ARC/NHMRC RESEARCH NETWORK FOR PARASITOLOGY

Network Newsletter, Thursday 17 August 2006

Dear Network Participant,

Please download the current Network Newsletter from our website http://www.parasite.org.au/arcnet/Newsletter/Newsletter_170806.pdf The August edition of the ARC/NHMRC Research Network for Parasitology Newsletter holds the following items for you:

[1] ASP wins ICOPA 2010 bid

ICOPA2010 will be held in Melbourne. Congratulations to David Piedrafita, Alan Johnson, Andrew Thompson, Mal Jones, Fiona Maddern and the entire ICOPA2010 bid team on this tremendous success.

[2] National Science Week 2006

Dave Jenkins from the Australian Hydatid Epidemiological Control Programme and Sheila Donnelly, Kate Miller, Rowena Lock, Rob Walker, Mike Lees, Kelly Mai, Nick Smith and Lisa Jones based at IBID, University of Technology, Sydney were involved in the Australian Museum's 'Science in the City' programme and the Ultimo Science Festival as part the 2006 Science Week celebrations. More than 7,000 school students and 500 adults participated in these two events and enjoyed Dave's tales of death and disease in the Cestode world and Sheila's "Revenge of the Body Snatchers" whilst also having a closer look at some parasites. "Pin the Parasite on Polly" was a particular highlight. To see pictures, visit the Network website www.parasite.org.au/arcnet and click on the link from the highlights box.

[3] 2006 ASP & ARC/NHMRC Research Network for Parasitology Annual conference and survey

The 2006 ASP & ARC/NHMRC Research Network for Parasitology Annual Conference was held at Legends Hotel on the Gold Coast, Queensland from 2 – 5 July. The meeting was officially opened by Jo-Ann Miller MP, Parliamentary Secretary to the Minister for Health; the programme featured national and international speakers and there were record numbers of delegates attending (268 delegates). Watch the Network website (www.parasite.org.au/arcnet) over the next month for interviews with some of the conference speakers.

Have your say about this, and future, year's ASP & Network conferences. Click on the following link (or copy and paste the link into your browser) to complete the 2006 ASP & Network Conference Survey

http://surveys.uts.edu.au/index.cfm?surveyid=1802

Please complete your conference survey online by Thursday 31 August 2006.

Awards

[4] Alex Loukas awarded Bancroft Mackerras Medal

The Bancroft Mackerras Medal is awarded by the Australian Society for Parasitology to recognise outstanding contributions of its members to the science of parasitology. It is based particularly on work published over

the last 5 years and, though nominations are called yearly, it is only presented when a suitable candidate is recognized, emphasizing its prestige. At the recent annual conference Alex Loukas, from the Queensland Institute of Medical Research, was awarded the medal in recognition of his outstanding research on hookworms and schistosomes. Gracious in acceptance of the award, Alex acknowledged the efforts of his team of researchers and collaborators and then delivered an excellent oration on haemoglobin digestion by these parasites and the development of subunit vaccines against them.

[5] Geoff McFadden wins 2006 Julian Wells Medal

Geoff McFadden, of the Botany Department, The University of Melbourne, is the 2006 winner of the Julian Wells Medal. The Medal is awarded annually – at the Lorne Genome Conference - to an Australian scientist who has made an outstanding contribution to our understanding of gene action, genome organisation or genomic evolution. Congratulations Geoff.

[6] Congratulations to Brendan Crabb – awarded the 2006 David Syme Research Prize

The David Syme Research Prize is awarded by the University of Melbourne for the best original research work in biology, physics, chemistry or geology produced during the preceding 2 years. In 2006 Brendan Crabb, from the Walter and Eliza Hall Institute of Medical Research, has been awarded this prize for his pivotal role in enhancing knowledge of malaria as an essential precondition for developing more effective control measures. Well done Brendan.

[7] Alberto Pinzon-Charry and Lukasz Kedzierski win Network Early Career Researcher Awards

Congratulations to Alberto Pinzon-Charry (Queensland Institute of Medical Research) and Lukasz Kedzierski (Walter and Eliza Hall Institute of Medical Research), the inaugural winners of the ARC/NHMRC Research Network for Parasitology Early Career Researcher Awards. Alberto received his award for his presentation on “Protective efficacy of immunisation with low dose parasite antigen and CpG in a murine malaria model” and Lukasz for his talk on “Novel drug targets for leishmaniasis.” As prizes, Lukasz and Alberto will receive funding to attend, and present their work, at the annual conference of one of our sister Networks in Europe, Asia or North America.

[8] Aaron Jex, Conor Jones and Michael Smout win ASP Student Awards at the 2006 ASP & Network Conference

Congratulations to Aaron Jex from The University of Queensland who won the ASP Student oral prize, Conor Jones from The University of Queensland who won the ASP Student poster+oral prize, and Michael Smout from the Queensland Institute of Medical Research who won the ASP Student poster prize at the 2006 ASP & Network Conference.

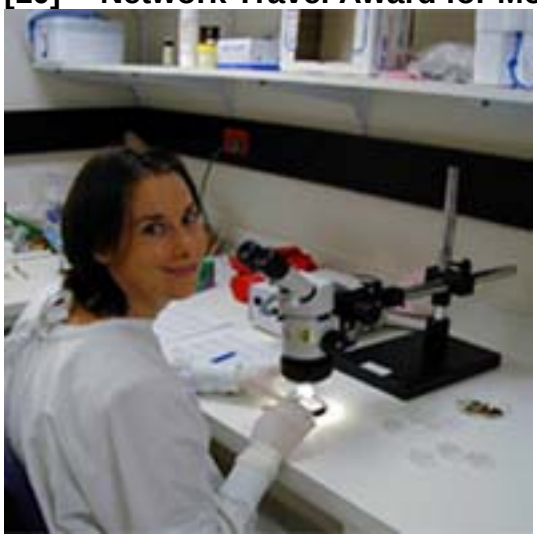
[9] Network Travel Award Winners

Congratulations to the most recent Network Researcher Exchange, Training and Travel Award winners:

- **Ms Linda M McInnes,** a PhD student from Murdoch University who attended the European Medical Biology Organisation course on Advanced Techniques in Molecular Medicine course in Uppsala, Sweden in June and an Australian National University National workshop on Genetic Analysis for Population Studies in Canberra in July 2006.
- **Dr. Abbey Bestall,** a PhD Student from Murdoch University who will travel to Melbourne to the Walter and Elisa Hall Institute for a Researcher Exchange. Abbey will work with Dr. Emanuela Handman's Leishmania Laboratory to learn the ELISA technique to detect the presence or absence of anti-Leishmania antibodies in kangaroo serum.
- **Neil Young,** a PhD candidate from the University of Tasmania/Aquafin CRC Health Program for his Researcher Exchange to work with Professor Ben Koop's laboratory at the Centre for Biomedical Research, University of Victoria, Canada between August and October 2006. Neil is investigating amoebic gill disease (AGD), caused by a protozoan parasite *Neoparamoeba* spp., of Atlantic salmon cultured in sea-cages in Tasmania.
- **Matthew Dixon** a PhD student from Queensland Institute of Medical Research for his Researcher Exchange to the laboratory of Dr Joanne Thompson at the Institute of Immunology and Infection Research, at the University of Edinburgh in August and September 2006. Through his Exchange Matthew will obtain knowledge in performing transfections in the rodent malaria's *P.berghei* and *P.chabaudi* and apply this to the study of commitment to gametocytogenesis in *Plasmodium*.

Profiles

[10] Network Travel Award for Molecular Parasitologist, Kate Mounsey



Kate Mounsey is a PhD student at Darwin's Menzies School of Health working as part of Dr Shelley Walton's group. Kate won a Network Travel Award and in 2005 spent three months with Prof. Roger Prichard's laboratory in McGill University, Canada to help her research. Kate spoke with Lisa Jones:

Tell me about your area of research?

My research looks at the molecular mechanisms of drug resistance in scabies. The first case of ivermectin resistance in the scabies mite was documented in crusted scabies patients in North Australia. As part of my PhD I'm using molecular techniques to identify and characterise scabies mite genes that are involved in ivermectin resistance.

What interests you about working in this area?

This work is challenging on many levels. Scabies mites are a difficult parasite to study; there is no animal model or *in vitro* culture system so I rely on scabies patients admitted to hospital to collect and study the mites. These challenges make it even more rewarding and exciting when I do make a breakthrough in my research. Scabies is a very important health problem, particularly amongst indigenous communities in remote central and northern Australia. The disease is particularly prevalent in children and, not only causes discomfort, but secondary skin infections, which can lead to serious complications such as rheumatic heart and kidney disease. My involvement with scabies patients is a constant reminder of why my work is important.

How has the Network travel award helped your research develop and how do you see your research developing in the future?

In Canada I worked with parasitologists at McGill University in Prof. Roger Prichard's laboratory where I received training in techniques to investigate genes potentially involved with ivermectin resistance in scabies; this included using real-time PCR to study – for the first time - the expression of scabies mite ABC transporters. Additionally, plans were made for continued

collaboration to further characterise a putative scabies mite chloride channel that may act as a drug receptor for ivermectin. This was a huge boost to my research work both practically - as I was able to work with the world-leaders of research into ivermectin resistance - and mentally, as a result of the confidence, motivation and enthusiasm I gained from working at McGill. I find this work very interesting and believe that the collaborative work with McGill University is a direct result of the Network Travel Award.

What advice do you have for other Network scientists who want to apply for a travel award?
"Go for it - there's nothing to lose"; the application process is very user-friendly!

What advice do you have for science students who are considering parasitology as a career?

One of the good things about parasitology is the diversity involved – it's a great starting point to learn about different areas, for example host-parasite interactions, immunology, molecular biology or epidemiology. Parasitology may not appear as glamorous as other scientific fields, but it is so diverse that you can gain many skills and develop a holistic approach to your research. My own research involvement goes beyond molecular parasitology – I also engage in public health work and patient interaction.

What do you see as the benefits of being part of the Network?
The main benefit of being part of the ARC/NHMRC Research Network for Parasitology is that the Network supports Australian research and encourages collaboration between groups, which improves the collective expertise.

Tell me about the highlight of your science career so far?
My trip to Canada and work at McGill was a fantastic opportunity and the highlight of my science career so far.

What would you like to do in the future?
My PhD is due to finish this year. I hope to continue to work to improve the health and well-being of people who live in developing regions; and I want to continue my research work in molecular parasitology.

We wish Kate all the best in her future and look forward to hearing more about her exciting research in molecular parasitology.

Conferences

[11] There is still time to register for the 3rd COST B22 Annual Congress on "Drug Discovery and Development for Parasitic Diseases", *October 1-4, 2006, Athens, Greece*

Congress information can be found at the following website:
http://www.eie.gr/iopc-costb22/index.html

The topics to be covered include:

- Novel targets for antiparasitic drug development
- Rational design and synthesis of new antiparasitic drug candidates
- Nature as a source for novel antiparasitic lead compounds
- Screening methods for antiparasitic activity
- Bridging genomics and proteomics towards new antiparasitic drugs
- Molecular mechanisms of resistance in parasites
- Targeted drug delivery against intracellular parasites
- Hit-to-Lead and Lead optimisation and candidate selection
- Networking for the development of antiparasitic drugs

Confirmed Speakers
Marc Ouellette (Centre de Recherche en Infectiologie, Canada)
Ian Hastings (Liverpool School of Tropical Medicine, UK)
Mary Moran (The George Institute for International Health, Australia)
Ernesto Fattorusso (U of Naples "Federico II", Italy)
Michael H. Gelb (U of Washington, USA)
Henri Vial (U de Montpellier II, France)
Guiseppe Campiani (U di Siena, Italy)
Rolf Walter (Bernhard-Nocht-Institut für Tropenmedizin, Germany)
Olle Heby (Umea Universiteit, Sweden)
Angus Bell (Trinity College, Ireland)
Stanny Geerts (Institute of Tropical Medicine, Belgium)
Ian Gilbert (U of Dundee, UK)
Barbara Papadopoulou (Centre de Recherche en Infectiologie, Canada)
Hagai Ginsburg (The Hebrew University of Jerusalem, Israel)

Position vacant

[12] Team Leader/Senior Scientist in Molecular Parasitology, AgResearch, Palmerston North, New Zealand

Are you ready to provide leadership and science excellence in this area of animal health research? Do you have a proven track record of developing new biotechnologies?

AgResearch, New Zealand's largest Crown Research Institute, is seeking an experienced molecular biologist with established skills and interest in parasitology to head up a team at the new Hopkirk Research Institute, in Palmerston North. The Hopkirk is a collaboration between Massey University and AgResearch.

We want to hear from you if you are ready to step up and make a difference by managing our Molecular Parasitology team. The team's major focus is on molecular biology of parasites affecting pastoral livestock species. It has established itself as an international leader in transgenesis of parasitic nematodes and has well developed research interests in drug target discovery, identification of genes important to parasitic life cycles, expression

and mapping of parasite genes and the genetic basis of anthelmintic resistance in parasitic nematodes. The team interacts with, and provides molecular support for, other research groups that focus on development of vaccines to control parasite infections and development of diagnostic and other tools that have utility in managing parasitic diseases in the livestock industry.

In addition to having strong scientific skills, this position requires you to be:

- Decisive
- A people developer
- Business Conscious
- Passionate

This is a senior science leadership role and the ideal candidate must have an internationally acknowledged background in parasitology and/or immunology, evidence of research leadership and grant success.

The Hopkirk is based on the Massey University Campus in Palmerston North a short distance from the AgResearch Grasslands Campus, situated in beautiful and inspiring rural surroundings.

AgResearch offers excellent working conditions, ongoing support and superb training and professional development opportunities.

For more information visit www.agresearch.co.nz/hopkirk or contact Dr Warwick Grant by email at warwick.grant@agresearch.co.nz

To apply on-line visit www.agresearch.co.nz/recruitment

Applications close 31 August 2006.

If you have any parasitology news stories please contact me by email Lisa.Jones@uts.edu.au or telephone 02-95144006. Don't forget that the Network newsletters can now be downloaded http://www.parasite.org.au/arcnet/Newsletter/Newsletter_170806.pdf

Please send me items for the next newsletter by 18 September 2006.

Best wishes,

Lisa
Communications Coordinator,
ARC/NHMRC Research Network for Parasitology