

From the President's Desk

Dear Members,

Welcome to the Christmas Edition of the Newsletter. It is hard to believe another year has gone by so quickly!

I would like to take this opportunity to congratulate ASP members for recent grant successes; awardees are featured later in this Newsletter.

A reminder that the **2013 ASP Annual Conference** will not be held in July as is typical but will be held in Perth on 25-29 August 2013 as a joint meeting with the **World Association for the Advancement of Veterinary Parasitology (WAAVP)**. There will be a number of concurrent sessions dedicated to non-veterinary areas of parasitology and participants will have the added benefit of exposure to many high calibre national and international speakers in all fields of parasitology. Registrations and Call for Abstracts open in January 2013. Input by the membership into potential speakers and themes for future ASP conferences is always welcome, and should be directed to Nick Smith.

Members are also reminded of the **ASP Invited Speaker Program**, which provides the opportunity to invite high calibre international parasitologists to Australia, touring the country to meet with ASP researchers. Please let Nick Smith know of anyone you may wish to invite, with a brief justification.

2014 will mark the 50th year anniversary of ASP, and the **2014 ASP Annual Conference** will be held in Canberra to mark this occasion. There will be a number of accompanying special events and Council would like to use this opportunity to further raise the profile of parasitology in Australia. Chris Peatey is heading the "Anniversary Celebration Working Group" on behalf of Council. Please let us know



any ideas you may have to celebrate this event.

Thanks to those members who responded to the survey about the proposed **ASP Parasitology Course**. The response to this survey was one of the best ever! Total of 133 respondents (24.4% of active members, of which 47 were students = 21.6% of active student members). Information from the survey has been considered by Council and next steps will be discussed at the upcoming MTM. We aim to launch this course in 2014 in conjunction with the 50th Anniversary of the Society.

Members are also reminded of the pool of "Outreach Funds" available to support State/Territory events; up to \$500/event with a total per state/territory of \$2,000/calendar year. Applications for this funding are to be coordinated with your State/Territory representative. Since this pool of funds has not yet been widely accessed, I want to re-iterate that the funds can be used to support a wide range of activities including "beer and nibbles" networking sessions of State members or any other parasitology-related event.

In the last Newsletter, we noted that the bid to host the **International**

IN THIS ISSUE

- 1 From the President's Desk
- 3 Science and Technology Australia AGM
- 4 ASP Network News & Funding Successes
- 7 Alan Cowman
- 8 Alex Loukas
- 9 Cinzia Cantacessi
- 11 Teresa Carvalho and Christian Doerig
- 12 OzEMalar News and Geoff McFadden
- 14 Events
- 15 Outreach & Communication
- 16 WAAVP 2013
- 17 International Journal of Parasitology
- 18 Hong You
- 19 Publication: Klaus Rohde
- 19 In Memoriam: Robert L Rausch
- 20 State News
- 24 Jobs
- 25 ASP Council

From the President's desk continued

Congress of Tropical Medicine and Malaria 2016 in Brisbane in 2016 was successful. This Congress is tentatively planned for mid-end September 2016 and it is anticipated that the **2016 ASP Annual Conference** will be jointly held with the ICTMM, so please save the date! Mal Jones is heading the Organizing Committee on behalf of ASP, and it will be co-sponsored by the **Australasian Society of Infectious Diseases**. With approximately 3000 attendees expected, it should be an excellent event. A direct link to ICTMM is available on the ASP website. Congratulations to Mal for an outstanding job in securing this Congress!

Alan Cowman, ASP Fellow and current President of the **World Federation for Parasitology (WHP)**, has requested input by ASP members to populate the World Federation for Parasitology website: <http://www.wfpnet.org>. Any content in the areas of Highlighted Features; Educational Articles; Meetings; Jobs and Funding; and Products and Treatments would be appreciated. Items of potential interest to a more global audience can also be communicated. Please forward any material to Lisa Jones for uploading. This will provide excellent exposure for Australian Parasitology, and is something we should foster.

I would also like to draw your attention to a call by the **American Society of Parasitologists** for nominees for an "Eminent Parasitologist Lectureship" award (<http://amsocparasit.org/taxonomy/term/15>). This honours someone of eminence and international visibility for a substantial contribution to parasitology over a substantial period of time. Selection criteria for the award include eminence and international visibility for a substantial contribution to parasitology over a substantial period of time. It would be appreciated if you could please let me know any names you think worthy of nomination, before the submission deadline of 14th Jan 2013.

In other news, as noted at the 2012 AGM, Council has approved funds to finalize the

creation of a **Textbook of Veterinary Parasitology**, led by David Emory and Ian Beveridge. A business plan for the production and marketing of this as an e-book has been put together at the request of Council, and approved by the Exec. It is anticipated that this textbook will be widely used as an invaluable resource for Veterinary students and others, since currently there is no textbook on Veterinary Parasitology suitable for the Southern Hemisphere. Many thanks to David and Ian, and the many other coauthors, for their efforts!

ASP was represented at the recent Science & Technology Australia AGM meeting in Canberra by Richard Allen; a report on this is provided elsewhere in this Newsletter. I would like to take this opportunity to again invite any Member with an interest in science policy and politics to please let me know. It would be great for the Society to be more actively involved in this arena.

Finally, the Mid Term Meeting of Council will be held on 11th Feb 2013, so please discuss with your State/Territory representatives anything you would like brought to the attention of Council.

As the end of 2012 looms, we can reflect on the many achievements of the past year. I would like to congratulate all ASP members for their efforts, individually and collectively, in the discipline of parasitology. Australia continues to be highly regarded internationally, and we should be very proud of our contributions.

In closing, I would like to wish you all the very best for the upcoming festive season,

Merry Christmas and Happy New Year!

Best wishes
Denise Doolan

Closing Dates for Awards

ASP Network Researcher Exchange, Travel and Training Award and JD Smyth Award

Friday 29 March 2013
Friday 26 July 2013
Friday 29 November 2013

Bancroft-Mackerras Award

30 September 2013
(for award in 2014)

Sprent Award

30 September 2013
(for award in 2014)

ASP Fellowships

9 January 2013

For more information, visit the ASP website:
www.parasite.org.au

\$400 Undergraduate Prizes

The Australian Society for Parasitology is pleased to announce that it will be offering undergraduate student prizes of \$400 each to Australian Universities identified as offering a suitable course in parasitology, for presentation to the best undergraduate student in parasitology (highest passing mark/grade). The course(s) must be taught by a financial member of the ASP (of more than one year standing), and must comprise at least 30% parasitology.

Requests for 2013 prizes must be made by the eligible University to the ASP Treasurer or Secretary by the 30th September 2013. Requests for prizes must include the following for each eligible course:

1. Course name/code/degree year
2. Number of Students enrolled in 2013
3. Number of hours dedicated to parasitology (and total number of hours for the course)
4. Name of financial ASP member (of at least 1 year standing) teaching course

Science and Technology Australia AGM

Along with more than 60 other organisations, the ASP is a member of the national science body, Science and Technology Australia. STA, which was previously known as the Federation of Australian Scientific and Technological Societies, (FASTS) held its AGM in Canberra on Friday 23rd November, 2012. Dr Richard Allen, from the Kirk Lab at ANU, reports on some of the salient items from the meeting.

Elections of STA Executive Committee

The STA Executive Committee Members as elected on 23rd November are:

President:

Professor Michael Holland

President-Elect:

Dr Ross Smith

Vice-President:

Claude Gauchat

Secretary:

Dr Jeremy Brownlie

Treasurer:

Professor Peter Adams

Chair, Policy Committee:

A/Prof Rebecca Ritchie

Early Career Scientist:

Dr Enzo Porrello

Full Board and Executive details can be found at:

<http://scienceandtechnologyaustralia.org.au/about-science-australia/governance-and-board/>

Change of CEO.

STA's very effective CEO Anna-Maria Arabia completed her term on 30th Nov, 2012, and STA expressed its gratitude for her contribution. STA is currently in the process of appointing a new CEO to begin early in 2013.



President's Report

STA President, Prof Michael Holland, highlighted the challenges that Australian science will face in the future, not least from the funding perspective, citing upcoming cuts to the university sector. As outlined in the Mid-Year Economic and Fiscal Outlook (MYEFO), reductions in funding to the tune of ~\$1 billion are slated, affecting particularly the research-intensive universities. He mentioned the need for a stronger relationship between science and industry to drive a better conversion of knowledge to technologies, in order to improve the quality of life for all Australians; he gave examples of countries such as Israel from whom we can learn to do this better. These and other issues will be developed further in the STA's inaugural State of Science Report, due out late January 2013, intended to be a biennial publication providing analysis of a variety of factors that impact on Australian scientific performance.

Activities of STA in 2012 included:

Parliamentary Friends of Science – a forum in which MPs interested in science can hear from the sector and inform themselves about scientific issues (the most recent event was held 27th Nov to assist MPs to familiarise themselves with the McKeon Review of Health and Medical Research). *Science meets Policymakers* – provides an opportunity for policymakers to meet with scientists to discuss how science can better inform policy formulation. *Science meets Superannuation* – a forum whereby scientists and investors from Australia's Superannuation industry were brought together to learn about each other's field, in an exploration of finding additional

or alternative sources of revenue to fund Australian science. *Science meets Parliament* – an opportunity for STA's various member organisations to learn about how best to put their case for the value of science to Australia's future prosperity to political representatives, and about the competing demands on politicians and the budget.

Australia's Chief Scientist

Prof Ian Chubb, who briefly addressed the meeting, is chair of the Australian Research Committee, which has just handed down the 'National Research Investment Plan' (28Nov2012). The report can be found at: <http://www.innovation.gov.au/Research/Pages/NationalResearchInvestmentPlan.aspx>

STA in 2013

STA's aims for the upcoming year include:

- Maintaining its role as an advocate for science (be the 'Go To' organisation for science in Australia), particularly in the upcoming election year, and foster a scientifically literate and engaged Australia.
- Diversifying revenue opportunities.
- Continuing to expand membership (STA gained 6 new members in 2012).
- Aiming towards a \$10 million turnover by 2020.
- Continuing to promote its 3 anchor programs for the year: Science meets Policymakers, Science meets Superannuation and Science meets Parliament.

Science &
Technology
AUSTRALIA

News from the ASP Network for Parasitology

Congratulations to Australia's parasitologists who have done exceptionally well, in a challenging environment, in securing funding.

In recently announced NHMRC Research Fellowships and Project Grants, ARC Grants, other grant and scholarships, JD Smyth Travel Award and ASP Network for Parasitology Travel Awards, Australian parasitologists secured over \$16.9 million worth of funding. Details are listed on the following pages, please let us know of any additional grant and fellowship successes for newsletters and annual report.

Our 2013 Annual Conference will be a joint-meeting held with WAAVP 2013 in Perth, 25-29 August at the Perth Convention Centre and is shaping up to be a fantastic conference with a terrific program. See our full page feature on the conference later in the newsletter. We will hold our second series of Inspiring Australia events during WAAVP in collaboration with Perth Zoo and Scitech. These events are currently in the planning stage along with our 2014 Inspiring Australia events (to be held in Canberra) please contact Lisa (lisa.jones1@jcu.edu.au) if you want to be involved.

Seasons Greetings with best wishes for a very Happy New year!

Nick Smith
Convenor, ASP Network for Parasitology

Lisa Jones
Communications Coordinator

Congratulations JD Smyth Travel Award Winner

Maya Olshina, PhD Student, Walter and Eliza Hall Institute, Department of Medical Biology, University of Melbourne, for a Researcher Exchange to visit Kovar Lab, Cummings Life Science Centre, University of Chicago West Campus, April – August 2013

Congratulations ASP Network Travel Award Winners

Luz Adriana Botero Gomez, PhD student, Murdoch University for a Researcher Exchange to Department of Microbiology and Molecular Genetics, The Hebrew University-Hadassah Medical School, Jerusalem, Israel. January - February 2013

Alexander Brazenor, PhD student James Cook University for a Researcher Exchange to Whittington Laboratory, University of Adelaide/SA Museum, March, 2013

Dr. Hong You, Research Officer, QIMR for a Researcher Exchange to Yerkes National Primate Research Centre, Emory University, USA

Prof Barbara Nowak, NCMCRS University of Tasmania for a Parasitic diseases in fish mariculture workshop University of Tasmania, Launceston 4-5 February 2013.

Closing dates in 2013 for ASP Network for Parasitology Travel Awards

Friday 29 March 2013
Friday 26 July 2013
Friday 29 November 2013



Images courtesy of Rob Adlard, Queensland Museum. Part of the exhibition *Parasites in Focus*.

Funding successes

In a challenging funding environment, ASP members have enjoyed some great successes recently, including \$2.3 million in ARC funding and \$13.5 million in NHMRC funding.

ARC Discovery and Infrastructure and Equipment Grants

Professor Geoff McFadden, The University of Melbourne, *Drug Targets in the relict plastid of malaria parasites*

Professor Mike Bull, Dr David Gordon, Dr Stephanie Godfrey and Dr Andrew Sih, The Flinders University of South Australia, *What drives parasite spread through social networks: lessons from lizards*

Dr Ross Waller, A/Professor Arnab Pain, The University of Melbourne, *Radical change in the architecture of a nucleus: loss of typical DNA organization systems in dinoflagellates*

Professor Geoff McFadden, Professor Leann Tilley, Professor Tony Bacic, Dr Eric Hanssen, Professor Paul Gleeson, Professor Dougal McCulloch, Dr Madhu Bhaskaran, Professor James Friend, Professor David Thorburn, Dr Jake Baum, The University of Melbourne, RMIT University, The Walter and Eliza Hall Institute of Medical Research, Murdoch Childrens Research Institute, *Three-dimensional cryo-electron microscope facility*

Professor Shaun Collin, Professor Carlos Duarte, Professor William Erskine, Professor Barry Marshall, A/Professor Kathryn Heel, A/Professor Mel Ziman, Dr Matthew Sharman, Dr Elin Gray, Professor Andrew Thompson, Professor Una Ryan, Dr Philip Stumbles, The

University of Western Australia, Edith Cowan University, Murdoch University, *Expanding capability in Western Australian flow cytometry for earth, ocean, environmental and biomedical science: state-of-the-art four laser and 12 colour analysis.*

Professor David Sampson, A/ Professor Peta Clode, Professor Kingsley Dixon, Professor Daniel Murphy, Dr Killugudi Swaminathalyer, Professor Andrew Thompson, Dr Zonghan Xie, Professor Dongka Zhang, The University of Western Australia, Murdoch University, Edith Cowan University, WA Botanic Gardens and Parks Authority, *A world class, high-resolution scanning electron microscopy facility for West Australian researchers.*

NHMRC Project Grants

Institution names refer to the Administering Institution, not necessarily the home institution of individual researchers.

Professor Kiaran Kirk, Australian National University, *Targeting an ion pump in the malaria parasite with multiple compound classes*, **\$371,500**

Professor Raymond Norton, Dr Jonathan Richards, Dr Christopher MacRaid, Monash University, *Generating an effective vaccine response against the intrinsically unstructured malaria antigen Merozoite Surface Protein 2*, **\$655,517**

Professor Marshall Lightowlers, University of Melbourne, *Immunological prevention of cysticercosis and hydatid disease*, **\$548,267**

Dr Michelle Wykes, Professor Arlene Sharpe, The Council of the Queensland Institute of Medical Research, *The differential contribution of Programmed death-1 ligands to malarial immunity*, **\$316,556**

Dr Tsin Yeo, Professor Nicholas Anstey, Dr Timothy William, Dr Arjen Dondorp, Menzies School of Health Research, *Targeting Toxoplasma gondii latent stages responsible for chronic disease*, **\$673,048**

Professor Ronald Quinn, Professor Wesley Van Voorhis, Dr Rebecca Pouwer, Associate Professor Katharine Trenholme, Dr Katherine Andrews, Griffith University, *Development of Fragment Hits into effective Antimalarials; Targeting Malaria Eradication*, **\$653,437**

Dr Darren Gray, Professor Gail Williams, Professor Archie Clements, Professor Yuesheng Li, Professor Remigio Olveda, Dr Peter Steinmann, Dr Kate Halton The University of Queensland, *A school-based health education package for the prevention of soil-transmitted helminth infections in China and the Philippines*, **\$1,488,948**

Dr Christian Engwerda, Dr Ashrafal Haque, The Council of the Queensland Institute of Medical Research, *Defining immune regulation and T cell responses during chronic infectious disease*, **\$690,264**

Professor Simon Foote, Associate Professor Brendan McMorran, Dr Gaetan Burgio, Macquarie University, *Identifying novel antimalarial targets using ENU mutagenesis in the mouse*, **\$730,612**

Funding Success continued

Dr Jacob Baum, Dr Stuart Ralph, The Walter and Eliza Hall Institute of Medical Research, *Cytoskeletal remodeling of the erythrocyte during malaria parasite invasion*, **\$540,487**

Professor Simon Foote, Associate Professor Brendan McMorrان, Macquarie University, *Griseofulvin, a novel host-directed antimalarial drug*, **\$442,363**

Professor James Beeson, Professor Stephen Rogerson, The Macfarlane Burnet Institute for Medical Research and Public Health Ltd, *Surface antigens of Plasmodium falciparum-infected erythrocytes and immunity to malaria in humans*, **\$578,502**

Dr Christopher Tonkin, Associate Professor Brian Smith, Associate Professor Michael Lawrence, The Walter and Eliza Hall Institute of Medical Research, *Functional analysis of the Toxoplasma Myosin driving tissue dissemination and host cell invasion*, **\$735,586**

Dr Michelle Gatton, Associate Professor Qin Cheng, The Council of the Queensland Institute of Medical Research, *Containment potential and risk of spread of artemisinin resistant Plasmodium falciparum*, **\$368,266**

Dr Jason Mulvenna, Associate Professor Jeffrey Bethony, Professor Paul Brindle, Associate Professor Malcolm Jones, James Cook University, *Biomarkers for the progression of cholangiocarcinoma: from risk factors to carcinogenesis*, **\$507,347**

NHMRC Aboriginal and Torres Strait Islander Health Research Fellowship

Ms Simone Reynolds, The Council of the Queensland Institute of Medical Research, *Scabies mite proteins as targets for the development of new therapeutics*, **\$299,564**

NHMRC Australian Clinical Fellowship

Dr Josh Hanson, Menzies School of Health Research, *Improving the medical care of adults admitted to hospital with severe malaria*, **\$359,564**

NHMRC CJ Martin - Overseas Biomedical Fellowship

Dr Andreas Kupz, James Cook University, *Identification of novel strategies to mediate immunity against intracellular pathogens*, **\$325,084**

Dr Mark Agostino, The Macfarlane Burnet Institute for Medical Research and Public Health Ltd, *Improving the immune response to bacterial superbugs and malaria*, **\$319,180**

NHMRC Peter Doherty - Australian Biomedical Fellowships

Dr Hayley Joseph, The Walter and Eliza Hall Institute of Medical Research, *Changing patterns of immunity following large scale malaria control programs in the South West Pacific*, **\$299,564**

Dr Stephan Karl, The Walter and Eliza Hall Institute of Medical Research, *Tackling fundamental knowledge gaps about the malaria parasite species Plasmodium vivax, enabling significant advances in malaria control and drug and vaccine development*, **\$299,564**

Dr Cinzia Cantacessi, James Cook University, *Hookworm proteins as novel anti-inflammatory therapeutics*, **\$299,564**

Dr Hong You, The Council of the Queensland Institute of Medical Research, *Identifying Genes Associated with Parasitism, and Novel Drug and Vaccine Targets*, **\$299,564**

Mr Wilson Wong, The Walter and Eliza Hall Institute of Medical Research, *Dissecting the molecular basis of malaria parasite cell movement*, **\$299,564**

NHMRC Practitioner Fellowship

Professor James McCarthy, Queensland Institute of Medical Research, *Developing drugs and vaccines for malaria by undertaking experimental studies in humans*, **\$380,583**

NHMRC R.D. Wright Biomedical Fellowship

Dr Rowena Martin, Australian National University, *Understanding how to combat drug resistance in the malaria parasite: Examination of two proteins that are key to the parasite's ability to evade the toxic effects of antimalarial drugs*, **\$397,724**

NIH EuPathDB Driving Biological Projects Grants

Professors Adrian Hehl, Peter Deplazes, Mike Grigg and Nick Smith, University of Zurich, National Institute of Allergies and Infectious Diseases and James Cook University, *Sexual development in Toxoplasma: high-throughput functional genomics and proteomics*. **US\$425,000**

Researcher News: Alan Cowman

Professor Alan Cowman of WEHI has been named a Howard Hughes Medical Institute (HHMI) Senior International Research Scholar, his fourth award from the institute.

Professor Cowman has had a major impact on infectious disease research in the field of malaria. He has spent the past 30 years studying the parasite *Plasmodium falciparum*, which causes the most deadly form of malaria in humans. The research has led to a better understanding of how the malaria parasite evades detection by the human immune system and how it becomes resistant to antimalarial drugs.

Professor Cowman, who is head of the Walter and Eliza Hall Institute's Infection and Immunity division, was one of 13 researchers who received HHMI grants of \$100,000 per year for five years.

The HHMI Senior International Research Scholar awards support outstanding biomedical scientists working outside the United States who have made significant contributions to fundamental research in

the biological sciences.

Professor Cowman said he was honoured to receive the award. "It is pleasing to have our research recognised globally for the contribution it has made to the field," Professor Cowman said. "I have had the great fortune to have my research supported by the Howard Hughes Medical Institute for 20 years now, and I'm very grateful to them for their ongoing support."

Malaria caused by *Plasmodium falciparum* is one of the most serious and widespread parasitic disease of humans. Each year, several hundred million people become infected with up to one million deaths.

Professor Cowman heads a laboratory that focuses on how the malaria parasite invades human red blood cells and develops in this protected environment so that it can hide from the host immune response.

"Our ultimate goal is to understand how the malaria parasite infects humans and causes disease and to use these insights to develop new antimalarial therapies," Professor Cowman said. "Red blood cell

invasion is an essential step in survival of the malaria parasite, so is a point in the parasite lifecycle that is vulnerable to immune attack and drug interventions."

Professor Cowman and his colleagues are progressing a 'multi-component subunit' vaccine into clinical development. The vaccine is made up of three proteins the team identified as being critical for the function of the parasite. They are also developing the first potential malaria vaccine that uses a whole, genetically modified malaria parasite to protect against infection.

Professor Cowman has received many awards for his work on *Plasmodium falciparum*, including the 1993 Gottschalk Medal for Medical Science and Biology, the 1994 Boehringer-Mannheim Medal, the 2001 Royal Society of Victoria Research Medal, the Centenary Medal from the Governor-General of Australia, and has been elected as a Fellow of the Australian Academy of Science and a Fellow of the Royal Society (United Kingdom).

Text and image supplied by WEHI



Researcher News: Alex Loukas

Fulbright Senior Scholarship recipient Professor Alex Loukas has recently returned from a three month sabbatical in California.

In August Alex Loukas, a 2012 Fulbright Senior Scholarship recipient, travelled with his family, to the United States and spent 3 months working with Professor Phil Felgner at the University of California, Irvine.

The purpose of Alex's visit was to further his work on developing a hookworm vaccine and anti-inflammatories based on hookworm proteins.

The Felgner lab pioneered the development of protein microarrays and have generated proteome arrays for almost 30 different pathogens. ASP president Denise Doolan introduced Alex to Phil Felgner through their collaborative NHMRC program grant.

This collaboration has now resulted in the generation and screening of the first helminth proteome arrays to be produced anywhere in the world, and the work has spurred numerous grant applications to national and international funding bodies.

Alex's grand plan of getting back into the lab in the US was a well-intentioned but somewhat naive pipe dream, and was overruled by the call of funding opportunities. Alas he was tied to the computer for much of his time.

He did however get to take a few road trips with his family, including Yellowstone and Yosemite National Parks where they spotted bison, otters, beavers, elk, moose and even grizzly and brown bears - purely parasitology-motivated trips in search of road carrion of course....



Researcher Interview: Cinzia Cantacessi

Dr Cinzia Cantacessi is a postdoctoral researcher at the Queensland Tropical Health Alliance Research Laboratory, James Cook University (Cairns). It has been a big year for Cinzia, being awarded The University of Melbourne Chancellor's Prize for Excellence in a PhD Thesis and an NHMRC Peter Doherty - Australian Biomedical Fellowship for her research on "Hookworm proteins as novel anti-inflammatory therapeutics". Cinzia speaks to Lisa Jones about her career, her research and her recent successes.

Dr Cinzia Cantacessi is a postdoctoral researcher at the Queensland Tropical Health Alliance Research Laboratory, James Cook University (Cairns). It has been a big year for Cinzia, being awarded The University of Melbourne Chancellor's Prize for Excellence in a PhD Thesis and an NHMRC Peter Doherty - Australian Biomedical Fellowship for her research on "Hookworm proteins as novel anti-inflammatory therapeutics". Cinzia speaks to Lisa Jones about her career, her research and her recent successes.

Cinzia describes herself as a parasitologist with particular interest in bioinformatics applied to the development of new drug discovery of new drug targets against parasites. She graduated from Bari University (Università degli Studi di Bari), on the east coast of Italy with a Bachelor Degree in Veterinary Science. Following her undergraduate degree Cinzia started her path as a parasitologist claiming, "I had an inspirational mentor who 'infected' me!" So, at Bari, one of the best Veterinary Science faculties in Italy and among one of the three recognized Veterinary faculties in recognized in Europe and one of the



best Veterinary Science faculties in Italy, Cinzia studied basic parasitology, lifecycles and molecular biology of parasites. Cinzia says, "I was passionate about research early in my science career. My supervisor, Professor Domenico Otranto (Faculty of Veterinary Medicine at Bari University),

did lots of fieldwork with drug companies on prevention of tick-borne diseases and vector-borne diseases in dogs and I researched fleas ticks and sandflies. It was inspiring and fun." Professor Otranto encouraged her to do a PhD overseas to gain more experience and learn another

Cinzia Contacessi continued

language to further her career.

Cinzia applied for a scholarship at The University of Melbourne with Professor Robin Gasser, who collaborated with Professor Otranto. Cinzia found her PhD a great experience. Her PhD started out as a diagnostics project but, because bioinformatics was experiencing a boom in veterinary and parasitology research, she embraced this new technology, with Robin's blessing, and stunning success followed.

Cinzia looked at molecular pathways of nematodes, focusing particularly on differences between different life cycle stages and adult males and females. She was a novice at bioinformatics, which proved to be an advantage, because it led her to develop a pipeline workflow for researchers not familiar with bioinformatics. "Researchers can use this software workflow for other parasites, it is applicable to other organisms," explained Cinzia. "And, from a drug development perspective, sequencing and bioinformatics has a future using these technologies because it helps to find new targets for drugs and understanding molecular biology" said Cinzia.

Cinzia published 10 papers before submitting her PhD and contributed to 20-30 other papers as a co-author; she

finished her PhD in 3 years with over 50 publications and also presented at International conferences. In recognition of this, in October 2012, Cinzia was awarded The University of Melbourne Chancellor's Prize for Excellence in a PhD Thesis, a prestigious, annual award recognising the University's high-achieving graduate researchers. Cinzia was thrilled to have won the award and gives credit to her supervisors and colleagues.

Cinzia says of her achievement, "I was extremely honored to be nominated for the award, let alone to have won such a prestigious prize. My first thoughts on hearing I had won were of my PhD supervisor and the people I worked with at Melbourne. It was such a great opportunity to have worked with such wonderful people."

Cinzia's ultimate aim is to go into field and her move to James Cook University, Cairns is one step closer to that goal. Cinzia met Professor Alex Loukas (James Cook University) and felt he had a great innovative approach to his research developing vaccine candidates and translation into field work. And, she believed her bioinformatics skills could help.

At JCU, Cinzia is analysing anti-inflammatory molecules from hookworms to see how they interact with their host

and investigating what gene expression changes occur in a mouse model upon injection of these molecules.

"I want to know what is the how hookworm molecules doing that is causing suppression of allergic and autoimmune diseases like asthma, Crohn's, IBD and coeliac disease," Cinzia explained.

Cinzia was recently awarded an NHMRC ECR Peter Doherty - Australian Biomedical Fellowship "Hookworm proteins as novel anti-inflammatory therapeutics" for 4 years to look at interactions between hookworm molecules with the ultimate aim to translate to therapies for allergic diseases. She is collaborating with Associate Professor Andreas Hoffman (Griffith University, Eskitis Institute) and Professor Domenico Otranto (Bari University, Italy).

Cinzia would like to be an academic with a leadership role, and lecture to veterinary science students. She is looking for opportunities to work on partnership projects with drug companies to make the most out of the new technologies used for screening to find candidate drug targets.

We wish Cinzia well for the future and look forward to hearing more about her parasitology work.



Looking for a postgraduate scholarship?

JASON

www.jason.edu.au

A small world

Teresa Carvalho, a Research Fellow in Christian Doerig's lab at Monash, describes her journey from Paris to Melbourne - a story of friendship and international collaboration.

It was during my PhD that I first met the great Christian Doerig. I was in Paris, working in Robert Menard's lab at the Pasteur Institute, and (desperately) trying to get some conditional mutagenesis system going in *Plasmodium berghei*. One day, a tall bearded guy with a Swiss accent came to the lab and introduced himself. Christian talked about his passion for *Plasmodium* kinases, convinced everyone that the world should be working on these great proteins and before he left we had figured out a way to collaborate. Six months later, when the project had borne no results, the collaboration ended. Nevertheless we had lots of fun (even without positive results!) and, it seemed, it was all about giving your very best.

I finished my PhD and came to Australia for a post-doc. Christian moved to Glasgow (then later to Switzerland), and we did not see each other again for 7 or 8 years. Until the day I got an e-mail from him: he was coming to Melbourne for a collaboration and asked if I was around. It would be nice to catch up after such a long time. Over lunch, he then told me the real purpose of his visit: he had been asked to come and interview for the position of Head of Department of Microbiology at Monash

University. How exciting!

After a couple of months, I received a new e-mail: he had actually been offered the position and was coming back to Melbourne with his wife Caroline "to sort things out" prior to the big move with their four children. They both came over to our place for dinner and we thought it was our duty to introduce them to Australian wines. They had made a fantastic decision and should know that they would not be disappointed in any way - neither by the food nor by the wine of this wonderful country! Over the course of the dinner, we talked about their future projects. This time, unlike his previous lab relocations (Paris to Glasgow then Glasgow to Lausanne) Christian would not be bringing a team. Australia was just a bit too far. Instead, he would be hiring a post-doc and an RA to start up his new lab at Monash.

"What are your plans?" - he asked. I replied I would be looking for a job in 5-6 months time, coincidentally the same time he would be hiring. I was not interested; I had had enough of the bench and was contemplating doing something different. As the evening went on, we opened a few bottles, made plans for the future,

had a good time and I remember Christian saying "A friend of mine once told me he never collaborates with someone that he hasn't been drunk with. I think it's a great principle!" As they were leaving, my partner, with a cheeky smile, said "you can now work together as the drinking part is done!"

A few weeks later, I saw the job description and decided to apply for it. After all, if I was going to give a second chance to a scientific career, it could only be with someone like Christian. A couple of months later, I was offered the job and Megan Bird was recruited as an RA.

I can truly say the journey has been fantastic. The Microbiology Department at Monash is an incredibly friendly and exciting working environment. In this first year, Megan and I have set up the lab and started to work on a few very stimulating projects. Our main focus is centred on *Plasmodium falciparum* functional kinomics and we are both continuing the work initiated in Christian's previous lab in Lausanne, as well as developing new projects on selected protein kinases of malaria parasites. We are now doubling our capacity with our PhD student freshly arrived from Malaysia, Ms Siti Shahpudin, and a very enthusiastic third year student, Ms Caitlin Conway, who decided to stay with us next year for her Honours degree. Further, it seems Iberians are taking over the Department with the arrival of Prof Jose Garcia-Bustos, from Spain, who is also establishing his lab to work on *Plasmodium falciparum* and high-content phenotypic screening. We have ongoing projects with Jose and I am grateful to collaborate with someone to whom chemical structures make sense!

The world is indeed a small place. Serendipity and international collaboration are such striking characteristics of a life in science. When I left Europe eight years ago, I believed I would be back two years later, and here I am working at Monash University with a Swiss boss, a Spanish collaborator and exhilarating times ahead.



News about Australia/Europe Malaria Research Cooperation

Back from a 3-month sabbatical in Kilifi, Kenya I'm feeling enlightened and energised and have included a few photos from my time away, it was such a rich cultural experience I've tried to capture through the camera lens.

Congratulations to **Professor Alan Cowman**, head of the Walter and Eliza Hall Institute's Infection and Immunity division who has been named a Howard Hughes Medical Institute (HHMI) Senior International Research Scholar, his fourth award from the institute. Alan was the only Australian researcher to receive a grant from HHMI Senior International Research Scholar in 2012.

Professor Alan Cowman has spent the past 30 years studying the parasite *Plasmodium falciparum* and has had a major impact on infectious disease research in the field of malaria. The research has led to a better understanding of how the malaria parasite evades detection by the human immune system and how it becomes resistant to antimalarial drugs.

Congratulations to malaria researchers who were successful in the recent ARC and NHMRC announcements of grants and fellowships:

Professor Geoff McFadden, The University of Melbourne; **Professor Kieran Kirk**, Australian National University; **Professor Raymond Norton**, **Dr Jonathan Richards** & **Dr Christopher MacRaid**, Monash University; **Dr Michelle Wykes** & **Professor Arlene Sharpe**, Queensland Institute of Medical Research; **Dr Tsin Yeo**, **Professor Nicholas Anstey**, **Dr Timothy William** & **Dr Arjen Dondorp**, Menzies School of Health Research (NT); **Professor Ronald Quinn**, **Professor Wesley Van Voorhis**, **Dr Rebecca Pouwer**, **Associate Professor Katharine Trenholme** & **Dr Katherine Andrews**, Griffith University; **Professor Simon Foote**, **Associate Professor Brendan McMorran** & **Dr Gaetan Burgio**, Macquarie University; **Dr Jacob Baum**, The Walter and Eliza Hall Institute of Medical Research & **Dr Stuart Ralph**,

University of Melbourne; **Professor Simon Foote** & **Associate Professor Brendan McMorran**, Macquarie University; **Professor James Beeson** & **Professor Stephen Rogerson**, The Macfarlane Burnet Institute for Medical Research and Public Health; **Dr Michelle Gatton** & **Associate Professor Qin Cheng**, Queensland Institute of Medical Research; **Dr Hayley Joseph**, The Walter and Eliza Hall Institute of Medical Research; **Dr Stephan Karl**, The Walter and Eliza Hall Institute of Medical Research, **Mr Wilson Wong**, The Walter and Eliza Hall Institute of Medical Research, **Dr Josh Hanson**, Menzies School of Health Research (NT), **Dr Mark Agostino**, The Macfarlane Burnet Institute for Medical Research and Public Health; **Dr Rowena Martin**, Australian National University; and **Professor James McCarthy**, Queensland Institute of Medical Research.

Congratulations to our latest OzEMalaR Travel Award winners:

Dr Clare Smith, University of Tasmania/ Menzies Research Institute Tasmania. Researcher exchange to investigate the role of host enzymes in the liver-stage of malarial infection in the laboratory of Maria Mota, Malaria Unit, Institute of Molecular Medicine, University of Lisbon.

Melanie Shears, PhD candidate, McFadden Laboratory, The School of Botany, The University of Melbourne. Metabolomics of Protozoan Parasites Workshop, University of Glasgow and Strathclyde University.

Dr Cyrille Botté, Research Fellow, McFadden Laboratory, The School of Botany The University of Melbourne Metabolomics of Protozoan Parasites Workshop, University of Glasgow and Strathclyde University.

Ghizal Siddiqui, PhD student, Monash University, Cooke Laboratory, Researcher exchange to the laboratory of Leicester University, Tobin Laboratory to gain technical expertise.

Closing dates in 2013/14 for OzEMalaR Travel Awards are:

Friday 11 January 2013
Friday 1 March 2013
Friday 17 May 2013
Friday 12 July 2013
Friday 13 September 2013
Friday 15 November 2013
Friday 10 January 2014

Visit our website www.ozemalar.org to find out how you can apply for OzEMalaR Travel Awards to support early career malaria researchers (PhD and postdocs) from Australia to work and be trained in top European laboratories within EviMalaR (= BioMalPar) for malaria research. To check which laboratories are eligible as hosts visit www.evimalar.org.uk

Download funding guidelines from the ozemalar website and start planning your researcher exchanges to utilise this great opportunity. We hope to see lots of new applications in 2013.

Please email Lisa with any news, jobs or events you have for the website (lisa.jones1@jcu.edu.au) or with your comments and suggestions.

Season's Greetings with best wishes for a very Happy New year!

**Geoff McFadden
Convenor, OzEMalaR**

Out of Africa

As he reaches the end of a memorable sabbatical, Geoff McFadden counts his blessings

- 90 days
- 28,236 air miles
- 1,268 road miles (felt like more on the rough, dusty roads)
- 1 triathlon
- 11 dozen Tusker Malts (sounds a lot but divided by 90 days it's modest)
- 47 gin & tonics (didn't get malaria.....so far)
- 1,877 photographs
- 2,324 emails
- 32,000 words of my book written
- 23 hours sailing
- ...3 family visitors :-)
- 4 safaris
- 8 trips to Mombasa airport
- 127 bird species
- 23 lions
- 1 leopard
- 3 cheetahs
- \$3,000 dollars raised for Upendo orphanage
- = **1 amazing time**



Events

Human Parasitology Masterclass at James Cook University, Cairns campus, 3-7 June 2013.



Professor Nick Smith and **Professor Alex Loukas** (both of James Cook University, Queensland Tropical Health Alliance and the Australian Society for Parasitology), will be leading this five day masterclass along with **Associate Professor Graham Roberston** (University of Sydney / Concord Hospital).

The Masterclass is aimed at medical and health professionals, scientists, students and tropical health program managers in the Asia.

Cost

Registration fee in Australian dollars: \$1900 (inc GST), for those enrolling outside the JCU Postgraduate Program. Normal student fees apply for JCU students.

Enrolments

Participants who wish to enrol in this Master Class outside of the JCU Postgraduate Program, email lisa.jones1@jcu.edu.au.

Places are limited and enrolments close 3 May 2013. There will be no formal assessment, however, participants who attend the entire five day course will receive a Certificate of Participation.

Above: some of the participants from the 2012 Masterclass stand outside the QTHA laboratory on the grounds of James Cook University's Cairns campus.

Outreach



Dr Tommy Leung, ASP Member and a keen social media advocate, recently appeared on a Google + broadcast.

Appearing on an episode of the deSTEMber Hangout on Air called *Living with Body-Snatchers*, Tommy introduced his audience to parasites and "their hidden world of biological drama and intrigue."

The broadcast is available here:

<https://www.youtube.com/watch?v=zmxahj51RS0>

Tommy also writes the Parasite of the Day blog: <http://dailyparasite.blogspot.com>

Outreach Funding

ASP members are encouraged to apply for ASP funding to support outreach in their state. Up to \$500 per event is available with a total per state or territory of \$2000 per calendar year. Proposals are to be submitted for consideration by State Representatives. Initiatives should foster outreach by members and advance the field of parasitology. This pool of funds has not yet been widely accessed and ASP President Denise Doolan would like to emphasise that the funds can be used to support a wide range

of activities - from seminars, symposia atc to "beer and nibbles" networking sessions of State members or any other parasitology-related event.

Proposals are to be submitted for consideration by State/Territory Representatives.

Communications

Professor Alan Cowman, President of the World Federation of Parasitologists, has requested assistance from ASP members in populating the the WFP's website.

The World Federation of Pasraitologists website is available at the following address:

<http://www.wfpnet.org>

Please e-mail your contributions to Lisa Jones (lisa.jones1@jcu.edu.au) for inclusion in the following areas:

- Highlighted Feature
- Educational Articles
- Meetings
- Jobs and Funding
- Products and Treatments

Your information may also be included on the ASP website and/or newsletter.

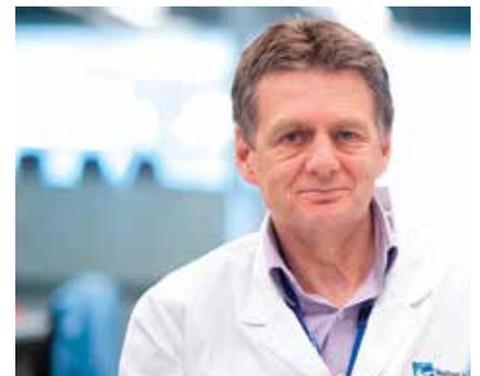


Image of Alan Cowman courtesy of WEHI.

25-29 August 2013

Perth Convention Exhibition Centre
Western Australia



24th International Conference of the World Association
for the Advancement of Veterinary Parasitology
Hosted by **The Australian Society for Parasitology Inc.**

**Call for abstracts
now open**

**Registration
open early 2013**

Key dates

Registration Opens: 7 January 2013
Abstract Closes: 31 March 2013
Abstract Notification: 19 April 2013
Early Bird Registration: 30 April 2013

If you would like to keep up to date with the latest conference information please visit the website and express your interest in attending via the online form. For further information contact Kylie skinner on +61 8 9389 1488 or email kylie.skinner@eew.com.au

On behalf of the Australian Society for Parasitology, we have great pleasure in inviting you to the 24th International Conference of the World Association for the Advancement of Veterinary Parasitology in Perth, Western Australia, from 25-29 August, 2013.

REGISTRATION

Conference registrations will open online on **Monday 7 January 2013**. Please visit the conference website to register prior to **Tuesday 30 April 2013** in order to secure your **Early Bird Registration**.

CALL FOR ABSTRACTS

Have you submitted your abstract for WAAPV 2013? We are pleased to advise the submission date has been extended to **Sunday 31 March 2013**. Authors will be notified of the status of their submission by **Friday 19 April 2013**, speakers are encouraged to register prior the end of Early Bird Registration in order to confirm their attendance.

SPONSORSHIP & EXHIBITION

Would you like to showcase your organisation at WAAPV 2013? Exciting **sponsorship and exhibition opportunities** are currently available and are selling quickly. Secure your Sponsorship now to receive the longest exposure in the lead up to the conference. To receive your copy of the Prospectus please contact kylie.skinner@eew.com.au

www.waavp2013perth.com

IJP News

International Journal for Parasitology highlights

November 2012 issue

Invited Reviews

Primaquine toxicity forestalls effective therapeutic management of the endemic malarias. J. Kevin Baird

African Plasmodium vivax: Distribution and origins. Richard Culleton, Richard Carter

Structural architecture and interplay of the nucleotide- and erythrocyte binding domain of the reticulocyte binding protein Py235 from Plasmodium yoelii. Ardina Grüber, Malathy S. S. Manimekalai, Peter R. Preiser, Gerhard Grüber

Human ex vivo studies on asexual Plasmodium vivax: the best way forward. Bruce Russell, Rossarin Suwanarusk, Benoit Malleret, Fabio T. M. Costa, Georges Snounou, J. Kevin Baird, François Nosten, Laurent Rénia

Finding the sweet spots of inhibition: Understanding the targets of functional antibody against Plasmodium vivax duffy binding protein. Francis B. Ntumngia, Christopher L. King, John H. Adams

Current Opinions

On the pathogenesis of Plasmodium vivax malaria: Perspectives from the Brazilian field Fabio TM Costa, Stefanie CP Lopes, Letusa Albrech, Ricardo Ataíde, André M Siqueira, Rodrigo M Souza, Bruce Russell, Laurent Renia, Claudio RF Marinho, Marcus VG Lacerda

Evolution of apicomplexan secretory organelles. Marc-Jan Gubbels, Manoj T. Duraisingh

Original Research Article

Lack of associations of $\alpha+$ - thalassemia with risk of Plasmodium falciparum and Plasmodium vivax infection and disease in a cohort of children 3-21 months from Papua New Guinea. Anna Rosanas-Urgell, Nicolas Senn, Patricia Rarau, John J. Aponte, John C. Reeder, Peter M. Siba, Pascal Michon, I Mueller

December 2012 issue

Seaweed extracts as a natural control against the monogenean ectoparasite, Neobenedenia sp., infecting farmed barramundi (Lates calcarifer). Kate S. Hutson, Leonardo Mata, Nicholas A. Paul, Rocky de Nys

Comparative analysis of Tritrichomonas foetus (Riedmüller, 1928) cat genotype, T. foetus (Riedmüller, 1928) cattle genotype and Tritrichomonas suis (Davaine, 1875) at 10 DNA loci. Jan Šlapeta, Norbert Müller, Colin M. Stack, Giselle Walker, Ala Lew-Tabor, Jan Tachezy, Caroline F. Frey

Establishment of a robotic, high-throughput platform for the specific diagnosis of gastrointestinal nematode infections in sheep. Florian Roeber, Aaron R. Jex, Angus J. D. Campbell, Rad Nielsen, Garry A. Andersona, Keith K. Stanley, Robin B. Gasser

Special Issues for publication in 2013:

February 2013 Apicomplexa in Farm Animals

March 2013 Translatability of Helminth Therapy

IJP Feature Interview : Hong You

Hong You graduated in 2010 with a PhD from her research on *Schistosoma japonicum* vaccine (IJP, August 2012*) and has recently won an NHMRC Fellowship and ASP Network for Parasitology Researcher Exchange Travel Award. Hong You talks to Lisa Jones about her research.

Hong You tell us the story about your work on *Schistosoma japonicum* vaccine?

My research is focusing on characterization and vaccine efficacy of *Schistosoma japonicum* insulin receptors. My previous studies suggest that host insulin is essential for schistosome growth, development and maturation. Schistosomes exploit host hormones and nutrients for their survival; indeed, schistosomes consume their dry weight of glucose every 5 hours. We found *S. japonicum* insulin receptors (SjIRs), can bind human insulin, which is postulated to result in downstream signal transduction which modulates schistosome glucose uptake. Encouragingly, in murine vaccine/challenge experiments, vaccination of mice with SjIRs resulted in consistently significant reduction in faecal eggs (56-67%), stunting of adult worms (12-42%), reduction in liver granuloma density and reduction in the numbers of mature intestinal eggs. Based on the fact that schistosome eggs are responsible for both pathology and disease transmission, a vaccine targeting parasite fecundity within the definitive host and/or egg viability, is an entirely relevant vaccine approach.

Your IJP publication reports your results from vaccine development work. Tell us what happens next in this vaccine research?

As now recognised, bovines are the major animal reservoir host for *S. japonicum* in China, being responsible for up to 90%



of environmental egg contamination. A mathematical model of schistosome transmission has predicted that schistosome vaccines capable of reducing water buffaloes' fecal egg output by 45%, alone or in conjunction with praziquantel treatment, will lead to a significant reduction in transmission of schistosomiasis. The development of a vaccine based on rSjIRs as a transmission blocking vaccine for preventing transmission of zoonotic schistosomiasis targeting bovines is feasible. My next aim is to do vaccine /challenge against *S. japonicum* infection in water buffalo in China or Philippines as in the Chinese setting.

You have recently won a Peter Doherty - Australian Biomedical Fellowship "Identifying Genes Associated with Parasitism, and Novel Drug and Vaccine Targets?" what will you be doing as part of your Fellowship?

My previous research showing that the host-parasite interaction involves very important pathways enabling parasites to survive in their mammalian hosts. In this project, through the use of bioinformatic methods, I will focus on the initial *in silico* identification of gene functions and

pathways important in the host-parasite interaction and aims to reveal novel potential drug and vaccine targets against schistosomes.

You have also recently won an ASP Network for Parasitology Researcher Exchange Travel Award for a trip to Prof. Francois Villinger's laboratory at Yerkes National Primate Research Centre, Emory University, Atlanta, USA, tell us about this trip?

I have finished the exchange trips. I visited Prof. Francois Villinger's laboratory twice this year during 1 June -22 June which was supported by ACVD (Australian Center for vaccine development) and 4 Nov to 16 Dec which was supported by an ASP Network for Parasitology Travel Award.

The reason for the travel was for me to visit Prof. Francois Villinger's laboratory to conduct research. The primary research interests of the Villinger laboratory focus on infectious diseases and immune responses to pathogens, including immunopathological mechanisms and the exploration of protective vaccines. Importantly, the technologies they are using in their current projects are highly relevant

Hong You continued

and complementary with my own interests in immunology and vaccinology.

I also undertook some bench work in Villingier Lab including reconstruction *S. japonicum* insulin receptors into pMT vectors for further expression of the secreted recombinant protein in the S2 cell system. There are great features in this insect expression system including higher protein yields than mammalian systems, easy high-density cell culture, and non-lytic expression for reduced degradation. This technique will be very useful in my future protein and vaccine work. The aims of the proposed travel also included: To investigate the immune response of mouse co-infected with HIV/Schistosoma by identifying of unique chemokine/cytokine biomarker signatures for schistosoma/HIV mono-infections vs. co-infection. To

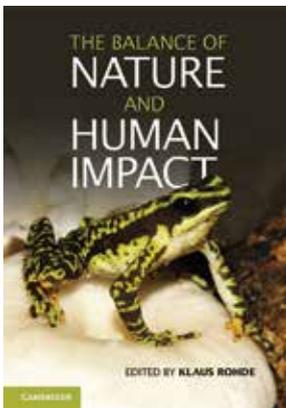
investigate the cytokine analysis (such as ELISPOT, proliferation assays) generated by *S. japonicum* insulin receptors which I have shown are encouraging vaccine candidates. During my visit, I was able to speak with each member of the Villingier team on a one-on-one basis, gaining valuable tips for investigating further the immune response generated by *S. japonicum* insulin receptors which I have shown are encouraging vaccine candidates. I received a lot of good suggestions for future work including how to undertake ELISPOT, proliferation assays for cytokine analysis in my future planned animal studies.

We wish Hong You all the best during her Fellowship and look forward to hearing about how her research progresses.

* **Hong You, Geoffrey Gobert, Mary Duke, Wenbao Zhang, Malcolm Jones and Donald McManus** Queensland Institute of Medical Research (QIMR) and **Yuesheng Li**, Hunan Institute of Parasitic Diseases, Yueyang, China and QIMR, published their article "The insulin receptor is a transmission blocking veterinary vaccine target for zoonotic *Schistosoma japonicum*" in the August 2012 edition of *International Journal for Parasitology* (42:09). Hong You graduated with a PhD from this research in 2010.

This publication can be downloaded from <http://www.sciencedirect.com/science/article/pii/S0020751912001543>

Publication



A new book edited by Professor Klaus Rohde, a Fellow of the ASP and Emeritus Professor at the University of New England, will be published by Cambridge University Press in February 2013. *The Balance of Nature and Human Impact* deals with the effects of climate change, habitat destruction and invasive species.

Some examples of chapters are: physics of climate, effects of climate change on Arctic vegetation, amphibian decline, the futures of coral reefs, emerging infectious diseases, effects of climate change on insect populations, alternative stable states of plant communities, the mathematics of species invasions, effects of climate change on North American and Australian birds, and a concluding chapter dealing with measures necessary to conserve biodiversity.

Details can be found here: <http://www.cambridge.org/gb/knowledge/isbn/item6964672>

In Memoriam: Robert L. Rausch



Professor Andrew Thompson has brought to our attention some sad news that will be of interest to many ASP members.

Dr. Robert L. Rausch, a former professor at the Western College of Veterinary Medicine (WCVM) in Canada and a world-renowned parasitologist, died on Saturday, October 6 2012.

Dr Rausch and his wife Virginia (pictured

together, left) travelled extensively around the world, and, throughout his career, Rausch served as a great ambassador for parasitology in the international arena.

A full tribute can be found on the WCVM website:

<http://words.usask.ca/wcvm/2012/10/in-memoriam-dr-robert-l-rausch/>

State News

ACT

The Australian National University

Congratulations to **Professor Kieran Kirk** and to **Dr Rowena Martin** on their recent NHMRC funding successes.

Kieran won an NHMRC Project Grant, 2013-15, for *Targeting an ion pump in the malaria parasite with multiple compound classes*.

Rowena won the NHMRC R.D.Wright Biomedical Fellowship, 2013, for *Understanding how to combat drug resistance in the malaria parasite: Examination of two proteins that are key to the parasite's ability to evade the toxic effects of antimalarial drugs*.

Queensland

The University of Queensland

School of Chemistry and Molecular Biosciences

Steve Barker, Tom Cribb and **Peter O'Donoghue** have just finished teaching their pet course on biomedical parasitology. Student engagement was enthusiastic, the pass rate was great, but numbers were down on previous years. Hope to see many of these students coming through parasitology research portals. Steve has recently been promoted to full Professor at UQ, and can now exercise his seniority prerogatives ("bullet-proof" shirt options). In addition to parasitology, he is now called upon to help champion genetics at UQ, one of our core majors. Tom has moved over to the School of Biology but is still going to wonderful exotic places to catch fish, even

playing host to boatloads of international students visiting our marine research stations. Peter is still providing service teaching to medical and nursing students, and has recently been running workshops on media training, seminar presentations and poster preparation for our postgraduate students. UQ is changing over to a new timetabling system next year, so it will be interesting to see if status quo is preserved, or whether change is imminent.

Bob Lester recently returned from a week-long trip to Indonesia investigating the innards of big eye and yellowfin tuna with staff at the Indonesian Research Institute for Marine Fisheries, Jakarta; the start of an ACIAR tuna stock study coordinated by Craig Proctor, CSIRO.



Bob Lester and staff of the Indonesian Research Institute for Marine Fisheries, Jakarta, after the workshop on tuna parasites.

UQ-QAAFI and DAFF Livestock Biotechnology Group

The University of Queensland St. Lucia Campus

A Congratulations to our Honours students who successfully completed their studies - we are anxiously waiting the outcome of their hard work. They include **Ammielle Kerudin** (tick fever genotyping), **Indra**

Izham (paralysis ticks) and **Aniqah Mahamudin** (*Eimeria* population genetics).



Celebrating the end of the year with an international lunch

We also have had **Rodrigo Cunha** (PhD student) visiting from Brazil since August - he will finish up in January 2013. He has been busy working with **Manuel Rodriguez Valle** on all things cattle tick gene expression. Close by is **Tao Xu** (also expressing cattle tick genes), who recently won extra PhD support from Meat & Livestock Australia, he also attended a Postgraduate conference run by MLA in Coffs Harbour. Anthea and Bronwyn have been working with Manuel to study new methods for *Babesia bovis* vaccination development on a UQ start up grant.

We welcome to our group new PhD student **Greta Busch** who will be working on paralysis tick from 2013 on the associated ARC Linkage project. This project has attracted heaps of media attention - we are even immortalised by Queensland Country Life via youtube: <http://youtu.be/A6ufOmF0DBA?hd=1> (enjoy.....). Manuel could not make the video performance but had I (**Ala Lew-Tabor**) known it was to be broadcast this way - all would have been dragged in. (PS. the tick filmed killed its host dog 'Wags' - no not the one of Wiggles fame.)

Jess Morgan and **Rosie Godwin** are heaving a sigh of relief having just completed their last field trial screening and amplifying *Eimeria* isolated from chicken faecal samples. It's all happening and all are looking forward to the Xmas and New Year relax.

State News continued

James Cook University

Queensland Tropical Health Alliance Laboratories, Cairns

We welcomed **Professor Alex Loukas** back from his very productive and enjoyable 3-month 2012 Fulbright Senior Fellowship and US sabbatical trip.

We said farewell to **Ammar Aziz** who will be taking up a new post of Research Assistant with **Professors Rick Price** and **Nick Anstey** at Menzies School of Health Research (NT) based in Darwin and working on emerging drug resistance in malaria, *Plasmodium vivax* and *Plasmodium falciparum*.

Congratulations to our recent grant and fellowship winners:

Dr Andreas Kupz has received the \$325,000 CJ Martin - Overseas Biomedical Fellowship for his work: Identification of novel strategies to mediate immunity against intracellular pathogens and will work with **Professor Nick Smith**. Andreas will spend the first two years of his NHMRC CJ Martin Early Career Fellowship with **Professor Stefan Kaufmann** at the Max Planck Institute for Infection Biology in Berlin, Germany.

Dr Cinzia Cantacessi has received the \$299,000 Peter Doherty - Australian Biomedical Fellowship for her project: Hookworm proteins as novel anti-inflammatory therapeutics. Her research will explore the role that parasite molecules play in mechanisms that regulate the immune response of their vertebrate hosts and test their potential to become novel therapeutics for the treatment of inflammatory diseases.

The Centre for Biodiscovery and Molecular Development of Therapeutics (BMDT) at JCU has launched its website <https://plone.jcu.edu.au/researchatjcu/research/bmdt/>

James Cook University's research output in medical microbiology was rated 5 "well above world standard", the highest possible



rating by the Australian Government's Excellence in Research for Australia (ERA) process.

"An ERA of 5 for medical microbiology is a great result for our researchers and reflects the national and international recognition of our work and the truly collaborative nature of the research that we are conducting" Professor Alex Loukas BMDT Centre Director said.

Townsville Campus, Marine Parasitology Laboratory

Terrence Miller who joins our team for the next three years as part of a Smart Futures Fellowship and Queensland Tropical Agri and Aquatic Sciences (QTAAS) Grant. Terry will be based at the James Cook University Cairns campus and will lead a new research project, Integrated management of parasite infections in tropical aquaculture and our new sister laboratory, the Aquatic Parasitology Laboratory.



Richard, Kate and Terry in their eclipse specs.

Terry is looking forward to establishing a new research group in Cairns and working with our financial industry partners (King Reef Seafoods Pty Ltd and Coral Seas

Pty Ltd) and Joint Investigator **Richard Knuckey** from the Northern Fisheries Centre, Department of Agriculture Fisheries and Forestry, Queensland (DAFFQ). The research project leaders (Terry, **Kate Hutson** and Richard) recently converged in Cairns to test out their eclipse glasses on a light bulb prior to being treated to a most spectacular total solar eclipse in Cairns.

The recent focus of the Marine Parasitology Laboratory has been on research. Kate has commenced a consultancy contract with DigsFish Services to work on fish and crab health surveys as part of port developments in Darwin Harbour, Northern Territory. PhD student **Alexander Brazenor** has thrown himself into his first PhD experiments. Masters student **Alejandro Trujillo** has been examining the cellular interaction between ectoparasites and host fishes. **Thane Militz** has applied for an Australian Postgraduate Award and is in the process of submitting papers from his Honours thesis. Special topic students **Amy Foulkes** and **Jesse Rostagno** are writing up their projects on marine turtle blood flukes and cleaner organisms, respectively.

Congratulations to **Dinh Hoai Truong** was awarded a High Distinction for his Masters thesis titled: Survival strategies of an insidious fish ectoparasite, *Neobenedenia* sp.. Dinh Hoai has since returned to Hanoi University of Agriculture, Vietnam, to resume his position as Lecturer. Congratulations to Thane Militz who was awarded a High Distinction for his Honours thesis: "Efficacy of garlic (*Allium sativum*) extract for management of a marine monogenean ectoparasite in aquaculture." Thane was also a recipient of a University medal for excellent academic achievement in his Bachelor of Science coursework studies undertaken at undergraduate level. This is a prestigious university award and we congratulate Thane on this outstanding achievement.

Congratulations to Alejandro for his magnificent entry in the festival of Life Sciences Photo Competition of a monogenean attached to its host. Unfortunately, Alejandro was pipped to the

State News continued

post by an entry of a tick submitted by his co-supervisor, **Constantin Constantinoiu** (School of Veterinary and Biomedical Sciences, James Cook University)! Kate received good tips for her "My Research in 3 minutes" presentation from PhD student **Sarah Catalano** (University of Adelaide, "My Research in 3 minutes" People's Choice Award) and won the James Cook University competition in the Early Career Researcher category and the People's Choice Award.

South Australia

South Australian Museum / University of Adelaide

Last year the South Australian Museum received funding to refit the Entomology Collection room. The Australian Helminthology Slide Collection has benefitted from this by the purchase of state of the art slide cabinets arranged in a space-saving compactus system. The Collection Manager **Leslie Chisholm** is excited that the new slide storage facility can hold up to 70,000 slides and will provide plenty of expansion space for future acquisitions. Visitors to the South Australian Museum, including **Ian Beveridge** who regularly brings material over from Melbourne to add to the collection will, no doubt, appreciate the improved space and facilities that have resulted from this refit.

Lesley Warner was able to meet with **Ali Aydogdu**, who works on Acanthocephala from fish, while in Turkey last September. Lesley then spent a couple of days in London checking acantho specimens from Australian fish hosts held in the Natural History Museum collection and enjoying

the hospitality of Eileen Harris and Tim Littlewood.

SA's loss will be the NT's gain when **Di Barton** heads off to Darwin (Thanks to the RAAF posting of her husband) at the end of the year. She will be spending some of her time hanging out at the Museum in Darwin, looking at parasites in various reptiles and amphibians (back to the toads!) while looking for some part-time work.

Sarah Catalano is now in the final year of her PhD investigating the dicyemid parasite fauna of southern Australian cephalopods, with particular focus on the iconic and endemic giant Australian cuttlefish, *Sepia apama*. Recent highlights include publishing a review paper in *Zootaxa* which lists the dicyemid species of the world described to date and attempts to unravel the confusion surrounding the classification of taxa within this group, and undertaking a research exchange to Osaka University, Japan (kindly funded by the ASP) to work with **A/Prof Hidetaka Furuya** on new species descriptions. Sarah has discovered 11 new species of dicyemid parasites, the first from Australian cephalopods, and has already formally described two (*Journal of Parasitology*). She recently took out the People's Choice Award for Adelaide University's Three Minute Thesis Competition and was also involved in two episodes of the children's science program 'Scope' on Channel 10. She is currently working on completing the remaining new species descriptions, finishing molecular phylogenetic analyses, and writing up her final thesis chapters.

Lindsay Dent, from the University of Adelaide, with a little help from **Ian Whittington**, **Lesley Warner** and **Mark Pharaoh** from the Mawson Centre, Polar Collections put together an interesting display for the University Open Day. With funding from the ASP state outreach initiative Lindsay produced, amongst other things, a poster highlighting the connections between Sir Douglas Mawson, Antarctic Explorer and the Australian Helminthological Collection through Prof T Harvey Johnston and Pat Thomas

(Mawson). A jar of parasitic worms from one of Mawson's Antarctic expeditions and a facsimile of his half sledge added to the atmosphere.

Tasmania

The University of Tasmania

Victoria Valdenegro and **Professor Barbara Nowak** attended the 6th International Veterinary Vaccines and Diagnostics Conference in Cairns between July 29 and August 1st, 2012. In the Fish vaccine session, Victoria presented her PhD research on systemic and mucosal immunity in Atlantic salmon, regarding the use of a recombinant protein as a candidate vaccine against the gill parasite *Neoparamoeba perurans*, causative agent of Amoebic gill disease. Professor Nowak was invited to give the keynote address "Improving vaccine performance through understanding host-pathogen interaction in yersiniosis". Professor Nowak was also the invited speaker at Danish Fish Immunology Research Centre and Network workshop where she presented three lectures including one on amoebic gill disease - development of new management strategies. In late November Professor Nowak also conducted the annual fish histopathology workshop at the University of Tasmania. The workshop which covered a range of histopathological conditions in fish including those related to parasitic infections was attended by broad range of participants including veterinarians, students and researchers. Participants were particularly impressed with the experience and knowledge of workshop session leaders that included some of Australia's leading fish pathologists and researchers.

Congratulations to **Miss Melissa Martin** currently based at the museum of tropical Queensland in Townsville working under

State News continued

the guidance and supervision of **Dr Neil Bruce**. Melissa was awarded the Geddes Postgraduate Award 2012 from the Australian Museum in Sydney. This award encourages students enrolled in any postgraduate qualification to work with any of the museum's collection relevant to the candidate's research program. It will allow her to have access to registered and unregistered collections from the museum, which in return will contribute to the documentation of Australia's biodiversity through identification, revision and documentation of this understudied taxonomic group. Melissa's research, on the taxonomy and systematics of buccal-attaching crustacean parasites on fish in eastern Australian waters, has so far led to the discovery of four *Ceratothoa* species, one *Glossobius* species and probably five *Cymothoa* species new to Australia. Her work at the Australian Museum was recently reported on in the Australian Magazine 'Explore'. Melissa will be giving a public talk at the Museum of Tropical Queensland, Townsville in late February about her research.



Melissa working hard on her research.

Last but not least congratulations to **Dr Nicole Kirchoff** who not only recently graduated in August, but also was awarded the best student presentation award at the Launceston ASP conference in July.



Nicole and her parents at the University of Tasmania August graduation ceremony.

Nicole was also recently chosen as one of 12 early career scientists unveiling their research to the public for the first time as part of Fresh Science, a national program sponsored by the Australian Government. As a national finalist Nicole received a week of intensive media training, and media exposure and presented research from her PhD regarding Southern bluefin tuna ranching and new husbandry efforts which resulted in lower parasite burdens. Also graduating in August was **Miss Catarina Norte dos Santos** who has recently started a PhD at the University of Tasmania under the guidance of **Dr Melanie Leef, Dr Mark Adams** and **Professor Barbara Nowak**.

Victoria

The University of Melbourne

As a previous member of ASP Victoria, we congratulate **Cinzia Cantacessi** (a former student at The University of Melbourne and now an NHMRC Early Career Research Fellow at James Cook University, Cairns). She recently won The University of Melbourne Chancellor's Prize for Excellence for her PhD thesis. Her thesis delved into the biology of parasites through the production, characterisation and utilisation of genomic and transcriptomic datasets from a range of gastrointestinal parasites.

Museum Victoria

We welcome a new state member, **Joanna Browne**, who is in the final stages of writing up her PhD thesis. A remote candidate of Griffith University, she is now based at Museum Victoria. She has been studying parasite communities of the "upside-down" and "blue blubber" jellyfish, including a two-year temporal study in Port Phillip. She has uncovered a range of new parasites including hyperiid amphipods, a parasitic anemone and a predatory sphaeromatid isopod and, using DNA sequencing, she has uncovered potential life cycles by matching digenean metacercariae from jellyfish with adults in fish.

The Walter and Eliza Hall Institute

WEHI report that they just completed their insectary and PC3 rooms. This now means WEHI will be able to begin work on the mosquito stages of *Plasmodium falciparum*.

We also congratulate WEHI research staff for their success with this year's NHMRC Project Grants. **Justin Boddey** was funded to work on parasite effectors that are exported into the host cell in liver stage *falciparum*. **Jake Baum** was funded to work on understanding cytoskeletal remodelling during invasion of *Plasmodium falciparum*. **Chris Tonkin** was funded to work on how the myosin motor powers tissue dissemination and host cell invasion in *Toxoplasma*. **Ivo Mueller** was successful in obtaining a NHMRC Senior Research Fellowship (SRF) and Justin Boddey was awarded a CASS foundation grant to develop drugs against Plasmeprin V.

State News continued

Monash University

We congratulate **David Piedrafita** on his promotion to Associate Professor and report his move to the Gippsland Campus of Monash University. Working with **Mark Sandeman**, he has been busy settling in, firing up collaborative research and welcoming two new PhD students from Bangladesh (**Shakif Azam & Abdullah Mamun**) and a Research Assistant, **Fiona**. His two existing students from the Clayton campus, **Sarah Preston** and **Amanda Peers-Adams** have just completed a large study on an industry flock of sheep held at Gippsland through the SheepCRC that will keep them analysing samples for months to come.

Hamish McWilliam, a PhD student of **Els Meeusen** and **David Piedrafita**, visited Brazil in September, where he presented a talk on the water buffalo immune response to migrating schistosome larvae at the International Congress for Tropical Medicine and Malaria in Rio de Janeiro. He also presented a poster at the International Symposium on Schistosomiasis, Belo Horizonte.

Mark Sandeman, David Piedrafita and **Els Meeusen** attended a two-day workshop in the Canary Islands looking at sustainable breeds & genetics of small ruminants (at least they claim it was work).

Dave also reports that **Showgy Ma'Ayeh**, a PhD student with **Phil Brook-Carter** is furiously finishing his thesis on *Giardia* and host cellular responses, while Mark has been assisting the completion of two of his remaining PhDs at La Trobe University. **Will Ritchie** is about to hand in his *Haemonchus* GST thesis and Mai keeps both **Warwick Grant** and Mark busy with her PhD on the young larvae of *Lucilia cuprina*.

Coincident with Dave's arrival on Monash's Gippsland campus, **Andrew Greenhill** also joined us from the Papua New Guinea Institute of Medical Research and with

Dave, Phil, Andrew, Mark and **Jenny Mosse** the Monash Gippsland campus now have quite a concentration of human and animal health interests.

Teresa Carvalho, a post-doc in **Christian Doerig's** lab at the Department of Microbiology, Monash University (Clayton campus), reports that their lab is now established. Along with their research assistant, **Megan Bird**, they are increasing their capacity with a PhD student freshly arrived from Malaysia, **Siti Shahpuhin**, and a very enthusiastic third year student, **Caitlin Conway**, who decided to stay with them for her Honours degree. Further, it seems Iberians are taking over the Department with the arrival of **Prof Jose Garcia-Bustos**, from Spain, who is also establishing his lab to work on *Plasmodium falciparum* in the field of high-content phenotypic screening.

Wishing all state members a Merry Christmas and all the best for 2013!

Jobs

Research Fellow, Virulence of amphibian chytridiomycosis



James Cook University, Townsville

Chytridiomycosis has caused amphibian declines and extinctions globally as it has spread through naïve populations. It is now endemic in much of its suitable range in Australia where it still causes high mortality rates and threatens amphibian biodiversity. We have funds to investigate mechanisms of virulence and how virulence of *Batrachochytrium dendrobatidis* (Bd) is evolving as it adapts to new hosts. The project involves animal and in vitro experiments using archived and new field collected isolates to assess strain virulence, and proteomics or genomics. The fellow will help supervise students and will be able to pursue areas of interest within this framework.

The two year project is multidisciplinary and involves collaborators such as Qld Institute of Medical Research. The outcomes of the project are likely to lead to the improved conservation of amphibian biodiversity and may contribute to theories on pathogen evolution.

More information is online, see vacancy no. 12377 at <http://www.jcu.edu.au/jobs/research/index.htm>

Deadline: Will be advertised until filled.

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