbon was an invaluable experience, and I left Portugal with countless ideas and a reinvigorated motivation for my own research. As a PhD student, this was the first conference I attended without other members of my university and found it to be a welcoming environment. I was able to meet many senior researchers and develop friendships with other early career scientists. AAA2018 provided the only dedicated mucormycosis session of any recent conferences, as far as I am aware. As I work on mucormycetes, this was an important opportunity to learn about the most current, novel research in the area, and the mucormycosis session was a highlight for me. I was able to meet the scientists at the forefront of mucormycosis community, and receive input on my own project. As this is a small community, these opportunities are scarce

and valuable. I also found the aspergillosis sessions to be incredibly interesting and I was able to take many ideas from the aspergillus community and apply them to my research. Many presentations focused on these diseases in a clinical setting, and I believe conferences which bring together clinicians and bench scientists are important, as we can gain a more well-rounded understanding of infectious diseases. This meeting did a fantastic job of becoming a platform for these collaborations.

I'd like to thank the BSMM for providing me with a travel grant, without which I wouldn't have been able to attend this meeting.

Courtney Kousser

Glyn Evans Award



The Society recognized the huge contribution Prof Glyn Evans made to the BSMM and mycology by providing an award to members to provide financial support to visit another laboratory for a period of training, usually to learn a specific technique. The Award contributes towards the costs of travel, accommodation and directly related expenses.

There are no set application deadlines for this award and applications may be submitted for consideration at any time. An award will not usually be made if the applicant has received a previous award (Travel Grant or Glyn Evans Award) less than three years before the application date.

More information at:

<http://www.bsmm.org/front/grants-funding/>

Glyn Evans Award - Recipient reports

Report from Alireza Abdolrasouli

We previously sequenced the whole genome of 24 clinical and environmental azole-resistant and susceptible isolates of *Aspergillus fumigatus* at the Imperial College London. We demonstrated that environmentally driven TR34/L98H was present among UK azole-resistant *A. fumigatus*

isolated from cystic fibrosis patients. Moreover, our population genomic analysis delineated that *A. fumigatus* was panmictic, with as much genetic diversity found within UK as is found between UK and the Netherlands (Abdolrasouli & Rhodes, *et al.*, mBio 2015).

Comparative phenotypic characterization revealed extensive heterogeneity among isolates in ambient pH tolerance and fungal cell wall homeostasis independent of azole-resistance. In addition, we observed marked decrease in germination rate, radial and kinetic growth in a subset of isolates under normoxic condition (Abdolrasouli, unpublished data). The preliminary cell wall integrity screening was carried out using different concentrations of a cell wall perturbing agent, Congo Red, incorporated into *Aspergillus* Minimal Medium as previously described (Ram & Klis, Nature Prot 2006). Isolates displayed distinct hypersensitive, sensitive and resistant phenotypes. We hypothesized that diversity in growth capacity under normal laboratory conditions correlates with cell wall changes. Therefore, I aimed to compare the quantity of glucan, mannan, and chitin in the cell wall of a subset of 10 previously sequenced *A. fumigatus* isolates.

Cell wall composition analysis was carried out in Professor Neil Gow's laboratory, Aberdeen Fungal Group (AFG), MRC Centre of Medical Mycology, University of Aberdeen. The whole experimental work was designed and supervised by two post-doctoral fellows Dr Kathy Lee and Dr Louise Walker, where Mr Iain Cunningham provided technical support for all experiments. Methods originally set up in AFG for the cell wall composition analysis of *Candida albicans* were adapted to grow and extract the cell wall of *A. fumigatus* from liquid cultures from three biological replicates. In addition, three different cell wall extraction methods were compared during my visit. For quantification of glucan, mannan, and chitin, cell walls were acid hydrolysed. The hydrolysed samples were then analysed by HPLC methodology. The total concentration of each cell wall component was

determined by calibration from the standard curves of different monomers.

During my two weeks visit to AFG, I also had the opportunity to observe and learn those techniques involved in transition electron microscopy for fungal cell wall studies.

Finally, I would like to express my sincere gratitude to the Executive Committee of the British Society of Medical Mycology for the prestigious Glynn Evans Award which supported my educational visit to the AFG. Moreover, I am grateful to Professor Neil Gow and his colleagues for hosting me in his laboratory and providing the excellent opportunity to learn about fungal cell wall analysis.

Alireza Abdolrasouli

Subscription changes & access to *Mycoses* online

The annual membership subscription of £25 also includes online access to the journal *Mycoses*. Please remember to pay your membership fees of £25 (<http://www.bsmm.org>) for 2018 using the 'Buy now' PayPal link that will allow you to pay by debit or credit card. Please note that you do not need a PayPal account in order to complete payment or to log in as a BSMM member for payment.

There is also an option to set up a standing order yourself by internet banking. If you do want to set up a standing order please contact our Treasurer Dr Caroline Moore (treasurer.bsmm@gmail.com), who will provide the banking details.

BSMM Junior



BSMM Junior is a resource for junior medical mycologists to allow scientific discussion and communication. We have set up BSMM Junior Twitter and Facebook pages to promote the BSMM to junior members of the society and to encourage interaction between young medical mycologists. The current BSMM Junior

representative is Dr Margherita Bertuzzi from the Manchester Fungal Infection group (MFIG).

Please connect with BSMM Junior on Twitter and Facebook using the links below:



<https://www.facebook.com/BSMM.Junior>



https://twitter.com/BSMM_Junior

We would like you the members to provide as much new material as possible to help ensure our society is dynamic, impactful and informative to the medical mycology community. Therefore, if you have material you wish to share about your public engagement, photo's from meetings, or any other relevant material then send it on to any one of the committee members.

Executive Committee Members

Current posts and tenures:

Thomas Rogers– President (2016-2019)
Rebecca Gorton– Secretary (2017-2021)
Caroline Moore– Treasurer (2017-2022)
Lewis White – Meetings Secretary (2015-2018)
Margherita Bertuzzi – Website and junior rep (2016-2019)
Ruth Ashbee – executive member (2015-2018)
Silke Schelenz – executive member (2016-2019)
Duncan Wilson – executive member (2017-2020)
Andy Borman - meetings organiser (2016-2018)
Simon Johnston - meetings organiser (2017-2019)

Executive Committee Membership:

Dr Lewis White and Dr Ruth Ashbee have served their terms as meetings secretary and executive committee member respectively. Requests for nominations were sent out in November 2017. No new nominations were received for these posts from the membership. A nomination for Dr Lewis White to be re-elected as meetings secretary has been received and will be put out to vote by the membership at the AGM. Dr Ruth Ashbee will step down from her current role as an executive committee member.

BSMM Course in Diagnostic Medical Mycology

The next BSMM course in Diagnostic Medical Mycology will take place in 2019 and will feature basic mycology and deal with the clinical features, epidemiology, pathogenesis and laboratory diagnosis of superficial, subcutaneous and systemic mycoses. This will include the characteristics and identification of dermatophytes and yeasts, serological tests and laboratory monitoring of antifungal therapy.

For registration information please contact Dr Ruth Ashbee (h.r.ashbee@leeds.ac.uk).

BSMM membership

The society has 299 members.

The current BSMM membership is comprised of 259 UK members and 40 overseas members.

In addition to the 299 members a further 39 members have been contacted regarding their membership status as payments have not been received for 3 concurrent years.

Within the BSMM membership we have 37 honorary members and 3 life members.

The Society welcomes nominations for life and honorary membership. Life and honorary members have all the privileges of ordinary membership but are exempt from paying any annual subscription charges. The Constitution states that “Members of at least 10 years standing, who have retired from active practice, shall be eligible to become life members. Members who have made a notable contribution to medical or veterinary mycology and/or to the work of the Society, shall be eligible for nomination to honorary membership.”

A member can be nominated for either life or honorary membership by the Committee or by two members, as long as the nomination is received by the General Secretary two months before the AGM. The award of life or honorary membership is then voted upon at the AGM.

New members:

The Society would like to welcome its 24 new members since the last AGM: Nada Alghamdi (University of Leeds), Khaled Alobaid (Kuwait), Matthis Backx (Cardiff), Rhys Brown (Kings College, London), Joanne Calley (Aberdeen), Stella Christou (Aberdeen), Alessandra da Silva Dantas (Aberdeen), Ruth Dickinson (London), Anna Goodman (London), Sara Gago (Manchester), Olivia Hepworth (London), Helen Heany (Aberdeen), Harriet Knafler (Sheffield), Catherine Mark (Aberdeen), Bethany McCann (Manchester), Christopher Nile (Glasgow), Christina Nikolakopoulou (Aberdeen), Marie O’Sullivan (Dublin), Selinda Orr (Cardiff), Bryn Short (Glasgow), Findra Setianingrum (Manchester), Aiysha Thompson (Cardiff), Andrew Ward (London), Emmanuel Wey (London).

Items for the next BSMM Newsletter

If you have any ideas, reviewed a mycology book, or come across anything that would be of interest to our community, and would be suitable for publication in the BSMM Newsletter please email Rebecca and Margherita at info.bsmm@gmail.com.

Forthcoming meetings

[28th ECCMID](#)

Madrid, Spain, April 21st – 24th 2018

[Fungal Pathogens Genomics](#)

Wellcome Genome Campus, Hinxton, Cambridge, UK, May 13th-18th, 2018.

[20th ISHAM Congress](#)

Amsterdam, June 30th – July 4th 2018.

[Gordon Research Seminars: Cellular and Molecular Fungal Biology](#)

Holderness, NH, US, June 16th-17th, 2018

[Gordon Research Conference: Cellular and Molecular Fungal Biology](#)

Holderness, NH, US, June 17th – 22nd, 2018

[Molecular Mycology: Current Approaches to Fungal Pathogenesis](#)

Woods Hole, Massachusetts, USA
July 30th – August 15th, 2018.

[52nd Annual Scientific Conference of the German Mycological Society \(DMyG\)](#)

Innsbruck, Austria, September 6th – 8th 2018.

[Gordon Research Seminars: Immunology of Fungal Infections](#)

Galveston, TX, US, January 12th – 13th, 2019.

[Gordon Research Conference: Immunology of Fungal Infections](#)

Galveston, TX, US, January 13th – 18th, 2019.

30th Fungal Genetics Conference
Asilomar Conference Center, Pacific Grove,
California, USA, March 12th-17th, 2019.

[9th Trends in Medical Mycology](#)

Nice, France, October 11th-14th 2019.

**Minutes from the 53rd AGM Birmingham
March 2017**

1. Minutes from Annual General Meeting held on the 21st of March 2016, in the Grand Hotel, Malahide, Dublin, Ireland

The minutes were approved after Neil Gow proposed, and Rosemary Barnes seconded the minutes.

2. Matters arising

All items were dealt with under agenda.

3. President's report (Tom Rogers)

TR thanked Rosemary Barnes for her outgoing role as President. He also thanked Gordon Ramage and Riina Richardson for their roles as Secretary and Treasurer respectively and also thanked Megan Lenardon for her membership of the executive. TR congratulated Neil Gow on his election as Fellow of the Royal Society. NG briefly explained what he intended to do with the 'Killer Fungus' exhibition in 2017, with the

prospect of it being part of the Manchester Science Exhibition.

4. Treasurer's report (Riina Richardson)

RR introduced the report:

"This is the financial statement for the British Society for Medical Mycology for the year ending 31st December 2016. The Independent Examiner's Report to the Trustees of the British Society for Medical Mycology is on Page 1. This report concludes that accounting records are in accordance with accounts regulations, and that no unusual items or disclosures in the accounts seeking explanation came to the examiner's attention. The accounts are broken down on the five-page report. Page 1 of the accounts is a summary of the income and expenditure and page 2 shows the balance sheet for the BSMM as of 31st December 2016. The details are found in the Notes on pages 3-5 of the accounts. Where available, the figures for 2015 are shown on the far right for comparison. The figures shown in the accounts do not include VAT.

The income for 2016 (page 1) consisted of subscriptions amounting to £2,603 (£8,695 in 2015), surplus of the Leeds course £8,551 (£5,384), and bank interest of £205 (£50). In addition, £3,591 of sponsorship for the 2015 annual meeting was received only in 2016. The 2016 52nd BSMM Annual meeting held in Dublin jointly with the Irish Fungal Society made £3,591 profit for the BSMM. The detailed accounts for the meetings can be seen in note 4 on page 4 of the accounts. The 2015 Annual meeting was very successful – thanks to IFS, and especially to Gary Moran for organising such a successful meeting, and also thanks to the Meetings Secretary, Lewis White, for the meeting programme. There was no UCL course profit share in 2016 (£25,789 in 2015).

Therefore, total income of the BSMM for 2016 was £14,950 (£32,164 in 2015).

Expenses of the Society are summarised in the lower half of page 1. Eleven (8 in 2015) travel grants were awarded in 2016 amounting to £5,124 (£1,512 in 2015). The BSMM awarded one (one in 2015) Glyn Evans award amounting to £1,096 (£394) and one bursary for a student on the UCL MSc course amounting to £1,139

(£263). There were no expenses in 2016 for the UK Clinical Mycology Network (£1,075 in 2015) and no speaker expenses for jointly organised meetings (£661). The Management and Administration costs were £11,875 (£2,118 in 2015). Of this, £10,000 consisted of support given to the Killer Fungus exhibit at the Royal Society Summer Exhibition in London. The detailed costs are shown in Note 2 on page 3 of the accounts.

The total expenses for the BSMM for 2016 amounted to £18,138 (£6,023 in 2015).

The net incoming resources for 2016 were £-3,188 (£26,141 in 2015). The balance sheet of the Society is shown on page 2 of the accounts and details the various bank accounts held by the BSMM. As you can see, the British Society for Medical Mycology finished 2016 with a net worth of £157,141 (£160,329 in 2015).

I would like to finish my report by extending my thanks to Mr Keith Thomson of Gardner and Partners Accountants in Aberdeen, who has been an extremely helpful and understanding accountant for the BSMM over the last 11 years.”

Manchester 17th March 2017

Dr Riina Richardson

Honorary Treasurer for the British Society for Medical Mycology

Approval of report proposed by Robin May and seconded by Lewis White

5. Secretary's report (Gordon Ramage)

GR gave the following report:

“This are the last few days of my tenure of the BSMM honorary secretary role. The position has been a lot more involved than anticipated, and while I have accomplished some things whilst supporting Chris Kibbler's outgoing term, Rosemary Barnes' full term, and Tom Rogers' initial term, there have been some challenging elements. We have managed to streamline the membership, utilised a mailing site to enhance communication, though the website has always been an issue. Thanks to Louise Walker who kick-started our social media, and with Margherita Bertuzzi coming in to develop a new

website, the BSMM have certainly moved forward. We now need the membership to engage with this and use the website as a dynamic system.

One point of reflection of my duties is that most of my time has been spent dealing with membership enquiries, payment of membership dues and related elements. This has diminished the ability to deal with more general and higher level responsibilities. There may be a case that a membership secretary role be created to enable the honorary secretary to deal with other issues.

This year we have the following statistics to report.

Membership numbers:

The Society has a total of 271 normal members, and an additional 35 honorary members and 3 life members. To date only 106 eligible members have paid (165 unpaid). In 2016 there were 122 unpaid subscriptions. We need to ensure all eligible members continue to pay their membership fees in order to support our travel grants and other professional membership benefits.

In terms of demographics, the society is made of the following country- based membership:

England 162 (53%)

Scotland 84 (27%)

Wales 9 (3%)

N & R Ireland 10 (3%)

Europe 26 (8%)

Rest of World 18 (6%)

Travel grants:

A total of £2350.00 has been awarded to eligible members for travel to conferences in the UK, Europe and beyond since the last BSMM annual meeting.

Amit Adlakha - £500.00 towards travel and registration to the Transplantation Society International Congress 2016, Hong Kong, 19th – 23rd August 2016.

Joy Icheoku - £500.00 towards the costs of travel and registration Gordon Research Conference/Seminar: Immunology of Fungal infections. January 14th – 20th 2017, Galveston Texas.

Mariam Garelinabi - £500.00 towards the costs of travel and registration Gordon Research Conference/Seminar: Immunology of Fungal infections. January 14th – 20th 2017, Galveston Texas.

Katja Schaefer - £350.00 towards the costs of travel and registration Advanced Lecture Course of Human Fungal Pathogens (HFP 2017) in Le Colle sur Loup, France. 13th -19th May 2017.

Leanne Smith - £500.00 towards the costs of travel and registration 10th International conference on Cryptococcus and Cryptococcosis (ICCC-10), Foz do Iguacu, Brazil. 26th - 30th March 2017.

Glyn Evans award:

Maria Fernanda Alonso - £800 to visit and attend the “Molecular Mycology: Current Approaches to Fungal Pathogenesis” training course taking place in the Marine Biological Laboratory in Woods Hole, Massachusetts (USA) from 12th - 28th June, 2016.

Finally, I would like thank all the members of the Executive, past and present, who have supported me in this role, and I wish them and my successors every success in the future. The amount of their time devoted to these roles in addition to their real jobs is not trivial. I also thank the membership for their patience with me during my dealing with their queries.”

Approval of report proposed by Donna MacCallum and seconded by Julian Naglik

6. Working parties

Fungal Serology – GR reported that Richard Barton was unable to commit to taking this forward. Following discussions within the Executive, it was agreed that Malcolm Richardson would be approached as a potential lead to drive forward the group, and work with Richard Barton.

Mycology Teaching – Ruth Ashbee reported that she had tried to engage with Universities to try and establish data on the level of mycology teaching.

7. UK Clinical Mycology Network (Silke Schelenz)

SS reported there are 19 members in UKCMN. There was a very good meeting at St Bartholomew’s in 2015, though funding was taken away in 2016. The network is also represented at the Standards meeting, and while RR and SS review these, SS asked membership for volunteers to help to support the review process to accurately reporting back to the SMI committees. RR highlighted the importance of engagement.

SS had reported at the Executive that a small sub-group of mycologists and medical microbiologists of the ESPAUR group have devised an online questionnaire and are keen to send this survey out in collaboration with the BSMM. The Executive had supported this England-wide survey as a joint BSMM/ESPAUR venture.

Malcolm Richardson enquired into who updated the website given that Scotland, Wales and N. Ireland are not represented. There were concerns it was not updated routinely.

David Denning stated that we do not have a true estimate of fungal burden in the UK, and suggested that BSMM working groups should engage more aggressively to try and get accurate information.

8. BSMM MSc/Diploma/Certificate Course

TR read the report from Chris Kibbler before handing over to Donna MacCallum.

Report from Professor Chris Kibbler

“The Society’s Course is now in its thirteenth year and has enrolled students from five continents. There are currently 13 students remaining in the programme. UCL closed the course to new students in agreement with the BSMM in 2015, as the student numbers recruited did not comply with the university’s target for financially viable courses. UCL has undertaken to support the remaining students through the remainder of their studies and I, as Programme Director, will continue to supervise this process. The most recently recruited students potentially

have another two years to complete the course after this current academic year.

The Board of Examiners were pleased to award one MSc distinction, one MSc pass, one PG Diploma distinction and one Certificate distinction this last academic year. The external examiners again commented on the high standard of the students, concluding that marking was fair and transparent, and the course was well taught and balanced. They had no recommendations for changing any of the assessments or course content.

Despite the lack of recruitment last year, the Society's 50% profit-share for 2015-16 was 10870.14.

No bursaries were awarded last year.

The Society is currently negotiating with Aberdeen University to transfer the course there, under the auspices of the Aberdeen Fungal Group. Donna MacCallum will update the Society further on progress with this.

As ever, this course could not run without the commitment of many members of the Society and I would again like to thank the module tutors, supervisors and mentors, who give freely of their time to teach, assess, supervise and support our students. I hope that many of these will continue to support the course in its new home."

Donna MacCallum reported that she has the course material from Chris Kibbler and that because of restructuring in Aberdeen there have been delays in progressing the plans for transfer to Aberdeen. Things are now in the process of moving forward and meetings will be arranged in Aberdeen to progress the plan.

Rosemary Barnes asked about a mycology module that is still offered by UCL, and whether there will still be profit share for BSMM. Rebecca Gorton will explore what is happening with this.

9. Leeds course (Ruth Ashbee)

RA reported that this is the 10th course she has run. The course continues to be popular although the number of students on the course has reduced compared to earlier years. TR thanked RA for her continuing hard work in organising this course.

10. Annual Scientific meetings

Birmingham 2017 (Robin May)

TR thanked RM and his staff for organising this successful meeting. RM reported 111 registrants. Sponsorship was from 10 full sponsors (£27k in total). It has allowed a record number of invited speakers. RM also thanked the hotel for their support and flexibility, and thanked Jude Williams who has single handedly dealt with the logistics.

Bristol 2018 (Andy Borman)

AB proposed 18th to 20th March in Bristol (Location, Cadbury House) – 15 miles south of Bristol (20 mins from Bristol airport). Looking for 120 participants. The hotel and grounds allow a number of diverse activities. Based on the prices and expected participants AB indicated that there would be a similar level of costs to those for 2017.

Sheffield 2019 (Simon Johnson)

Expressions of interests from Imperial College and Liverpool for 2020.

11. Website update (Margherita Bertuzzi)

MB presented slides to introduce the new website. There is now an image gallery and the membership are encouraged to engage and create a dynamic website. MB asked members to provide images. We also have social network interactivity and new and archive newsletters. There is also capacity for sending correspondence which MB will moderate. MB also highlighted the ease for paying membership and meeting fees, and the new single login capacity. MB asked for suggestions to improve the website 'going forward'. The Society thanked Graham Atherton for all his help in creating and building the website. RR asked that

we should use members section where appropriate. Rosemary Barnes asked that guidelines, etc, should be made visible and therefore more accessible on the website.

meeting of ECMM in Vienna in April during ECCMID. It was agreed that ECMM needs to be an AGM agenda item.

Meeting closed at 5.25pm.

12. Executive committee elections

TR announced that there would be elections to replace outgoing members of the executive (Riina Richardson [treasurer], Gordon Ramage [secretary], Megan Lenardon [committee])

Treasurer - GR reported that there was a nomination for Caroline Moore, this was proposed by Rosemary Barnes and seconded by Donna MacCallum

Secretary - GR reported that there was a nomination for Rebecca Gorton, this was proposed by Lewis White and seconded by Malcolm Richardson.

Executive member - GR reported that there was a nomination for Duncan Wilson, this was proposed by Julian Naglik and seconded by Neil Gow.

All new members were welcomed to the Executive.

13. Election of life and honorary members

No nominations were proposed.

14. BSMM customs and traditions

No items were raised

15. Any Other Business

TR reported there is a plan that the BSMM executive members will undergo Trustees' training to comply with rules and regulations of the Charities Commission.

David Denning asked who is the BSMM representative on the European Confederation for Medical Mycology. TR responded that Rosemary Barnes had represented BSMM, and that he will now take over and attend the next Council