

THE AUSTRALIAN SOCIETY FOR MICROBIOLOGY

WESTERN AUSTRALIA BRANCH NEWSLETTER

February/ March 2006



Welcome to 2006!

By Suellen Blackaby

Welcome to 2006 and a year in which we hope to invigorate our Visiting Speakers Program, and launch our new website.

Details of intending speakers are currently being confirmed for the year and, once this occurs, details will be posted onto our new website, which is currently in its final stages before going live.

Michele Squire has developed an entirely new website that we believe better serves our member's needs. We are indebted to UWA who have provided a sponsored hosting arrangement for the site. You will be informed as soon as the site goes live, and we urge you to visit and let us know your thoughts. Also, if you have any information you believe should be imparted to all members, please contact us so we can spread the word. Details of meetings, speakers and news will be posted regularly on the new website, so please ensure that you bookmark the site to stay up to date as we move through 2006.

This year cannot pass without acknowledgement of the Nobel Prize awarded to Robin Warren and Barry Marshall for their lifetime work on *Helicobacter pylori*. A culmination of many years hard work was celebrated by all, and ASM added their congratulations to the many received by the Award recipients.

The close of 2005 and the start of 2006 saw the retirement of two long-standing members of ASM-WA: Jim Wells and Chris Richardson. They have both made a significant contribution to microbiology in their work in many laboratories throughout Perth, as well as the significant time spent as committee members and executive of

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ASM-WA. Jim and Chris held many positions with ASM during their careers and the current committee acknowledges and thanks them for those contributions over many years. We wish them and their families well in their 'leisure' years and look forward to spotting them enjoying the crushed grapes and beautiful sunsets they so well deserve, at the many future meetings that will be held on the vast waters that border our shores.

The committee has already met this year, and have a number of projects for members underway, including a significant workshop. Stay tuned for details via email and the website.

Planning is imminent for ASM in Perth in 2009. Expect to be approached for your input and ideas to ensure that ASM members have a unique experience that only WA can provide.

We look forward to seeing you throughout an exciting 2006!

Around the Labs Report

By Veronica Susai

The final event of 2005 ended with presentations by three prominent speakers at the 'Around the Labs' meeting held on 5th December at the Telethon Institute of Child Health Research at Princess Margaret Hospital. It was an informative and delightful evening as speakers updated us with news from the microbial world.

Our first speaker was Dr Simon Toze, (Principal research scientist for CSIRO, Floreat), who enlightened us with his presentation entitled 'Water Reuse and Managed Aquifer Recharge (MAR) - will it shrink my penis?'. The presentation provided a promising solution to dealing with Perth's current water shortage problems by involving the use of reclaimed wastewater for possible use in horticulture, green open space irrigation and industrial applications. The scheme has great potential. However, Dr Toze emphasized that more research is still required to overcome public attitudes and concerns regarding persistence of chemicals and pathogens in the recovered water. More information regarding the scheme can be found at <http://www.clw.csiro.au/research/urban>.

The second speaker was Dr David Speers (infectious Disease specialist, PathWest) who updated us with the current emergence and spread of the H5N1 avian influenza in his presentation entitled 'Pandemic Influenza - A storm in an egg cup'. Currently the spread of the disease exists in countries with poor resources and infrastructure to manage such outbreaks. As this strain has the potential to cross the species barrier and is considered novel, providing no immunity in the human population, there is enough concern in the medical community to be prepared for the likelihood of a pandemic. However, we should be aware that avian influenza is not a pandemic flu, but it does have pandemic potential and as such a national influenza pandemic action plan has been implemented. The

Prime Minister's Prizes for Science

The Prime Minister's Prizes for Science are a national tribute to excellent and dedicated work in Australian science and science teaching. Each comprises a cash grant, a medallion and a lapel pin.

The major prize, the Prime Minister's Prize for Science, is one of the nation's most highly regarded awards and the premier national award for scientific achievement. It is awarded for an outstanding specific achievement in any area of science advancing human welfare or benefiting society, and has been awarded previously to such luminaries of Australian science as Frank Fenner, Donald Metcalf and Jacques Miller.

The Malcolm McIntosh Prize for Physical Scientist of the Year and the Science Minister's Prize for Life Scientist of the Year are awarded to scientists who are thirty-five years of age or younger, and are designed to both honour excellent research and to highlight that our early-stage career scientists are producing world-class research.

Nomination for these prizes is now open and will close on Friday, May 19, 2006 at 17:00 AEST.

For more information contact the Secretariat on (02) 6240-5066 or email pmprize@dest.gov.au

Additional information can be obtained from the website at: <https://sciencegrants.dest.gov.au/scienceprize/pages/home.aspx>

Pathology Week

6-12 March 2006

Pathology Week is a week of public education, media coverage and events highlighting the work of medical scientists, hospitals and laboratories around Perth

Details of events that will be conducted by participating organisations during the week can be viewed on the website at <http://www.pathology.med.pro>, or contact Sue Strutt (Sue.Strutt@sjog.org.au)

A gala dinner is being held to celebrate Pathology Week. Click [here](#) to download the flyer (PDF)

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plan includes stockpiles of vaccines, the provision of medical care and enhanced surveillance. In brief, Dr Speers suggested that we should be 'alert but not alarmed'.

Our third and final speaker was Dr Roberta Carey (Chief Epidemiologist, CDC, USA) with her presentation entitled 'Detecting emerging antimicrobial resistance: the problems and solutions'. Dr Carey explored the various causes of antimicrobial resistances, which included the overuse of antibiotics in wealthy nations, the incomplete use of drugs in poorer nations and the widespread practice of feeding livestock with low levels of antibiotics to promote animal growth. Such practices have brought the emergence of a variety of drug resistant organisms. There is a concern that the detection of these drug resistant organisms is becoming more difficult as new resistance patterns develop. Comparisons were made between automated systems; more commonly used in the United States, and the standard broth micro-dilution and disc diffusion methods used in Australia. Solutions for overcoming problems arising from these detection methods included the continual education of clinical microbiologists, the creation of smarter automated instruments and the tracking and trending of susceptibility patterns nation-wide. More information on these issues can be found at www.cdc.gov/drugresistance



REMINDER

ASM NATIONAL CONFERENCE
GOLD COAST
2-6 JULY 2006

Early bird registration and abstract
submissions close 31st March.

For more information go to
www.asm2006.org

Visiting Speakers Report

By Michele Squire

Professor Bonnie Bassler

The 2006 Visiting Speakers Program got off to an excellent start when Professor Bassler overwhelmingly convinced a large turnout of assembled listeners that bacteria can talk. Rather than the individualistic, reclusive organisms that we once thought they were, bacteria in fact use a sophisticated chemical language to allow them to work as a synchronous population when the population reaches significant numbers (ie. A quorum). An example of this behaviour is bioluminescent organisms that light up when a critical high organism number is reached. Professor Bassler outlined her team's discovery of this language, using the bioluminescent organisms *V. harveyi* and *V. fischeri*, which she has since termed 'Quorum Sensing' (the organisms sense they are in a quorum and change their behaviour across the population to act in unison). The basis of this language is a series of interconnecting molecules known as 'autoinducers' that induce a quorum response via a signal transduction cascade. The type of response elicited is dependent on the species of organism/s present and the environment. Some autoinducers are species-specific allowing intraspecies communication, while other autoinducers allow communication between mixed bacterial species in close proximity. Professor Bassler outlined the complex stereochemistry that was involved in the discovery of autoinducers and, in doing so, highlighted the need for a multidisciplinary approach to research, with individual team members bringing individual strengths and knowledge to the project.

Professor Bassler's research has significant treatment implications using anti-autoinducer methods. For example, virulence, motility and biofilm production are all processes controlled by quorum sensing. In addition, pro-quorum sensing strategies may also be of use in the biotechnology field.

More information about Professor Bassler's
research may be found at

http://www.hhmi.org/research/investigators/bassler_bio.html

Vacation Scholarship Report

By Krystel Ho

2nd Year Dental Student, UWA

Armed with only a semester's knowledge of dental microbiology and immunology (DMI), an enthusiasm for all things science and wearing a post-exam exhaustion worthy of The Odyssey, I set off on a 6 week vacation – in Lab 1.25K – with Professor Riley and Doctors Carson & Hammer, with unusual fervour.

I remember Professor Riley nonchalantly advertising his Tea Tree Oil (TTO) project in DMI one day, trying to quell his excitement while telling us that there was an interest in using TTO, an all-Australian natural product, in combating oral bacteria. A few months later, I applied for the ASM-WA vacation scholarship – someone was obviously paying attention.

In the beginning, I was unsure I was doing anything right – even unsure how to plate a colony on a blood agar plate on my first day. I got the hang of things in due time and I'm now one hundred percent sure that I can spread 10 plates in 30 seconds with my eyes closed! Who needs wrist exercises? Spread plate! But don't forget about RSI! The time I spent in the labs has proved invaluable because not only did I learn something more about microbiology, and familiarised myself with microbiological laboratory techniques, I actually got results! Moreover, I got to learn something about the bacterial aetiology of endodontic re-infections as well as the importance of eliminating bacteria for a better overall prognosis. I got a taste of microbiological research and, at the same time, have unveiled an interest in yet another scientific discipline. The experience I have gained on my part is immense, and I hope I've contributed at least in a small part to the current TTO research.

Viruses in May Conference

11–13 May 2006

Katoomba, NSW

Viruses in May is an annual conference that brings together a diverse group of people to discuss the important issues surrounding viral illness. The meeting is particularly aimed medical virologists, clinicians, scientists and medical students from around Australia, in order to discuss diagnostic and management issues related to virology.

Topics include:

- The discovery and diagnosis of Parvovirus B19
- Acute Tropical Fevers
- Treatment of SARS, HIV and Influenza in the emergency department
- Viral outbreak management

For further information please contact Jacqueline Faltas (z3021301@student.unsw.edu.au) or visit <http://www.virusesinmay.com/>.



NSW South West AIMS Conference 2006

*Theme: Remote & Rural Medical
Laboratory Science*

When: 11 - 13 March 2006

Where: Broken Hill, NSW

For more information contact

Mr Gary Smith

(garydalesmith@bigpond.com)

Click [here](#) to download the conference brochure (PDF)

ASM WA awards vacation scholarships to student members of the Australian Society for Microbiology wishing to gain laboratory experience in microbiology during the long summer vacation period. Scholarships are tenable for 6 to 8 weeks during the vacation and are valued at \$200 per week.

Applications close in October each year. Further information may be obtained from Professor Tom Riley (see last page for contact details)

The new regulatory framework for IVDs in Australia. What will it mean for the Australian IVD industry and their customers?

Background to the new system

This year, another regulatory layer will be added to the Australian pathology industry. The upcoming regulatory framework for *in vitro* diagnostic products (IVDs) due to be implemented in July 2006, will mean that along with other therapeutic goods sold in Australia, all IVDs will be regulated by the Therapeutic Goods Administration (TGA). The new system will cover both commercially supplied IVDs and IVDs manufactured by laboratories for their own use.

The new requirements will mean that before an IVD can be supplied to Australian laboratories, it must be evaluated and approved by the TGA and placed on the Australian Register of Therapeutic Goods (ARTG). Products on the market prior to the implementation date will have a transition period determined by their risk classification. High risk (Class 4) assays such as those used for screening the national blood supply will have a transition period of two years, while all other IVDs will have four years to become included on the ARTG.

The current regulations for IVDs cover a small percentage of products including tests for HIV and Hep C, products containing components of human origin, those for home use and IVDs on the PBS. The Medical Industry Association of Australia (MIAA), the peak industry body for Australian IVD suppliers, estimates that these products represent approximately 5% of all commercially sourced IVDs currently on the Australian pathology market.

The new system will cover ALL IVDs. This means that approximately 95% of the IVD industry will need to comply with the new system with very little background in regulation. For many companies it will require the development of a new administrative arm and significantly, it will be the first time many companies have faced

regulatory fees.

Australian industry's position on the new framework

MIAA has supported the development of an IVD regulatory framework for Australia. The current absence of homogenous regulation for IVDs has led to a variety of approaches to quality assurance and traceability, depending heavily on the level of commitment of manufacturers or suppliers to product and process quality.

MIAA believes that most players in the IVD field already incorporate these elements under their respective quality systems. The new regulatory framework will ensure that the whole industry is brought up to this mark.

The Australian IVD industry's position of support has been based on three important platforms. Firstly, to allow fulfillment of the TGA's mandate from the Australian Health Ministers Advisory Council (AHMAC) to regulate all IVDs, industry believes the rules have to be the same for all players, that is for both in-house manufacturers and commercial suppliers. Secondly, the industry has supported harmonisation of the framework with international regulatory systems to minimise TGA review, allowing prompt access to the market. Finally, industry has supported the development of cost effective and "light touch" regulation.

What will the new regulations mean for laboratories?

It is important to understand that the TGA regulatory approach will not regulate laboratory practice. This is already controlled under various QA programs and NATA accreditation. However, the new system will add further confidence to the

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materials used in laboratories.

One of the most significant effects of the upcoming legislation will be the tightening of claims made by IVD sales staff to their customers. The legislation will provide a legal requirement to promote products on the basis of the "intended purpose" only. This means that if laboratories choose to use IVDs outside their intended purpose, and / or beyond the manufacturer's specifications, they will be classified as in-house manufactured IVDs, with a shift of regulatory responsibility from the commercial supplier to the laboratory.

As approximately 95% of commercially sourced IVDs in Australia are currently unregulated, the majority of IVD suppliers will face regulatory fees for the first time under the new system. It is highly likely that the resulting financial impact will be reflected in IVD price rises after July 2006. The increases will be greatest for higher risk IVDs which attract more significant fees and require more extensive regulatory preparation.

The TGA has conceded that product rationalization is an inevitable consequence of new regulation. MIAA believes that the new regulatory framework for IVDs will be no exception. This will particularly apply to Australian based distributors with large catalogues sourced from multiple manufacturers. For laboratories, the likely reductions in catalogue size for many IVD companies will mean that the currently large range of diagnostic options available in pathology will shrink.

Conclusion

There is still more work to do before the new regulatory system for IVDs supplied in Australia is implemented in 2006. The TGA's spirit of willingness to work with industry particularly over the last eighteen months is a good sign for the future, not only in terms of completing a workable system, but also for the fine tuning that will inevitably follow.

Upcoming Events Summary

Please put these dates in your diary...

6 - 12th March 2006

Pathology Week

Click [here](#) for more details

11 - 13th March 2006

NSW South West AIMS Conference

Broken Hill, NSW

Click [here](#) for more details

March 2006

ASM-WA Bacterial Vaginosis Workshop

University Club of Western Australia

Date & time to be advised

2 - 6th April 2006

5th International Symposium on Pneumococci and Pneumococcal Diseases

Alice Springs

See [website](#) for more information

11 - 13th May 2006

Viruses in May

Katoomba, NSW

Click [here](#) for more details

2 - 6th July 2006

ASM 2006 National Conference

Gold Coast, Qld

Click [here](#) for more details



The ASM-WA Committee meets on the 1st Tuesday of every month.

If you would like to raise something in this forum, please contact the relevant committee member.

Contact details are located on the last page of this newsletter.

ASM WA Branch Committee

Chairperson

Suellen Blackaby
Blackaby Diagnostics
9229 6128

suellen@blackabydiagnostics.com.au

Treasurer & Chairperson-Elect

Rod Bowman
PathWest
9346 3908

Rodney.Bowman@health.wa.gov.au

Secretary

Nickie Barrett
Royal Perth Hospital
9224 2444

Nicola.Barrett@health.wa.gov.au

Committee Members

Mark Watson
Royal Perth Hospital
9224 1175

mwatson@cyllene.uwa.edu.au

Martin Finn
Curtin University
9266 7514

m.finn@curtin.edu.au

Barbara Henderson
PathWest
9346 2494

Barbara.Henderson@health.wa.gov.au

Tom Riley
University of Western Australia
9346 3690

triley@cyllene.uwa.edu.au

Ian Ross
Microserve Laboratory
9227 6499

admin@microservelab.com.au

Phil Silvester

Curtin University
9451 1168

psilvester@optusnet.com.au

Communications Team (Newsletter & Website)

Michele Squire
University of Western Australia
0409 824 676

mspb@bigpond.net.au

Veronica Susai
University of Western Australia
9346 2212

vsusai@cyllene.uwa.edu.au

Country Representative

Belinda Clark
PathWest
0417 928 091

belc@tpg.com.au

University of Western Australia Student Representatives

Susannah Piek
9444 3107/ 0404 493 951

suseroberts@hotmail.com

Kristy Philippe
9489 7895

kristyp@ichr.uwa.edu.au

Curtin University Student Representative

Elise Thatcher

elisecruise@hotmail.com

Murdoch University Student Representative

Rajat Hans
0422 603 732

blessings83@yahoo.com

Our new website is currently under construction

*Members will be notified by email when it goes
live*
