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*We gratefully acknowledge the support of our
Network Newsletter Sponsor, BioAustralis.*

In this issue....

Dear Network Participant,

As I write, the Network's Annual Report is on its way to Canberra – you can find a copy for yourself at:

<http://www.parasite.org.au/arcnet/reports/index.html>

Australian parasitologists continue to make important discoveries and the Network Annual Report summarises their efforts.

In this issue of our Newsletter, we extend our congratulations to Dave Kemp of QIMR, awarded an OA recently, and feature Jan Slapeta, who was part of a team that published an article in *Nature* recently about a new and highly unusual alveolate that sits, phylogenetically, very close to the Apicomplexa but photosynthesises. We also extend our congratulations to a number of young parasitologists who were awarded fellowships in the latest round of announcement by the NHMRC.

And, of course, a reminder to register and submit your abstracts – deadline April 11 - for the Annual Conference in Glenelg, SA in July.

As always, please don't hesitate to provide feedback and supply us with news stories, grant successes, job ads, notices of upcoming events *etc etc*.

In the meantime, best wishes,

Nick

(Nick Smith, Convenor, ARC/NHMRC Research Network for Parasitology; nick.smith@uts.edu.au)

Congratulations

Congratulations to Dave Kemp of the Queensland Institute of Medical Research, who was awarded a Medal of the Order of Australia on January 26, 2008 for *“service to medical research as a molecular biologist, particularly in the areas of tropical health and infectious diseases, through contributions to Indigenous health and to professional organizations”*.



Professor Dave Kemp OA

Conference News

Reminder – Early Bird Registration and Abstract Submission for the Glenelg2008 close on April 11, 2008. Full details about the conference can be found at www.parasite.org.au/arcnet/conference

The Network is, once again, subsidising venue and invited speaker costs to ensure the meeting is as affordable as possible. It

is a “not to be missed” event, with the organising committee having done an outstanding job of attracting some superb, internationally recognised speakers and providing some fantastic social events.

The conference will be held at the Stamford Grand Hotel in Glenelg, South Australia, just a short trip from Adelaide Airport. It will commence on Sunday, July 6 with a Welcome Reception at The Grand and conclude with the Conference Banquet at Hardy’s Reynella Winery on Wednesday, July 9.

Grant Winners

The NHMRC recently announced the latest recipients of career development fellowships and training fellowships and, pleasingly, there were several parasitologists on the list:

Rowena Martin, ANU and University of Melbourne

Jacob Baum, WEHI

Alex Maier, WEHI

Don Gardiner, QIMR

Michelle Gatton, QIMR

Mark Pearson, QIMR

Charlene Willis, QIMR & Griffith University

Kate Mounsey, Menzies School of Health Research

Nelson Lee, QIMR

Kylie Home, University of Melbourne

Congratulations to you all!

Network Researcher Exchange, Training and Travel Awards

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

Alex Loukas. QIMR Brisbane. To fund a visit from **Dr Jeffrey Bethony** (George Washington University, Washington DC) to network labs in Brisbane and Sydney.

Geoffrey Gobert. QIMR, Brisbane. Travel to Shanghai and the National Institute of Parasitic Diseases, and the Hunan Research Institute of Parasitic Diseases Yueyang, China.

Kathy Andrews. QIMR, Brisbane. To fund **Dr Geoff Dow** (Walter Reid Army Institute of Research WRAIR; Silver Spring, MD, USA) to spend a week at the QIMR to write a joint grant proposal to the Medicines for Malaria Venture.

Hayley Schwarz. Parasite Control Laboratory, LaTrobe University. For travel to The Menzies School of Health Research, Darwin to collaborate with **Deborah Holt** and **Shelley Walton** on the

molecular analysis of iron-binding proteins of *Sarcoptes scabiei*.

Remaining application dates in 2008

The Network Researcher Exchange Training and Travel Award scheme continues to prove to be an outstanding success and young researchers are particularly encouraged to apply for assistance. In 2008, there will be six application rounds with the following deadlines:

Friday May 30

Friday July 25

Friday September 26

Friday November 28

Applications will be assessed by a specific assessment committee and applicants will be advised of the outcome, where possible, within 4 weeks. Guidelines for the Network Researcher Exchange, Training and Travel Awards can be found at www.parasite.org.au/arcnet/funding

Recent Events

The Network has sponsored several very successful events recently:

“Northern Australia Malaria Symposium” (Brisbane, November 27, 2007), organised by Kathy Andrews, Michelle Gatton and Alberto Pinzon-Charry (Queensland Institute of Medical Research) and attended by 43 malariologists, from Queensland and the Northern Territory.

The symposium explored a range of topics including Parasite Biology, Drug Development and Resistance (with the ANU's Kevin Saliba a special guest speaker), Pathogenesis and Immunology. The symposium was designed to bring together malaria researchers from the north of Australia to explore potential collaborative research possibilities.

"Molecular Approaches to Malaria" in Lorne, Victoria, in early February, 2008, was also sponsored by the Network and was a great success, attracting over 400 malariologists from around the world (<http://www.mamconferences.org>). Congratulations to Brian Cooke, Brendan Crabb, Alan Cowman, Maureen Grant and Marian Cravino for organising an outstanding meeting.

The conference also saw the signing of a Memorandum of Understanding between the Network and the EU Network of Excellence for the Biology and Pathology of Malaria (*BioMalPar*). The MoU formalises the excellent relationship that already exists between the two Networks and, hopefully, will lead to even closer collaboration and co-funding opportunities.



Artur Scherf (Director, BioMalPar) and Nick Smith (Convenor, ARC/NHMRC Research Network for Parasitology) sign the MoU between the two Networks, overseen by Hannu Lang of the EU.

"The Imaging Infectious Diseases Workshop", a joint WEHI and Institut Pasteur event, was held at WEHI in January, 2008, with the assistance of the Network. See:

http://www.wehi.edu.au/WEHI_Groups/indexworkgroups.php?id=124

Lucky participants reported very enthusiastically about the value of the workshop and our thanks and congratulations go to Emanuela Handman for her splendid efforts in bring this meeting to fruition. It seems likely that a series of very productive collaborations and breakthroughs will result from this workshop in the not-to-distant future.

Network Mentorship Scheme

Early career researchers are encouraged to apply to the Network Convenor (nick.smith@uts.edu.au), in strict confidence, for funding to participate in the Network Mentorship Scheme. The scheme allows young investigators to be paired with experienced, successful researchers to discuss, plan, prioritise and set targets for their career. Typically, the early career researcher will fly to the institute of a senior parasitologist and spend a day there. Arrangements for professional development and progress to be reviewed by the pair annually can also be arranged. Importantly, mentors need not be from an

individual's home institution but can be drawn from across the Network. The scheme has proved very valuable for several young researchers and their mentors already.

To apply, simply write to Nick with a brief outline of your research interests and aspirations. You can also indicate a preferred mentor or ask Nick for advice on whom amongst the Network participants may be most suitable.

Network IT Initiative

The Network IT Initiative will continue in 2008 and Network Participants are encouraged to contact it's chair, Ross Coppel of the Victorian Bioinformatics Consortium at Monash University, to explore any and all their bioinformatic needs including::

- Microarray analysis/storage
- Sequence analysis/storage
- Comparative genomics
- Custom software development
- Online project collaboration
- Data visualization
- Computer hardware selection

So, don't hesitate to contact Ross to explore how he and his team can assist you:

<http://www.vicbioinformatics.com/parasitology.shtml>

- ross.coppel@med.monash.edu.au
- torsten.seeman@med.monash.edu.au

Network Survey

Thankyou for completing the annual Network Survey. The results of the survey appear in the Annual Report at:
<http://www.parasite.org.au/arcnet/reports/index.html>

Profile – Jan Slapeta

Jan Slapeta has tramped a winding road to his current position as Lecturer in Veterinary Parasitology at the University of Sydney. Jan did his undergraduate studies in veterinary medicine at the University of Veterinary and Pharmaceutical Sciences, Brno, in the Czech Republic. This led him to the decision that research was the world for him, so he undertook a very successful PhD in parasitology at the same university, publishing extensively on the molecular and evolutionary biology of coccidian parasites. Jan then accepted a Fogarty Fellowship to work as a postdoctoral researcher at the National Institutes of Health's Wadsworth Centre in Albany, New York, working on S-adenosylmethionine synthetase, and enzyme involved in the plant-like polyamine biosynthesis of *Cryptosporidium*. He also spent time characterising the relic mitochondrion of that parasite.

After a stint as a French Research Council Postdoctoral Scholar at Unite d'Ecologie, Systematique & Evolution, Orsay, France, Jan came to Australia as a postdoctoral fellow with Nick Smith and Sabina Belli at the University of Technology, Sydney, working on the development of the oocyst wall in *Eimeria*. The move proved a beneficial one as, a year or so later, he was offered a tenured lectureship at the

University of Sydney, where he is apparently flourishing as evidenced by his participation in a team that recently published an article in *Nature* that documents a highly unusual and intriguing organism (Moore *et al.*, 2008 A photosynthetic alveolate closely related to apicomplexan parasites. *Nature* 451: 959-963).

Chromera velia, described by Patrick Keeling of the University of British Columbia, in his review of the *Nature* article, as “a little brown ball”, is an algal symbiont of coral in Sydney Harbour (of all places!). It is fully photosynthetic but has housekeeping genes from the plastid that are most closely related to the same genes from the non-photosynthetic plastids of apicomplexan parasites like the malaria parasite, *Eimeria* and *Toxoplasma*. However, the photosynthetic genes of *Chromera*'s plastid are more closely related to those of the dinoflagellates, another branch of the Alveolata entirely. It is, effectively, a “missing link” between the dinoflagellates and the apicomplexans. If that was not enough, the team also put to bed a debate on whether the apicoplast is derived from red algae or green algae – it seems clear that the apicoplast and the plastid of dinoflagellates are the result of the same single endosymbiotic event involving a red alga, not a green alga.

More specifically, the plastid of *Chromera* is surrounded by four membranes, is pigmented by chlorophyll *a*, and uses the UGA codon to encode tryptophan in the *psbA* gene – these are classic features of the Coccidia (the subclass that includes *Toxoplasma* and *Eimeria*).

Why is this important to parasitologists? This simple organism is a perfect model for studying the evolution of apicomplexan parasites and may well be a very useful tool for testing putative new drugs that act against the plastid. And, as we all know, apicomplexans are, in some ways, difficult to work on as, at best, they need to be grown in living host cells and, at worst, are totally unable to be worked on outside of a living host. *Chromera*, however, grows like a weed in simple media.

The next step, no doubt, will be to sequence the entire genome of this intriguing organism and its comparison to free living dinoflagellates, on one hand, and parasitic apicomplexa on the other, will keep evolutionary biologists happily amused for decades.

Announcements

The Global Forum for Health Research and The Lancet announce their third joint essay competition for the under 30s on the theme Climate change and health: research challenges for vulnerable populations.

Rules and guidelines:

- Authors must have been born on or after 1 January 1978.
- Each author may submit one essay only.
- Essays may be submitted in English or French and should be 1500 words maximum.
- Essays must be based on the author's own ideas and not be derived from another source.

- Essays must not have been previously published.
- Entries are individual (i.e., the work of a single author).
- They should include original, even provocative ideas and not be technical or academic texts: tables, charts and figures are probably not necessary; references should be limited.
- Authors are free to be idealistic, passionate, to take established practices to task, albeit in a constructive fashion.
- Within the context of research for health, the theme allows authors to include any aspect that interests them particularly - for example, extreme weather, natural disasters, fuels and energy, transport, water management, vectors, food production, demographics, urban planning, security.

The deadline for receipt of entries is 30 April 2008.

A selection of shortlisted essays will be published in an anthology as well as on the Global Forum and Lancet websites and winners will be invited to take part (with all expenses paid) in the Global Ministerial Forum on Research for Health, which will take place in Bamako, Mali, from 17 to 19 November 2008.

For full details and submission of entries, see <http://www.globalforumhealth.org>

"Laboratory Diagnosis of Malaria: From Conventional to High Technology"

This 5 day International workshop, presented by the Department of Protozoology (Faculty of Tropical Medicine)

at Mahidol University, takes place between 18th and 22nd August 2008

For more details go to:

<http://www.parasite.org.au/arcnet/events/index.html>

"The Biology of Host-Parasite Interactions"

Elisabetta Ullu and Artur Scherf encourage you to apply to the upcoming Gordon Research Conference "The Biology of Host-Parasite Interactions", which will be held on June 22-27, 2008 at the beautiful Salve Regina College, Newport, RI, USA.

The conference will cover several different topics that are of interest to the "parasite" community. So far, the participation of 33 internationally renowned investigators has been secured and plans are to have approximately 25 short talks selected from the submitted abstracts. The GRC web site (<http://www.grc.org/>) provides detailed information on the programme and application process. The application deadline is May 30, 2008, but earlier applications are encouraged. There will be some travel fellowships available to support individuals from underrepresented minority groups as well as promising graduate students and post-docs.

Positions Vacant

PhD project in Schistosome Research

A PhD position is currently available in the laboratory of Dr Bernd Kalinna, Senior Research Fellow at the Centre for Animal Biotechnology, Faculty of Veterinary



NEWSLETTER

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Science, the University of Melbourne,
Australia.

Please contact Professor Robin Gasser,
Department of Veterinary Science, The
University of Melbourne, for more
information (robinbg@unimelb.edu.au)

The major focus of our laboratory is helminth parasites of medical and veterinary importance. Ongoing projects deal with basic molecular aspects of the genome of the human schistosomes including their resident mobile genetic elements (MGEs). We are currently constructing virus-like elements from those MGEs for functional genomics studies. The laboratory is funded by grants from The National and Medical Research Council of Australia and the National Institutes of Health, USA. For further information on our research see:

http://www.cab.unimelb.edu.au/cab_schisto.htm and contact Bernd H Kalinna for information about how to apply (Tel +61 3 8344 8805; email bernd.kalinna@unimelb.edu.au)

Research Assistant or Scientist - The University of Melbourne: Parasite Genomics and Drug Target Discovery

An opportunity exists in our group for a highly motivated assistant or scientist to undertake research in parasite genomics and drug target discovery. The research is focused on finding new methods for the control of parasitic worms that cause major diseases in livestock. You will have a BSc (H1), BVSc (H1), MSc, or an equivalent degree. Experience in molecular biology and/or bioinformatics is essential. Twelve-month fixed-term appointment, with the possibility of then undertaking a PhD, supported through a scholarship from the University of Melbourne.

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