ASM2012 report

David McMillan

Chair of the Local Organising Committee

The Annual Scientific Meeting of the Australian Society for Microbiology was held in Brisbane from 1 to 4 July. The meeting was held under sunny skies at the Brisbane Convention and Exhibition Centre, and attracted almost 600 delegates.

Some major changes were implemented to the format of this year's meeting. Notably, the length of the meeting was reduced by one day. The maximum number of concurrent sessions was also reduced to four, resulting in larger audience sizes for Symposia and Proffered paper sessions. For the first time, two separate poster sessions were held on the Monday and Tuesday evenings. Both sessions were also exceptionally well attended. The feedback from delegates suggests that all these changes have been well received.

As is traditional, the meeting commenced with a number of workshops on the Sunday. The workshops covered diagnostics, bioinformatics and antibiotic resistance. Each was well attended, with two of the workshops being fully subscribed. The Bazeley Oration, also held on the Sunday, was given by Amanda Leach from the Menzies School of Health Research. Her presentation was a timely reminder of the health challenges that are still faced by Australia's Indigenous communities.

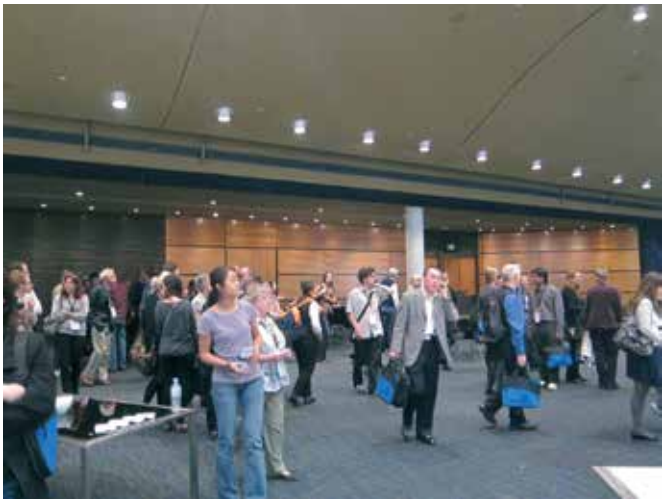
The remaining scientific program ran for three days. Nine plenary sessions were given by international speakers. Amongst these great talks, a personal highlight was the presentation by Harvey Rubin from the University of Pennsylvania. His talk demonstrated how fundamental insights into the biology of *Mycobacterium tuberculosis* are being used to develop new classes of drugs for treatment of infection by this organism.

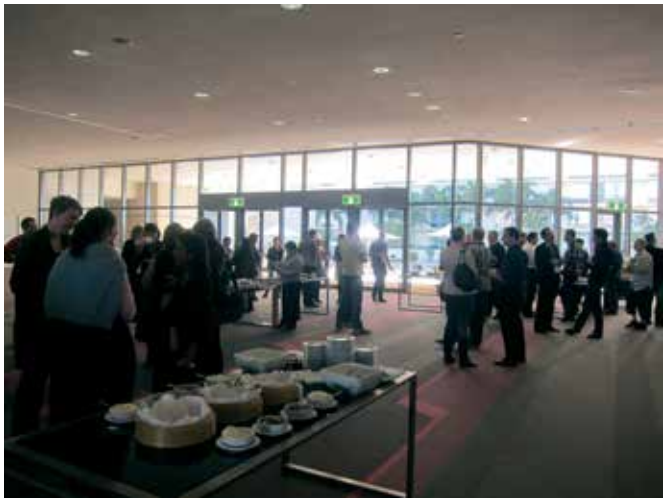
An important component of the ongoing success of our Annual Scientific Meeting is continued participation by our commercial partners. We sold out of all exhibition space this year, demonstrating the value that the trade places on attending ASM2012. Holding the two poster sessions in the Trade Hall, and the reintroduction of a passport competition, resulting in increased opportunities for interaction between delegates and trade representatives was highly appreciated. We would particularly like to thank Bio-Rad, Thermo-Fisher Scientific and BD, who were our Gold, Silver and Bronze sponsors respectively.

The meeting concluded with a public lecture given by Jill Banfield. Jill's lecture covered the intersection of geology and microbiology, and highlighted some of the ways that microorganisms may be used to control environmental problems of the world. The lecture was moderated by scientific personality and communicator Dr Karl Kruselnicski. Karl graciously waived his appearance fee for his services.

On behalf of the ASM2012 Local Organising Committee, I would like to thank those that attended and made the event so successful. I would also like to thank the members of the Scientific Program Committee and ICMS, who along with the Local Organising Committee worked together to bring you a stimulating meeting.

See you in Adelaide next year.






BIO-RAD

ASM Awards

Frank Fenner Award 2012

Johnson Mak

Professor Johnson Mak is Chair in Infectious Diseases within Deakin University School of Medicine. He is also Head of the Deakin HIV and Emerging Virus Laboratory at CSIRO AAHL.

Johnson completed his PhD in 1996 in the field of molecular virology at McGill University in Montreal, Canada. He then accepted an invitation to set up a research group within the AIDS Pathogenesis Research Unit at the Burnet Institute. Johnson has recently joined Deakin University and CSIRO AAHL.

Johnson is a molecular virologist by training and has a strong interest in HIV assembly. Johnson has consistently secured research funding from both national and international sources and published in a number of prestigious journals contributing to the field of retroviral assembly. He has a keen interest in the development of novel approaches to dissect the biology of HIV; more recently, he has applied some of these techniques to delineate the early steps (uncoating) of HIV replication. He has been a recipient of various prestigious fellowships, including Canadian NHRDP, NHMRC Peter Doherty, Monash Logan, Pfizer, and ARC Future fellowships. His laboratory employs a combination of molecular virology, cell biology and protein biochemistry approaches to investigate the deadly HIV pathogen, through basic research with the ultimate goal of developing effective prevention and treatment of HIV infection.

David White Excellence in Teaching Award

Danilla Grando

I have a long-standing passion for teaching microbiology. This began as a medical scientist in the 1980s, disseminating how to achieve best practice in clinical diagnostic microbiology. In the late 1980s I was very fortunate to secure a position as a microbiologist at the Royal Victorian Eye and Ear Hospital. This opened up the world of ocular microbiology, a truly exacting practice that makes a great difference in preserving a patient's sight. In order to promote the dissemination of best practice in ocular microbiology I founded, with the help of colleagues in other states, the Ocular Microbiology SIG of ASM. Ocular Microbiology workshops are still a regular feature at the National Meeting for the Australian Society for Microbiology.

In 1998 I was employed part-time at RMIT University as an academic and was given charge to teach microbiology to nurses. I realised that I needed to create new ways of teaching to engage these students, so I transformed the lectures into active learning (lectorials) and created low-cost, practical classes able to cater for large classes. I also began my current love affair with digital technologies in teaching. In 2007 I was given the opportunity to plan and develop curricula for our new Digital Wet Laboratories at RMIT University and in conjunction with my work on the nursing curriculum was awarded 2008 Australian Learning and Teaching Council Citation for Outstanding Contribution to Student Learning. My passion for transformational learning through digital technologies continues and in 2011 I helped to organise and participated in a digital technologies specialist symposium at the ASM National meeting. As the new incoming chair for the Education SIG, I hope to encourage others to pursue their professional development in the teaching of microbiology so that we can continue to find improvements in the ways we engage our student to prepare for the wonderful careers open to them in microbiology.

ASM BD Student Awards

Vaccination against *Streptococcus pneumoniae* with an immunodominant region of poly-histidine Triad Protein D

Charles D Plumptre, University of Adelaide, SA

Charlie is a third-year PhD student in James Paton's laboratory at the University of Adelaide. His project focuses on the Pht proteins of *Streptococcus pneumoniae*, which are surface-localised virulence factors that are under consideration for inclusion in next-generation protein-based vaccines for use against pneumococcal disease. Charlie is supported by a graduate scholarship from the Northcote Trust (UK).

The influenza virus haemagglutinin mediates secondary bacterial Otitis Media by inducing middle ear inflammation

Kirsty R Short, University of Melbourne, Vic

Kirsty is in the final year of her PhD at the University of Melbourne, Department of Microbiology and Immunology. Her research focuses on the role of influenza virus in *Streptococcus pneumoniaeotitis* media and transmission. Her findings have provided a new insight into mechanisms by which influenza virus-induced inflammation facilitates secondary bacterial disease.

Regulation of Paraoxonase 2 (PON2) by PPARγ: Possible role in *P. aeruginosa* lung infections in cystic fibrosis

Naseem Ali, Menzies Research Institute, Hobart, Tas

Naseem is a second-year, international PhD (Medical Research) student at the University of Tasmania where he previously completed an undergraduate degree in biotechnology with first class honours. He was fortunate to be able to study for his PhD and remain in Australia by winning the prestigious IPRS scholarship and supplement that with an ACFRT studentship as well. His supervisors are Dr Louise Roddam, A/Prof. Margaret Cooley and Dr Phoebe Griffin. He is fascinated by bacterial quorum sensing and the potential for countering bacterial infections by eliminating their ability to communicate.

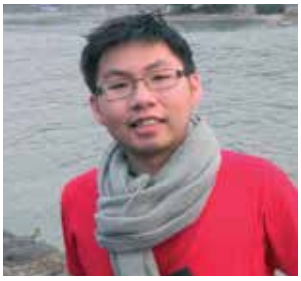
Resistance to cationic antimicrobial peptides is determined by oxidoreductases in *Neisseria meningitidis*

Susannah H Piek, School of Pathology and Laboratory Medicine, The University of Western Australia, WA

Susannah Piek has recently completed her PhD at the University of Western Australia, where she studied under the supervision of Dr Charlene Kahler. Susannah commenced her PhD in 2007, conducting research into the molecular basis of pathogenesis of *N. meningitis*, the causative agent of meningococcal meningitis and meningococcaemia. She held an Australian Post-Graduate Award until the end of 2010 when she commenced work as a research assistant in Dr Kahler's laboratory, while continuing to write her thesis. Susannah had her thesis accepted in May 2012 and has now been promoted to research associate with the commencement of her first postdoctoral position.

Identification of *Staphylococcus aureus* cell division protein-protein interactions and super resolution of the major cyokinetic protein, FtsZ

Andrew Liew, i3 institute, University of Technology, Sydney, NSW



Andrew Liew is currently completing a PhD at the University of Technology, Sydney under the supervision of Professor Liz Harry. The project involves investigating the protein-protein interactions that drive the process of cell division in the medically important pathogen *Staphylococcus aureus* using different protein and fluorescent microscopy techniques. Understanding how cell division occurs is important as a first step for the development of novel antibacterials that target this essential pathway. In 2009, Andrew completed his Bachelor of Science degree with honours and received the university medal at UTS which involved developing a genetic system for visualising proteins in *S. aureus*. Apart from science, he has a passion for running outdoors and socialising with friends.

Targeting Chlamydial pathogenesis: A novel vaccine design

Connor P O'Meara, Institute of Health and Biomedical Innovation, Queensland University of Technology, Brisbane, Qld

Connor is a PhD student in his final year of study in the field of microbiology and immunology. Connor is an outstanding student who was not only the winner of the BD ASM Queensland Student Award, but has also been awarded best oral presentation at the Brisbane *Chlamydia* conference 2010 and the Australian Society for Medical Research Queensland 2012. He completed his undergraduate degree in Sydney and in his honours year characterised multidrug resistant regions within *Salmonella* under Prof. Steve Djordjevic. Currently, Connor is

studying under the supervision of Prof. Ken Beagley and Prof. Peter Timms at the Institute of Health and Biomedical Innovation, Queensland University of Technology. The focus of his PhD is to design an effective vaccine against *Chlamydia* by utilising novel adjuvants and delivery systems. His interests lie in the functional side of immunology and host-pathogen interaction.

Distinguished Service Awards

A lifetime working in Microbiology was rewarded on Sunday 1 July at the opening of Brisbane ASM 2012, when president, Professor John Turnidge, presented Peter Traynor and William James Crozier with the ASM Distinguished Service Awards.

Peter Traynor (SA)

Peter Traynor received his Distinguished Service Award for his substantial contributions to the ASM.

Peter was actively involved in the Parasitology and Tropical Medicine SIG, as Victorian State Convenor (1996–2004) and National Convenor (2000–2002). The annual Victorian Parasitology evening, begun during his time as Convenor, remains a highlight of the Victorian branch calendar to this day.

For the Education SIG, Peter has been involved in presenting workshops on presentation skills, both nationally at the NSM and at state level, and these workshops were not only well attended but have contributed positively to the standards of presentation we enjoy at scientific meetings.

With the Culture Media SIG, he has served as National Secretary (2000–2006) and National Convenor (2006–present). Symposia organised for the SIG at ASM national meetings in 2006, 2007, 2008 and 2009 were all attended by more than 100 delegates in each case. A contributing member to the first Guidelines on assuring quality of microbiological media, released in 1996, then a co-author of subsequent Guidelines released in 2004, and most recently senior author and editor of the revised new editions of the Guidelines completed in 2012. The importance of these media Guidelines in the Society's interface with the membership cannot be overstated, as they provide an important and valuable contribution to the Society's standing with both national and international standards bodies and laboratory accreditation agencies.

Peter has been a driving force through his active involvement in SIG governance, and has, by example, increased the accountability of the SIGs to the Society. The issues of good corporate governance and our accountability as an incorporated association have been strengthened through his persistence in these matters.

Peter joined the SA branch committee in 2007 and it was immediately apparent that his contribution would be significant and indeed this has been the case. In 2008 Peter became the Scientific Meetings Convenor for the branch and has used every opportunity to ensure that all local meetings are of the highest standard and represent the aims of the society. This role culminated at Tri-State 2011 where Peter was instrumental in gathering a group of speakers that were second to none and resulted in a very successful meeting. Peter has always looked to improve the branch's activities and promote the ASM as a whole.

His commitment to the society, as an active member, has been demonstrated over many years.

William Crozier (NSW)

"Bill" Crozier commenced working in dairy microbiology in the food industry in 1967 following two years of agriculture studies at University of Sydney. By 1968, he was teaching dairy microbiology in the Biology Certificate at Sydney TAFE. Moving to the medical microbiology area in late 1969, he began a career in medical mycology at RNSH, which would continue to the present, comprising 43 years in medical mycology, only interrupted by one year in microbiology teaching at Sydney TAFE (1975). This included 23 years in the Microbiology Department of The Wollongong Hospital, mainly as Senior Mycologist and then 13 years at Southern-IML Pathology Services, also as Senior Mycologist, a position which he still holds.

Over his 45 year career in microbiology, Bill has published more than 50 pieces of research in journals or as presentations at conferences, including six "Australian first" clinical mycology case reports and one "world first" report. Additionally, many other presentations at clinical meetings, ASM SIG meetings, and so on, or as CD ROMs, DVDs, and so on, designed to reach country microbiologists.

Teaching microbiology has been high on Bill's list of contributions to the field. Starting at TAFE in 1968, he has taught part-time at universities (including Sydney, UTS and UOW), various TAFE institutions and to many other groups. He has served as an external supervisor for several M.Sc or B.Sc (Hons) candidates at UOW and Charles Sturt University. Over the last two decades, his contributions have changed to more a "mentor role".

Since 2009, Bill has worked with school children as a volunteer science mentor, teaching various areas of science (including microbiology) to school classes from kindergarten up to year 12. He has been a volunteer with the CSIRO Scientists in Schools (SIS) scheme since 2010 and has judged student poster presentations at UOW Schools Science Fair since 2008. In 2005, UOW awarded Bill a Lifetime Fellowship for "services in Medicine to the Community and the University".

Joining ASM as a student member during the last year of a B.Appl. Sc (Hons) degree course at UTS in 1974, Bill became MASM in 1978 and has remained continuously in ASM for 38 years. He has served on state branch committees on two occasions (NSW branch of ASM, 1993–95), (NSW-ACT branch of ASM from 2008 to 2012). He became a "country coordinator" for Illawarra ASM meetings in 1991, convening numerous meetings and including a successful 1993 weekend conference. He solicited the support of the NSW-ACT branch of ASM for the UOW Schools Science Fair and now this branch has sponsored a "Best Microbiology Presentation" award since 2009. Bill also instigated the "NSW-ACT Branch of ASM Mycology Award" in 2011 (a perpetual mycology award for ASM members of this branch).

As a latter interest for the macrofungi has developed, Bill commenced writing a monthly column in his works newsletter during 2010 on "mushrooms and toadstools from the area". This describes identification criteria, history, habitat and poisonous/edible classification. Its success has resulted in his publishing a book on macrofungi in 2012 and he has also completed Doctor's qualifications in Macrofungi through a research college in the USA.

Bill has previously been awarded the Merck, Sharp & Dohm ASM Mycology Award in 2004, the NSW-ACT Branch of ASM Mycology Award in 2012, the NSW-ACT Branch of ASM Branch Service Award in 2009, and the award of this ASM Distinguished Service Award in 2012 represents the culmination of a 45-year career in microbiology.

FASM Q&A with Kerry Varettas

Please tell us a little about your career in microbiology

My career in microbiology began with the completion of my degree in Applied Science at UTS in 1980. I then began working in the clinical diagnostic field in a private microbiology laboratory and later at South Eastern Area Laboratory Services (SEALS) at the St George Public Hospital, Kogarah. I have been employed in the microbiology department at SEALS since 1988, first as a hospital scientist and then later regraded to a senior hospital scientist.

What do you see as the biggest challenges for microbiology today?

One of the biggest challenges in the clinical field is the shortage of experienced scientists who will succeed the current senior scientists. Other issues may have compounded this problem such as the lack of a clearly defined career progression, pressure of increasing laboratory workloads and the rationalisation of laboratory resources.

Why did you decide to apply for an FASM?

In the clinical field, the award of an FASM is equivalent to a PhD. Attaining a PhD is not easy in a clinical laboratory where diagnostic testing and not research is the core role of the laboratory. Gaining an FASM allows hospital scientists to continue their education and provide an opportunity to gain a higher qualification and progress their career.

How did you find the FASM process?

I had a Master of Public Health, which made me exempt from Part I. With consultation from the National Examinations Board, I selected a focus area and sat a three-hour, essay-style exam to qualify for Part II. It was difficult to study and sit for an exam after so many years, but I did pass and went on to complete a literature review for Part III. For a clinical scientist with few publications and research projects, the literature review is a big task but can be broken down to manageable chapters. Completion of Parts II and III took approximately 18 months.

The ASM National Office and the members of the National Examination Board were all very flexible and supportive during the whole process.

What were the best and worst aspects of the FASM for you?

The best part was being able to write a literature review on a topic I was interested in and subsequently increase my knowledge in this area. The worst part was having to study and sit for an exam!

Would you recommend FASM to other microbiologists?

Yes, especially for clinical hospital scientists where the option of obtaining a Master degree or a PhD is not possible where they work. This is a way of furthering your career without requiring external funding, supervisors and a research project and can be completed in a manageable time frame. The FASM allows clinical scientists to be recognised as having a high level of scientific and professional achievement within their field of microbiology. This is not easy to achieve in a clinical diagnostic laboratory where research is minimal.

Do you have any suggestions for other microbiologists?

Talk to other members who have obtained their FASM and who are employed in a similar field. Having a 'buddy' or 'mentor' that can talk to you and guide you along the way will make it less daunting that it initially seems.

Has your award of an FASM been recognised by your employer in some way?

My employer has been supportive of my application and proud of my achievement. On a financial level, senior scientists who are at Year 3 of the Award scale should be able to progress to Year 8 with an FASM.