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The Australian Society for Parasitology Inc.

NEWSLETTER

Volume 24 Issue No. 4 December 2013

From the President's Desk

IN THIS ISSUE

Dear Members,

Welcome to the December edition of the Newsletter.

I would like to take this opportunity to congratulate ASP members on recent grant successes, and wish everyone every success in 2014. Many of you are already writing applications to meet earlier deadlines, and we wish everyone good luck and the best of success in 2014, in an increasingly challenging "funding" environment. We hope that funding bodies and referees appreciate the major significance of Parasitology!

The organisation of the 2014 ASP Annual and 50 Year Anniversary Conference in Canberra is well underway. There will be a number of accompanying special events, and this is a unqiue opportunity to raise the profile of Parasitology. Kirian Kirk is Chair of the Organising Committee (including Eva Bennett, Melanie Rug, Richard Allen, Giel van Dooren, Kevin Saliba, Ian Cockburn, Alexander Maier, Adele Lehane, Carol Behm, Haylee Weaver, Eva Bennet, Lisa Jones, Nick Smith). We sincerely thank Peter O'Donoghue and Lisa Jones for their efforts in planning, assembling and drafting the booklet to commemorate 50 Years of ASP. The draft program is already in place for the conference, and a number of innovations will be introduced. In addition to the Opening, Plenary and Award Sessions, each 90 min scientific session of the conference will be a symposium that features a Lead Invited Speaker (30 min), followed by three Contributed Paper talks (15 min) and three Research Snapshots (5 min). The plan is that Symposia will be conceptually based, emphasizing the ideas and research that bind ASP. There will be a 1 h session of 2 min Poster Talks. Letters of invitation have been sent to international and national speakers, and Plenary Speakers.

Some Themes and Lead Speakers will also be identified from submitted abstracts. Sponsors have been approached and have made suggestions regarding themes and aspects of the conference. The website will go live in early January 2014. Conference registration will open at that time. We thank all of the conference organisers for their efforts thus far. Nick Smith (ASP Network Convenor) is the contact for suggestions or comments.

As you know, the International Congress of Tropical Medicine and Malaria (ICTMM) will be held in Brisbane in 2016. This Congress is planned for mid-end September 2016 will be held jointly with the ASP meeting. Malcolm Jones has been heading the Organizing Committee on behalf of ASP, together with representatives of the Australasian Society of Infectious Diseases (ASID). An agreement between ASP and ASID has been put in place, and information on ICTMM will be up dated on the ASP website. Input from ASP membership into potential Keynote Speakers and themes is welcome, and should be directed to Malcolm. Thanks to Mal for his outstanding efforts in putting arrangements in place for this important Congress.

From the President's desk continued

I sincerely thank Nick Smith and Lisa Jones for their continued and major efforts and contributions to the ASP Network, and to Alex Maier for taking on the responsibility of Chair of the Management Committee of the ASP Course to commence in November 2014. The ASP Course will combine fundamental parasitology with recent research developments. It is a course for PhD students and early career researchers. The course will cover all major parasite groups and will be taught by a number of key Australian academics. The specific topics for the research lectures and practicals will vary from year to year, depending on the expertise and interests of the researchers recruited as teachers. The course will also include tutorials and workshops that give students the skills to develop scientific presentation skills – and opportunities to test those skills. Planned is a workshop on career development to guide and advise students on strategies for their future career and on preparing CVs, fellowship, grant and job applications, tips for interviews, strategies for developing teaching and research portfolios, and getting the most out of national and international conferences.

Members are reminded of "Outreach Funds" available to support State/Territory events, including networking sessions or any other parasitology-related event; up to $500/event with a total of $2,000/calendar year per state/territory. Applications support are to be coordinated with your state/territory representative.

Major progress has been made with the Textbook of Veterinary Parasitology, led by David Emery and Ian Beveridge. The first edition of the textbook will be available in early 2014 and will provide an invaluable resource for Veterinary students and others. This will be the first textbook on Veterinary Parasitology for the Southern Hemisphere. Thanks to David and Ian for their major efforts in bringing this important project to completion.

I draw your attention to a call by the American Society of Parasitologists for nominees for an Eminent Parasitologist Lectureship award (http://amsocparasit.org/node/69). This award 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 of candidates for nomination, before the submission deadline of 14th Jan 2014.

The Mid Term Meeting (MTM) of Council will be held in mid February 2014, so please contact your State/Territory representative if you wish issues to be brought to and raised at MTM.

Over the Christmas/New Year period, our deepest thoughts are with Dave Kemp's family, after the sad news of his passing in November 2013, and also with ASP members who lost a loved one in 2013.

As we can reflect on the many ASP activities and achievements in 2013, I would like to thank and congratulate all ASP members for their efforts, individually and collectively, in the discipline of Parasitology. We maintain a strong international profile and we should be proud of our contributions.

I wish you all the very best for the year agead.

Kind regards to all of you,

Robin Gasser

$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 2014 prizes must be made by the eligible University to the ASP Treasurer or Secretary by the 30th September 2014. Requests for prizes must include the following for each eligible course:

1. Course name/code/degree year
2. Number of Students enrolled in 2014
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

1964-2014

The Australian Society for Parasitology Inc.

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Celebrating 50 years of the ASP

The 50th Anniversary Celebration ASP Conference will take place June 30 - 3 July 2014 in Canberra.

2014 Conference

ASP 50th Anniversary Annual Conference
30 June - 3 July 2014, ANU Commons, Canberra

The 2014 Australian Society for Parasitology 50th Anniversary Conference will take place in Canberra from Monday June 30 – Thursday July 3, 2014, inclusive, at the Australian National University, the site of the Society's first conference in 1964. It will be a truly memorable event, celebrating the past, the present and the future of Australian parasitology.and features events for early career researchers and the general public with the following confirmed themes and invited speakers:

Elsevier Lectures

- IJP Lecture – *2014 ASP Invited Lecturer* **Raffi Aroian** (University of California, San Diego, USA)
- IJP Drugs and Drug Resistance Lecture – **David Horn** (University of Dundee, UK)
- IJP Parasites and Wildlife Lecture – **Vanessa Ezenwa** (University of Georgia, USA)

Plenary and Symposia themes and confirmed speakers

- Discovery, Development and Investigation of New Antiparasitics (Helminths) - **Tim Geary** (McGill University, Canada)
- Discovery, Development and Investigation of New Antiparasitics (Protozoa) – **Mike Ferdig** (University of Notre Dame, USA)
- Cell Biology and Development – *2014 ASP Invited Lecturer* **Boris Striepen** (University of Georgia, USA)
- *2014 ASP Invited Lecturer* **Margaret Mackinnon** (University of Oxford, Nuffield Department of Medicine, Kenya, Kilifi KEMRI-Wellcome Research Programme)
- Biochemistry Physiology - **Audrey R. Odom** (Washington University School of Medicine, U.S.A.)
- Vaccines – **Marshall Lightowlers** (The University of Melbourne, Australia)
- Host-Parasite Interactions – **Wai-Hong Tham** (Walter and Eliza Hall Institute, Australia)
- Epidemiology – **Una Ryan** (Murdoch University, Australia)
- Immunoregulation (Protozoa) – **Ian Cockburn** (John Curtin School of Medical Research, Australia)
- Cell Signalling and Parasite Lifecycles - **Christian Doerig** (Monash University, Australia)
- Drugs and Drug Resistance - **Vicky Avery** (Griffith University, Australia)
- Ecology - **Jan Slapeta** (The University of Sydney, Australia)
- Population Genetics – **Alyssa Barry** (Walter and Eliza Hall Institute, Australia)
- Evolution & Phylogeny – **Tom Cribb** (The University of Queensland, Australia)

Plus we will be staging two celebratory and provocative sessions, at the start and end of the conference, on A History of Australian Parasitology – Discoveries that Matter and The Future of Parasitology. Professor Graham Mitchell (AO) will chair both these sessions, drawing on the wisdom of some of the ASP's Fellows for the first and our Bancroft Mackerras Medalists for the closing session.

Conference website www.parasite.org.au/arcnet **Registrations will open late January 2014**

Our Inspiring Australia and ASP public events will take place in conjunction with the conference along with some truly inspirational events for Early Career Researchers and Postgraduate students.

Please email Lisa.Jones1@jcu.edu.au for the ASP 50th anniversary logos for use at the bottom of your emails and for promotion of the ASP during 2014 and Lisa can also email you the conference poster to print out and display in your work area.

Appointments and awards

Congratulations to Professor Karen Day who has been appointed Dean of Science at the University of Melbourne.

Image and story source: University of Melbourne

Prominent international biologist Professor Karen Day has been appointed as Dean of Science at the University of Melbourne.

Professor Day's research interests include infectious disease and global health with a particular interest in malaria.

Currently a Professor in the Departments of Microbiology and Medicine at the New York University (NYU) School of Medicine, she was previously Chair of the Department of Medical Parasitology, Director of the Masters Program in Global Public Health and the Director of the Institute of Urban and Global Health.

Following post-doctoral work in Papua New Guinea, Professor Day held positions in biology at Imperial College, London and in zoology and Hertford College at the University of Oxford.

She was a Founding Partner of both the Wellcome Trust Centre for the Epidemiology of Infectious Disease (WTCEID) and the interdisciplinary Peter Medawar Pathogen Evolution Research Centre at Oxford, during which time she was appointed a Visiting Professor at the Harvard School of Public Health.

Professor Day is a member of the NYU Society of Fellows and an Emeritus Fellow, Hertford College, Oxford. She holds a BSc (Hons) with a double major in microbiology/ biochemistry from the University of Melbourne and a PhD in Molecular Parasitology from the Walter and Eliza Hall Institute of Medical Research (WEHI), University of Melbourne.

Professor Day will commence as Dean in January 2014, succeeding Professor Rob Saint.

Congratulations to Professor Alan Cowman who has won the Mahatir Science Award in Tropical Medicine.

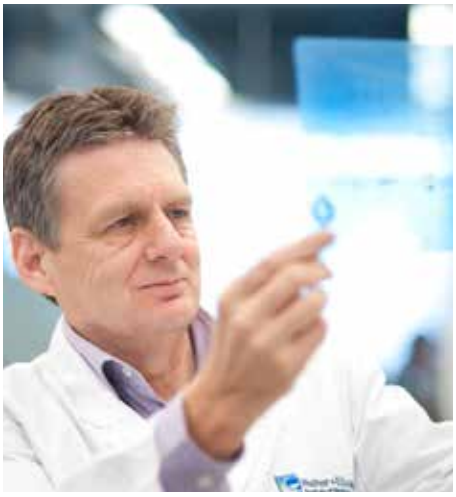


Image and story source: WEHI

Professor Alan Cowman has won the Mahathir Science Award in Tropical Research, awarded by the Mahathir Science Award Foundation through the Academy of Sciences Malaysia, in recognition of his substantial contributions to understanding malaria.

Professor Cowman has been integral to the global malaria research effort.His work has led to the development of two potential malaria vaccines, one of which is in clinical trials in the US and the other in preclinical development.

Professor Cowman said he was delighted to receive the award. "The Mahathir Science Award in Tropical Medicine is an outstanding accolade for the many scientists I have collaborated with at the Walter and Eliza Hall Institute and beyond who have made possible the advances we have made in understanding malaria."

Tun Ahmad Sarji Abdul Hamid, Foundation Chairman, said Professor Cowman was chosen from 29 nominees across 11 countries. "Each nomination has undergone a stringent selection process conducted by the distinguished Fellows of the Academy of Science Malaysia, and also evaluated by an International Advisory Panel comprising Nobel Laureates and world-renowned scientists," he said.

The Mahathir Science Award recognises scientists and institutions worldwide that solve problems of the tropics through science and technology. The winner receives a gold medal and US $100,000. An official prize-giving ceremony will be held in 2014.

Appointments and awards continued

Congratulations to Dr Franziska Bieri from QIMR Berghoger who has won the Research Australia Discovery Award for her "Magic Glasses" project

QIMR Berghofer Medical Research Institute visiting scientist Dr Franziska Bieri has won the Research Australia Discovery Award.

The award recognises an early career researcher who has already demonstrated work of importance or impact.

While still a PhD student at QIMR Berghofer, Dr Bieri helped produce an animated cartoon promoting hygiene to counteract intestinal worm infections in rural China.

When the DVD was shown in Chinese schools, the parasitic worm infection rates halved in the Hunan province.

The work, led by QIMR Berghofer's Professor Don McManus in collaboration with Chinese colleagues and scientists at University of Queensland, was published earlier this year in the prestigious and influential New England Journal of Medicine (NEJM).

"This is wonderful recognition of a highly promising young researcher," Professor McManus said.

"As part of her PhD, Fransizka developed and trialled an education package, including a DVD called 'Magic Glasses' which was tailored for school children.

"Intestinal worms are one of the most wide-spread and disabling chronic infections, affecting more than a third of the world's population. This work has the potential to help eliminate infections globally and we're continuing to develop the program here at QIMR Berghofer and with our collaborators."

The Research Australia Awards are an annual event recognising and celebrating achievements across health and medical research.

Image source: researchaustralia.org
Story source: QIMR Berfhofer

Happy New Year

A very Happy New Year from the ASP Network for Parasitology.

Outreach

2014 marks the final year of our joint ASP-Inspiring Australia grant to run public outreach activities and we are gearing up for some very special events in Canberra, ACT.

Our first IA-ASP outreach program is a very exciting initiative with the Australian War Memorial in Canberra. We will run a two-part public lecture series "The Parasite War Years" held at the Australian War Memorial, on Sunday 29th June and Sunday 16th August 2014.

We are very pleased to announce that the ASP were successful in our 2014 ACT National Science Week seed grant application and have been awarded $1000 to run a second public event at the War Memorial on August Sunday 16th (the second lecture as part of "The Parasite War Years" public events). We have also been invited to participate in Science in ACTion which will run from about the 15th – 17th August. This will be a large scale event, which will combine the energy and excitement of National Science Week in one location at the ANU. Attracting families, school and university students, as well as members of the general public, Science in ACTion represents an opportunity to engage old and new audiences while helping to shape one of the biggest science events in the ACT calendar. Melville Hall on the ANU campus will come alive with interactive displays, workshop spaces and career information from premier science, technology, engineering and mathematics (STEM) organisations in the ACT and surrounds. A short walk away, the Manning Clarke theatres will host talks, discussions and entertaining science shows for all ages.

Save the date!

ASP 50th Anniversary Annual Conference will take place 30 June – 3 July 2014 at ANU Commons, Canberra. It will be a truly memorable event, celebrating the past, the present and the future of Australian parasitology. www.parasite.org.au/arcnet

Please email Lisa.Jones1@jcu.edu.au for the ASP 50th anniversary logos for use at the bottom of your emails and for promotion of the ASP and Lisa can also email you the conference poster to print out and display in your work area.

Network Mentorship Scheme

Early career researchers are encouraged to apply to the Network Convenor (nicholas.smith@jcu.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 Smith (nicholas.smith@jcu.edu.au) 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.

Picture galleries

The following pages are a pictorial documentation of our 2013 **ASP Early Career Researcher Event** held at WAAVP2013 and of our joint ASP-Inspiring Australia public outreach events in August 2013 with our partners Perth Zoo, Scitech and Murdoch University.

Parasites in Focus at Perth Zoo on Saturday 24th August 2013 attracted more than 300 of the 3000 visitors to the Zoo that day and gave people from all ages the chance to engage with ASP parasitologists and explore the fascinating world of parasites with activities suitable for everyone to enjoy, and an opportunity for zoo patrons to get "under the skin" of Australia's parasitologists.

"Parasites and Pets, Parasites and You – What do you really think you know?" our Free public event for the whole family took place on Sunday, 25th August, at the Perth Convention Exhibition Centre, Riverside Theatre. Professor Susan Little, Oklahoma State University, Professor Malcolm Jones, The University of Queensland and Professor Andrew Thompson from Murdoch University gave a lively performance on stage and hosted a quiz with prizes (for non-parasitologists) and at the same time young budding scientists could attend our "Young parasites science club" free, fun, supervised science activities for young scientists.

Watch the quiz of "Parasites and Pets,

Closing dates for ASP awards and ASP Fellowships

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

Friday 28 March 2014
Friday 18 July 2014
Friday 21 November 2014

ASP Fellowships

9 January 2014

More information
www.parasite.org.au

Parasites and You – What do you really think you know", on the ASP YouTube channel http://www.youtube.com/user/ASPParasiteNetwork

"Profs, Pints and Parasites. Friends Without Benefits." held on Tuesday 27th August, at the Aviary Rooftop Bar in Perth was an inspiring and energetic event hosted by Renae Sayers from Scitech and featured Peter O'Donoghue, The University of Queensland and Stephanie Godfrey, Murdoch University doing parasite interpretive dance and discussing new threats on the block – parasites.

Nick Smith
Convenor, ASP Network for Parasitology

Lisa Jones
Communications Coordinator

Gallery : ASP Early Career Researcher Event

Researcher Exchange 1 - Leslie Vega in Colombia

Leslie Vega, Veterinary Student Murdoch University won an ASP Network for Parasitology Researcher Exchange to visit Omar Triana Chávez, Group for Biology and Control of Infectious Diseases, University of Antioquia, Medellin Colombia. This is a report from Leslie's exchange.

The research exchange consisted of 9 weeks in Medellin, Colombia at the University of Antioquia, Group for the Biology and Control of Infectious Diseases. The aim was to study the epidemiology of Chagas disease and investigate the prevalence of the disease in the rural community of Peñon Duran, a territory of Talaigua Nuevo of the Bolivar department located on a fluvial island known as Margarita Island or Mompos Island. We also elected to include investigation of *Leishmania* based on reports of the presence of the vector in the region.

I had the opportunity to train under the guidance of Dr Lina Carrillo MV MSc, [Program for Study and Control of Tropical Disease, University of Antioquia] in Puerto Valdivia for two days. I assisted in collecting blood samples and skin biopsies from dogs for a project investigating *Trypanosoma cruzi* and cutaneous Leishmaniasis infection. I also had the opportunity to assist in field anesthesia, blood and skin sampling for any wildlife species that were caught in the area, including *Didelphis marsupialis*. This training aided me in preparing and organizing the laboratory work and fieldwork for my project in Peñon Duran.

The project in Peñon Duran was part of a larger public health campaign of Margarita Island. We met with the Secretary of Health of the region, Dr. Alexis de la Peña to review the aims of the project and discuss future campaigns for continuing surveillance of Chagas disease in this area. We were interviewed by the local news to promote the campaign in the hope that further studies can be performed uninhibited in the future and to promote awareness of the disease.

We were able to collect samples from 42 dogs, one *Didelphis* (opossum) and 50 members of the community. We visited the houses of various community members to discuss the campaign, explain the process of Chagas and *Leishmania* transmission, and provide identification guides for the common triatomine species in the area.

At present, there have been complications relating to the ELISA in antibody detection within Chagas positive identified dogs and humans. This protocol is currently being investigated and hope to have more definitive results in the near future. Variables currently under investigation include sample, antigen and control viability. Despite this, the IFAT samples were consistent and will form part of a publication once ELISA results are confounded. Samples that have been identified as positive by ELISA or IFI will undergo DNA extraction for PCR for further confirmation. Additionally, positive human serum sub-aliquots are being investigated blindly by another research laboratory for additional confirmation.

Skill sets learned include:

- Collaboration with research teams and community members utilizing Spanish as a second language
- Methods for identification and collection of Triatominae and Phlebotominae species
- Methods for trapping and handling sylvatic species for blood and tissue collection
- Methods for *Trypanosoma cruzi* diagnosis utilizing xenodiagnosis, ELISA and IFAT, and DNA extraction for PCR for *T. cruzi* and *Leishmania* diagnosis.

Researcher Exchange 2 - JD Smyth Travel Awardee Gabrielle Josling in Canada

Gabrielle Josling, PhD Student, University of Melbourne won a JD Smyth Travel Award for a Researcher Exchange to visit Dr Raymond Hui, and to attend the Structural Genomics Consortium, Toronto Canada 12-23 August, 2013.

The aim of this research was to visit Dr. Raymond Hui at the Structural Genomics Consortium, Toronto, as part of a collaborative project on bromodomain proteins in the malaria parasite *Plasmodium falciparum*.

The parasite has a highly complex lifecycle, with stages in the *Anopheles* mosquito as well as liver and red blood cell stages in the human host. This requires very strict control of gene expression. Genes required for the essential processes of growth and red blood cell invasion as well as for the pathogenic processes of cytoadhesion and immune evasion are known to be regulated through epigenetic mechanisms. The parasite has a number of novel factors predicted to play a role in epigenetic regulation. These novel epigenetic regulators of essential processes are attractive drug targets.

Epigenetic regulation involves heritable changes in gene expression which are not due to changes in DNA sequence, but instead to changes in chromatin structure. In eukaryotes, DNA is packaged with histone proteins to form chromatin. Histones can be covalently modified, and these modifications are important in recruiting factors that influence chromatin structure and gene expression.

Our lab has been investigating novel bromodomain proteins found only in alveolates. The bromodomain is a conserved motif that binds to acetylated lysine residues in histone tails. Acetylated histones are usually associated with active genes, so bromodomain proteins are generally involved in gene activation. Bromodomain inhibitors have recently been shown to be effective in treating models of cancer, inflammation and HIV, and thus novel bromodomain proteins in *P. falciparum* are promising drug targets.

I have been characterising two bromodomain proteins called BDP1 and BDP2 using techniques such as immunofluorescence assays, histone binding assays, and chromatin immunoprecipitation. These have shown that they are found in the parasite nucleus and are able to bind to parasite histones. In addition, I have shown that BDP1 is enriched in 5' untranslated regions of genes, which contain important regulatory regions. These observations are consistent with predicted role for both proteins in gene regulation.

To learn more bromodomain protein function, I have also made a malaria parasite line which allows BDP1 to be conditionally knocked down. This is the first time that this system has been used successfully in *P. falciparum* to functionally characterise an epigenetic regulator. Using this parasite line, I have shown that BDP1 is important in regulating parasite growth. Cells that produce lower levels of BDP1 show a dramatic growth defect due to a reduced ability to invade red blood cells. This exciting result shows that BDP1 is a regulator of genes involved in the essential process of invasion, and is thus a potential drug target.

Dr Hui is an expert in structural biology who has already expressed the bromodomains of both BDP1 and BDP2 and has solved the structure of BDP1. During my visit to Dr. Hui's lab at the Structural Genomics Consortium, I attempted to crystallise the bromodomain protein BDP2 so that its structure could be solved. Having a structure for the protein will provide insight into the protein's function and mechanism of action, and will also be extremely useful in the development of bromodomain inhibitors for the treatment of malaria.

This visit to Dr. Hui's lab allowed me to learn about protein purification and crystallisation, which will be very useful for future work. This visit also allowed me to discuss the project in more detail to gain new ideas and perspectives on how to improve the project. This exchange also helped our labs establish a long lasting relationship which will lead to future collaborations.

News about Australia/Europe Malaria Research Cooperation

Happy New Year! In 2014, our last year of NHMRC funding, OzEMalaR continues to strengthen links and promote collaboration between Australian malaria research laboratories and European, African & Indian malaria researchers through researcher exchanges and communication.

OzEMalaR Travel Award Scheme

Congratulations to our latest OzEMalaR Travel Award winners:

- **Rebecca Stewart**, PhD Candidate, Tonkin Lab, Walter and Eliza Hall Institute, for a Research Exchange to Frischknecht Lab, Heidelberg University and for the EMBL Advanced Course in Fluorescent Imaging in Heidelberg.
- **Christopher N Weir**, Ph.D student, Walter and Eliza Hall Institute, Prof. Alan Cowman's lab, for a Research Exchange to Dr Sarah Reece's group at the Institutes of Evolution, Immunology and Infection Research (University of Edinburgh) to investigate the evolution, diversity and importance of the essential *Plasmodium falciparum* parasite protein, PfRh5 and its interacting partner PfRipr.
- **Leonardo Lucantoni**, PhD, post-doctoral fellow, Griffith University / Eskitis Institute for Drug Discovery / Discovery Biology/ Prof. Vicky Avery's laboratory, for a Research Exchange to Istituto Superiore di Sanità / Dipartimento di Malattie Infettive, Parassitarie ed Immunomediate / Dr. Pietro Alano's laboratory (Italy).

OzEMalaR funding runs until the end of 2014 and we want to see lots of applications this year to make the most of such a fantastic opportunity. Remember all OzEMalaR Travel Award funds granted to successful applicants must be spent by the end of 2014.

The deadlines for 2014 OzEMalaR Travel Awards* are:

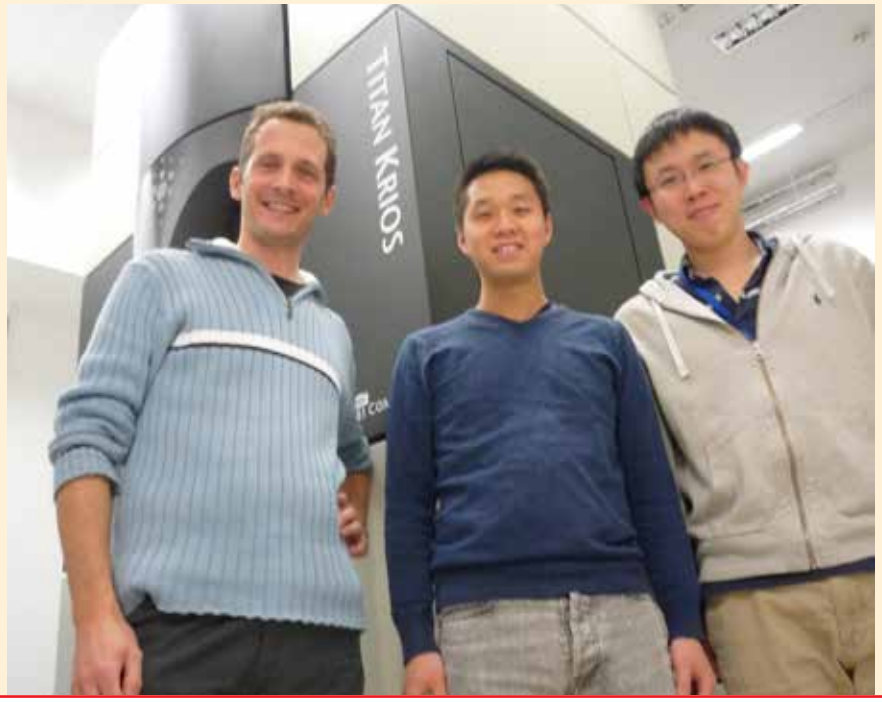
Friday 10 January 2014
Friday 7 March 2014
Friday 2 May 2014
Friday 4 July 2014
Friday 5 September 2014
Friday 31 October 2014+

+ For applications after 31 October 2014 please email Lisa.Jones1@jcu.edu.au

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 2014, our final year of funding for OzEMalaR. If you are not currently but would like to be part of the OzEMalaR Network please contact Lisa with your details.

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.

Geoff McFadden
Convenor, OzEMalaR



Dr. Wilson Wong, Research Officer, Walter and Eliza Hall Institute/ Dr. Jake Baum's Laboratory, won an OzEMalaR Travel Award in September 2013 for a Researcher Exchange to Welcome Trust Sanger Institute, Hinxton, UK. Wilson is pictured here together with Dr Sjors Scheres and Dr Xiaochen Bai from the Medical Research Council of the Laboratory of Molecular Biology in Cambridge UK. The machine behind them is the latest Cryo-Electron Microscope, Titan Krios that they used to determine the 3D structure of the *Plasmodium* ribosome to atomic resolution.

ASP-Inspiring Australia event with Perth Zoo

ASP-Inspiring Australia events with Murdoch University

Profs, Pints & Parasites (ASP-Inspiring Australia event with Scitech)

NCMCRS student study visit to Japan

ASP student member Ylenia Penacchi describes her three wonderful months at Kinki University in Japan

I am a PhD student at the NCMCRS (University of Tasmania) and my research project involves examining the fish inflammatory and immune response to parasites at the gene level. In order to achieve my aim I am using as models two different fish infectious diseases which are the amoebic gill disease and the blood fluke infection. During the first year of my candidature I had the chance to carry out a part of my research project in Japan and I spent three wonderful months at Kinki University. The experiences that I have had there have been fantastic. I have been really well supported throughout my time there and I had the opportunity to meet, share information and work with expert fish parasitologists. Most importantly I have furthered my knowledge on blood flukes and other fish parasites of economic relevance in aquaculture. These three months that I have spent in Japan were just the kind of new research experience that I was looking for.

International Journal for Parasitology

November 2013
Zoonoses
Double Special Issue

Zoonotic potential of *Giardia* **Una Ryan, Simone M. Cacciò**

Cryptosporidiosis and C*ryptosporidium* species in animals and humans: A thirty colour rainbow? **Jan Šlapeta**

Getting to the guts of the matter: the status and potential of 'omics' research of parasitic protists of the human gastrointestinal system **Aaron R. Jex, Anson V. Koehler, Brendan R. Ansell, Louise Baker, Harin Karunajeewa, Robin B. Gasser**

New pieces of the *Trichinella* puzzle **Edoardo Pozioa, Dante S. Zarlenga**

The epidemiology and public health importance of toxocariasis: a zoonosis of global importance **Calum N.L. Macpherson**

Ancylostoma ceylanicum, a re-emerging but neglected parasitic zoonosis **Rebecca J Traub**

Phylogenetic systematics of the genus *Echinococcus* (Cestoda: Taeniidae) **Minoru Nakao, Antti Lavikainen, Tetsuya Yanagida, Akira Ito**

The zoonotic, fish-borne liver flukes *Clonorchis sinensis, Opisthorchis felineus* and *Opisthorchis viverrini* **Trevor N. Petney, Ross H. Andrews, Weerachai Saijuntha, Alexandra Wenz-Mücke, Paiboon Sithithaworn**

Anisakis – a food-borne parasite that triggers allergic host defenses **Natalie E. Nieuwenhuizen, Andreas L. Lopata**

The ecology of tick-borne diseases **Miriam Pfäffle, Nina Littwin, Senta V. Muders, Trevor N. Petney**

Parasite zoonoses and wildlife: one health, spillover and human activity **R.C.A Thompson**

Special issue for publication in early 2014

February 2014 12th International Congress on Toxoplasmosis

IJP: DDR

Recent Papers

Daouda Ndiaye, Baba Dieye, Yaye D. Ndiaye, Daria Van Tyne, Rachel Daniels, Amy K. Bei, Aminata Mbaye, Clarissa Valim, Amanda Lukens, Souleymane Mboup, Omar Ndir, Dyann F. Wirth, Sarah Volkman, Polymorphism in *dhfr/dhps* genes, parasite density and ex vivoresponse to pyrimethamine in *Plasmodium falciparum* malaria parasites in Thies, Senegal , International Journal for Parasitology: Drugs and Drug Resistance, Volume 3, December 2013, Pages 135–142, http://dx.doi.org/10.1016/j.ijpddr.2013.07.001

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IJP: PAW

Recent Papers

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Jobs and opportunities

PhD Scholarship in Antimalarial Drug Discovery, Griffith University

About the project

Griffith University is offering a PhD Scholarship (for commencement in early 2014), in the field of antimalarial drug discovery. The project will be carried out at the Eskitis Institute (Nathan campus, Griffith University). The PhD Scholarships will be part of an NHMRC-EU project team led by Associate Professor Kathy Andrews. The project will involve investigation of epigenetic inhibitors for malaria, including the development of new phenotype assays and investigating the biology of malaria parasites.

Scholarship value and duration

The stipend is a living allowance valued at the Australian Postgraduate Awards rate (AUD $25, 392 in 2014; tax free) and will be awarded for three years. A research allowance for the project is available. Students can also apply on a competitive basis for additional funds for conference presentations and research visits to the laboratories of European partners.

Eligibility

The successful applicant will have an appropriate Honours 1 undergraduate degree in a relevant field of biology, such as molecular biology, parasitology, cell biology, and/or drug discovery. The candidate will be enrolled full-time. This scholarship is available to Australian/New Zealand citizens and Australian/New Zealand permanent residents.

Closing date

Applications for this application close Midnight (AEST) 23 January 2014.

How to apply

Applicants can submit their application online:

http://www.griffith.edu.au/higher-degrees-research/how-to-apply .

More information

Associate Professor Kathy Andrews
Head, Tropical Parasitology Laboratory
Eskitis Institute for Drug Discovery
Ph: (07) 3735 4420
Email: k.andrews@griffith.edu.au

Outreach

Melanie Leef and Catarina Norte dos Santos from the University of Tasmania recently introduced staff and kids at the Lady Gowrie Day Care Centre to fish parasites

Tasmania's final state outreach event for the year was held by Melanie Leef and Catarina Norte dos Santos. This event was aimed at the educators and children (between the ages of 2-6 years of age) from the Lady Gowrie day care facility located on the University of Tasmania campus. Both Melanie and Catarina visited the Day Care Centre and provided the educators from 2 classes with knowledge and tools to facilitate an increased awareness of fish parasites. As well as a leaflet containing background information about specific important fish parasites, the educators from each class were given a large colour laminated poster of a fish with detachable fish parasites (amoeba, isopod, copepod and fluke).

The poster and detachable parasites were designed by Catarina for a previous state outreach event. Educators also received a corresponding set of soft parasites as well as a children's book about an amoeba who was lonely and had to 'split himself' to make a new friend. This outreach event also included a visit by the educators and children to the University of Tasmania's Aquaculture facility to see the fish species the parasites affect. It is anticipated that these resources will be used at least once a year specifically for science week.

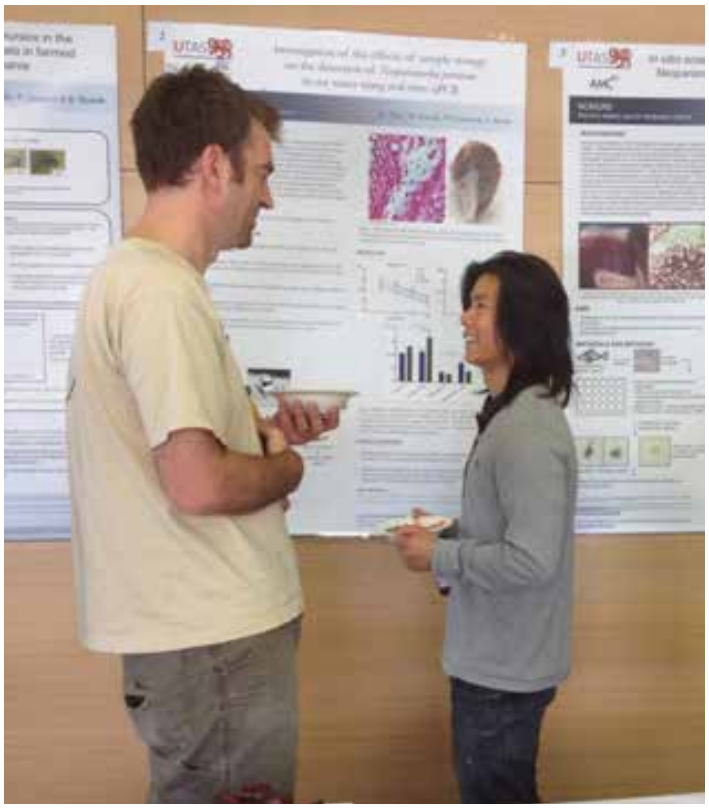
Outreach Funding

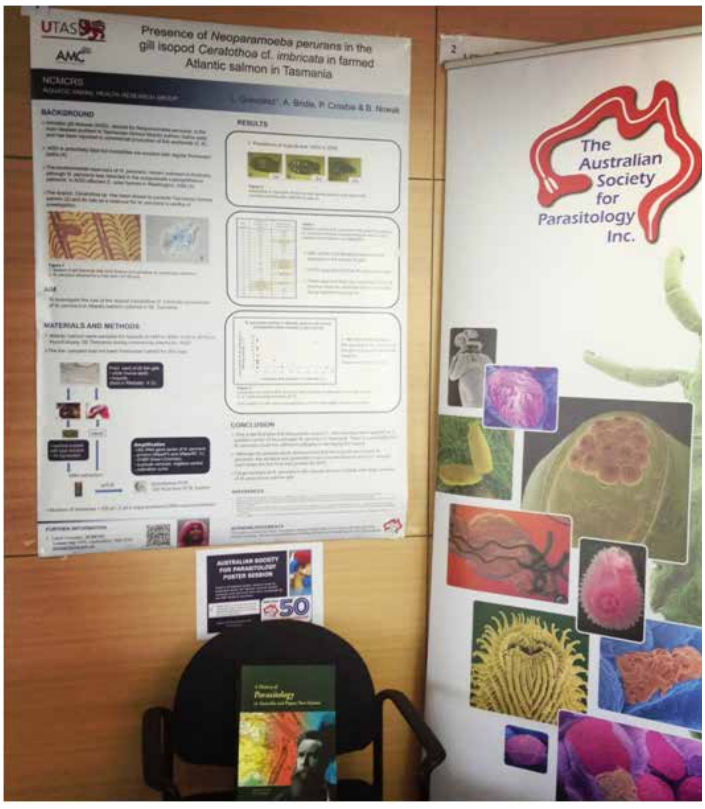
ASP members are encouraged to apply for ASP funding to suport outreach in their state. Up to $500 per event is available with a total per state or territory of $2000 per calendar year. Proposals are to be submitted for consideration by State Representatives. Initiatives should foster outreach by members and advance the field of parasitology. This pool of funds has not yet been widely accessed and ASP President Robin Gasser 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.

The annual Fish Histopathology workshop at the University of Tasmania

The annual Fish Histopathology workshop at the University of Tasmania conducted Professor Nowak offered a unique opportunity for outreach and to showcase our ASP student parasitology research to an audience of veterinarians, pathologists, university lecturers, researchers, students and government agency workers. This outreach event, hosted by Melanie Leef and Barbara Nowak, consisted of a lunchtime poster session which utilized research posters from past conferences including the 2012 ASP Launceston conference and the recent WAAVP conference which was held in conjunction with the ASP annual conference. In total 11 posters were displayed for the workshop participants to look at during their ASP sponsored lunch break. Our current students Megan Stride, Catarina Norte dos Santos, Kingsley Tam and Lukas Neumann were also invited to attend the lunch to discuss their research with the participants. To encourage discussions and active participation the workshop participants were asked to vote for the best poster. The winner of this poster session was ASP member Laura Gonzalez. Laura is currently in Chile conducting her PhD research. She will return to Tasmania in Jan 2014 so will be awarded her prize 'A History of Parasitology in Australia and Papua New Guinea'.





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1. Resources given to the local children's day care included a fish poster with detachable parasites, soft toy parasites and a children's book 'The story of amoeba'

2. Melanie Leef with her daughter Layla who was sad to be leaving the Aquaculture facility after such an exciting visit.

3. Visit by the day care children and educators to the University of Tasmania's Aquaculture facility to see the fish species the parasites affect.

4. Children interacting with the fish poster and parasites

This page

Left: ASP student member Kingsley Tam discussing his research poster with a Veterinarian pathologist from New Zealand during the ASP sponsored lunchtime poster session. Kingsley's poster was first presented at the WAAVP conference in Perth earlier this year.

Right: The winning poster as voted by the workshop participants. Congratulations to Laura Gonzalez who will be awarded the book 'A History of Parasitology in Australia and Papua New Guinea' in January 2014 when she returns to Tasmania after conducting field research in Chile.

State News

New South Wales

University of New England

The ASP's social media guru, **Tommy Leung**, recently had an article on *Sphaerularia vespae*, the parasitic nematode that infects the Japanese yellow hornet, published on The Conversation. Follow the link below to read Tommy's article.

https://theconversation.com/manipulative-parasites-make-hornets-their-nest-20797

Northern Territory

Menzies School of Health Research

Global and Tropical Health Division

The Malaria Research Facility in Timika (Papua Province, Indonesia) has seen busy times this year. After a long preparation phase and a final planning meeting in Jakarta early in the year, a large house-to-house survey was conducted in the study area between March and August 2013. The main aim of this survey was to collect data and samples in order to assess the clinical, parasitological, social, and economic impact of the anti-malarial treatment policy change in the area in the year 2006. The survey was successfully conducted by a multidisciplinary team of clinicians, field workers, laboratory technicians, administrative and logistics staff, scientists and students from the malaria team at the Menzies School of Health Research in Darwin (**Prof Ric Price, Dr Jutta Marfurt, Dr Sarah Auburn, Dr Tonia Woodberry, Dr Gabriela Minigo, Grennady Wirjanata, Zuleima Pava, Irene Handayuni,** and **Steven Kho)**, the Eijkman Institute for Molecular Biology in Jakarta (Dr Rintis Noviyanti, Dr Farah N. Coutrier, Leily Trianty, Andreas Kusuma, and Retno Ayu Setya Utami) and the Papuan Health and Community Development Foundation (PHCDF) in Timika (Dr Jeanne Rini Poespoprodjo, Dr Franciscus Thio, Dr Enny Kenangalem, Dr Faustina Helena Burdam, Dr Daniel Adrian Lampah, Ferryanto Chalfein Sanggamele, Prayoga, Lenni Marlina Jilarpoin, Basbak Gobay, and all the interviewers, lab assistants, data entry clerks and drivers). In total, 4011 individuals from 800 households in 16 different locations were investigated and >10,000 samples were collected and stored for complementary studies. So we are looking forward to even busier times ahead of us!

Dr Daniel Lampah performing clinical assessment of household members

Basbak Gobay and Lenni Marlina Jilarpoin preparing blood samples for immunological analysis

Irene Handayuni testing patient samples for G6PD deficiency

Steven Kho analysing flow cytometry data in the research building in Timika.

Mr Sisay Getachew Alemu, a PhD student from Armauer Hansen Research Institute (AHRI) in Addis Ababa, has spent 6 weeks at the Menzies School of Health Research working on a collaborative study investigating the diversity of Ethiopian *Plasmodium vivax* parasites. Receiving training from **Dr Sarah Auburn** in **Prof Ric Price'**s team, Sisay has learnt several new techniques in molecular biology which he will transfer to the AHRI laboratory. Future collaborative studies with **Dr Jutta Marfurt** on the surveillance of anti-malarial drug resistance in *P. vivax* using *ex vivo* methods are also in development.

Mr Sisay Alemu working in the Menzies laboratory with Ms Sheren To.

IMPROV/OPRA Studies

Menzies School of Health Research has been awarded funding by the Bill and Melinda Gates Foundation (BMGF) to conduct a study titled "OPtimising the RAdical Cure of Vivax Malaria" (OPRA). The study aims to:

- Evaluate the safety and efficacy of short, high dose primaquine regimens
- Determine the efficacy of 14 day, low dose regimens of primaquine
- Determine the efficacy of standard schizontocidal treatment regimens
- Investigate strategies to ensure safe deployment of primaquine regimens
- Deliver an economic evaluation of the radical cure of *P.vivax*

OPRA is a multicentre study conducted in 3 field sites, i.e., Indonesia (Obj1), Ethiopia (Obj1, 2, 3), and Vietnam (Obj 2, 3).

The OPRA study complements the work led by the Mahidol Oxford Research Unit (MORU) in Bangkok to conduct the IMPROV study titled: "IMPROVing the Radical cure of Vivax malaria: a multicentre randomized comparison of short and long course primaquine regimens." The objective is to evaluate the safety and efficacy of short, high dose primaquine regimens. IMPROV is funded through UK Aid, MRC, and the Wellcome Trust and administered by MORU on behalf of Oxford University. It is a multicentre study conducted in 5 field sites; i.e., Thailand, Vietnam, Indonesia, Pakistan and Afghanistan.

Prof Ric Price is the Principal Investigator for both studies. It is expected that patient recruitment will commence in March 2014. Menzies has recruited additional staff to assist with this clinical study. **Dr Ben(edikt) Ley** joined Menzies in early December to support the IMPROV/OPRA lab team and work on the G6PD studies with Dr Lorenz von Seidlein. In January 2014, **Dr Kamala Ley-Thriemer** will join the Global and Tropical Health Division as OPRA study coordinator.

If any readers wish to receive the IMPROV/OPRA newsletter please email contact details to julie.affleck@menzies.edu.au

Queensland

University of Queensland

School of Chemistry and Molecular Biosciences

UQ has just introduced a new Bachelor of Advanced Science to be run over 4 years with built-in Honours. Students get extra depth of content in select fields of study and also have an undergraduate research experience. While 'parasitology' *per se* is not one of the primary fields of study, **Peter O'Donoghue** (POD) is attempting to pepper the course with parasitological context, especially with respect to parasite growth rates, stage-structured population modelling, pharmacodynamics and pharmacokinetics. It is a lot of fun going back to basics, and hopefully will underpin a more dynamic postgraduate school.
Speaking of postgraduates, **Linda Ly** is writing up her thesis on the biodiversity of endosymbiotic flagellates in Australian termites, **Rebecca Dunne** is finalizing her work on bioinformatics of *Trichomonas vaginalis,* **Michelle Plant** is writing up her papers on the health status of Australian birds frequenting tourist hotspots and relying too much on hand-feeding, and **Veronica Zhang** is finishing her work on drug efficacy against *Plasmodium falciparum*. It is anticipated that UQ staff and students alike will attend the forthcoming 50th anniversary of the ASP in Canberra. It should be a great occasion to showcase achievements.

QIMR Berghofer Medical Research Institute

Dr Franziska Bieri has won the Research Australia Discovery Award, an accolade which recognises an early career researcher who has already demonstrated work of importance or impact.

While still a PhD student at QIMR Berghofer, Dr Bieri helped produce an animated cartoon promoting hygiene to counteract intestinal worm infections in rural China. When the DVD was shown in Chinese schools, the parasitic worm infection rates halved in the Hunan province. The work, led by **Professor Don McManus** and UQ's **Darren Gray** in collaboration with Chinese colleagues, was published earlier this year in the prestigious and influential New England Journal of Medicine (NEJM). "This is wonderful recognition of a highly promising young researcher," Professor McManus said. "As part of her PhD, Fransizka developed and trialed an education package, including a DVD called 'Magic Glasses' which was tailored for school children. "Intestinal worms are one of the most wide-spread and disabling chronic infections, affecting more than a third of the world's population. This work has the potential to help eliminate infections globally and we're continuing to develop the program here at QIMR Berghofer and with our collaborators."
The Research Australia Awards are an annual event recognising and celebrating achievements across all fields across health and medical research. This is the second time in four years that the discovery prize has been awarded to a worm parasitologist.

James Cook University

Cairns campus, Queensland Tropical Health Alliance

Queensland parasitologists made a small but

State News continued

notable dent in the 5000-strong crowd at the annual ASTMH meeting in Washington, DC, in November. **Dr Michael Smout** was not only awarded a travel fellowship to attend the meeting but took out the one of the young investigator prizes for his presentation on the use of the *Opisthorchis viverini* secreted growth factor granulin as a wound-healing agent.

Both of **Alex Loukas**' PhD students, **Ivana Ferriera** and **Leon Tribolet**, are nearing the light at the end of the tunnel; they're both writing up their theses. Both students presented their work at the annual ASI conference in Wellington, NZ in December with Ivana being awarded the Pecha-Kucha prize for best oral presentation. Ivana's work on the immunomodulatory properties of hookworm excretory/secretory products and Leon's research on hookworm ASP's should be ready for submittal early next year.

Tasmania

University of Tasmania

Welcome to new ASP members **Lukas Neumann**, **Napatsorn Torchareon** and **Mark Blumhardt**. All our new members are post graduate students studying at the University of Tasmania under the supervision of **Professor Barbara Nowak**. Congratulations to student members **Kingsley Tam** and **Melissa Ting** who recently completed their Honours in Aquatic Animal Health under the supervision of Professor Barbara Nowak. Both Kingsley and Melissa will graduate in mid Dec. Congratulations also to **Melissa Martin** who was awarded a copy of the *A History of Parasitology in Australia and Papua New Guinea* for her consistent and timely contributions to the Tasmanian state news.

Melissa Martin presented with *A History of Parasitology in Australia and Papua New Guinea* for her regular contributions to the Tasmanian ASP state news.

Dr Nicole Kirchhoff, who is now in the USA, recently had an opportunity to meet and speak with Guy Harvey and the CEO of the Guy Harvey Foundation, which is an internationally renowned fisheries conservation and education organization. They discussed future collaborations regarding bluefin tuna research as well as Nicole's new baitfish aquaculture company Live Advantage Bait LLC which was awarded best start-up business 2013 in South Florida. Nicole received $6k in prizes. Nicole also visited the NOVA south eastern oceanographic centre to discuss new findings regarding the invasive Lionfish which are plaguing Florida and the Caribbean. Interestingly they were found to have very few parasites with lower prevalence and intensity compared to their native range in the Pacific Ocean. Nicole is also an invited speaker at an invitation only meeting between NASA, NOAA, and satellite mapping industry regarding the mapping of highly pelagic species including bluefin tuna. She was invited to speak about aquaculture and fish culture can and how this knowledge can be used to enhance models for adult and larval limits, preferences and behaviour.

Nicole Kirchhoff and Guy Harvey (both centre) the CEO of the Guy Harvey Foundation, which is an internationally renowned fisheries conservation and education organization.

Workshops

In late November **Professor Nowak** 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 from Australia, New Zealand, Denmark and Indonesia. Participants were particularly impressed with the experience and knowledge of workshop session leaders that included some of Australia's leading fish pathologists and researchers. The workshop also provided an opportunity for another Tasmanian state outreach event (see the Outreach section of this newsletter).

Some of the participants and tutors including Dr Stephen Pyecroft (standing right) and Dr Judith Handlinger (seated second left) at annual Fish Histopathology workshop held at the University of Tasmania.

Histopathology session led by renowned pathologist Dr Judith Handlinger

Histopathology session led by renowned pathologist Dr Stephen Pyecroft.

In early December **Melanie Leef** attended the Micromon Recombinant DNA Techniques Course held at Monash University in Clayton Victoria. Melanie also successfully secured internal funding to attend ICOPA next year in Mexico. In December **Melissa Martin** and fellow student member **Mark Polinski** also contributed to a Teacher Professional Learning workshop with the theme 'smart science for global solutions'. This workshop was held at the University of Tasmania's NCMCRS science labs and consisted of approximately 30 senior science teachers from various Tasmanian colleges. Melissa discussed her research while Mark ran a molecular tutorial session about DNA extractions.

Mark Polinski enjoying a chat with one of the science teachers attending the Professional Learning workshop.

Mark Polinski discussing PCR and molecular analyses as part of his DNA tutorial session which was part of the Professional Learning workshop for science teachers in Tasmania.

Melissa Martin presenting her ever popular presentation about isopods at the Teacher Professional Learning workshop

Victoria

La Trobe University

Four Honours students graduated from Prof **Terry Spithill'**s laboratory:

- **Jane Kelley** studied drug resistance in worms and flukes in dairy cattle in Gippsland.
- **Kim Loh** cloned and expressed a tegument protein from Fasciola hepatica.
- **Tim Merritt** developed a method to grow and develop juvenile flukes in vitro.
- **Elizabeth Read** performed a Theileria survey in dairy cattle in Gippsland.

The PhD candidate **Tim Elliott** had a paper accepted in Veterinary Parasitology reporting genetic diversity of drug resistant flukes in SE Australia.

In the first week of December, Prof Spithill gave a seminar at Monash Gippsland and spent a day discussing scientific collaborations with Drs **David Piedrafita** and **Mark Sandeman.**

The University of Melbourne

Congratulations to **Professor Robin Gasser** who recently received an Honorary Doctorate from the University of Bern, Switzerland, in recognition of his substantial contributions to parasite genetics and genomics.
Professor Gasser and his team recently published whole genome of a socioeconomically important parasite, *Haemonchus contortus*.

> Schwarz EM, Korhonen PK, Campbell BE, Young ND, Jex AR, Jabbar A, Hall RS, Mondal A, Howe AC, Pell J, Hofmann A, Boag PR, Zhu XQ, Gregory TR, Loukas A, Williams BA, Antoshechkin I, Brown CT, Sternberg PW, Gasser RB. **The genome and developmental transcriptome of the strongylid nematode Haemonchus contortus.** Genome Biol. 2013 Aug 28;14(8):R89

Professor Marshall Lightowlers had been travelling to exotic places, again. Firstly he had the pleasure of travelling to the Bill and Melinda Gates Foundation Grand Challenges meeting which was held in Rio de Janerio in October. He says that the Foundation currently has almost no investment in zoonotic diseases and hopes that their invitation for him to present his group's progress on implementation of vaccines to reduce transmission of *Taenia solium* and

State News continued

Echinococcus granulosus might stimulate the Foundation's interest in these and other neglected zoonotic diseases.

Marshall Lightowlers availing himself of local produce in Rio de Janeiro

Above: Marshall with a recent medical graduate from Khartoum Bottom of this page: Junction of the White (RHS) and Blue Nile rivers in Khartoum

A month later Marshall attended the bi-annual meeting of the International Association of Hydatidology which, on this occasion, was held in Khartoum, Sudan. Also in attendance from Australia were Andrew Thompson and David Jenkins. During the closing ceremony Marshall received an award and plaque from the Association presented by the Sudanese Minister for Health, recognising his contribution to the development of new tools for the control of *Echinococcus granulosus.* Another thing Marshall describes as memorable was the armed escort that the conference attendees were given to chaperone their bus between the hotel and the conference venue.

Dr Abdul Jabbar visited **Dr Herve Hoste'** Laboratory at INRA, Toulouse, France to undertake research on testing various compounds for their *in vitro* anthelmintic properties. Earlier this year, Dr Jabbar received "France-Australia Science Innovation Collaboration Program Early Career Fellowship 2013" from the Australian Academy of Science for his visit to France. Dr Jabbar also gave a plenary talk at the Final Meeting of CAPARA (Goat Parasites) in Berlin, Germany.

The Walter and Eliza Hall Institute of Medical Research

Professor Alan Cowman has won the Mahathir Science Award in Tropical Research, awarded by the Mahathir Science Award Foundation through the Academy of Sciences Malaysia, in recognition of his substantial contributions to understanding malaria. The Mahathir Science Award recognises scientists and institutions worldwide that solve problems of the tropics through science and technology. The winner receives a gold medal and US $100,000. An official prize-giving ceremony will be held in 2014.

Dr Justin Boddey presented a talk entitled "To attach or detach: PI3P binding or PEXEL cleavage at the ER membrane during protein export by malaria parasites?" at the Molecular Parasitology Meeting in Woods Hole, USA.

Western Australia

Murdoch University

Things have slowly been returning to normal for the Murdoch parasitology group following the WAAVP conference in August this year. **Andy Thompson**, **Stephanie Godfrey** and **Alan Lymbery** have recently commenced a new ARC Linkage Project looking at the ecology of parasite transmission in fauna translocations. We have two new PhD students working on this project; **Amy Northover** who started in December 2013 and will be looking at translocations of woylies and polyparasitism, and **Jess Rendle**, starting in February 2014 and exploring interactions between predation and parasitism in translocations of bandicoots. We also welcome two new PhD students who started in August 2013; **Stephanie Hing** who is investigating the ecology of stress and disease in woylies,

and **Krista Jones** who is exploring parasite transmission at the individual, community and population level in woylies. In addition, a new PhD student has yet to be appointed who will be based in **Hamish McCallum**'s lab at Griffith University and will be involved in the modelling component of the new ARC project. **Catherine Perez** will also commence full-time postgraduate studies in 2014, investigating strain variation in *Trypanosoma cruzi* and the impact of polyparasitism on the course of infection and response to drug intervention.

Adriana Botero has recently commenced a postdoctoral position with the Murdoch parasitology group. Adriana will continue her research on the molecular ecology and evolutionary biology of trypanosomes in native mammals, as well as further developing the group's research on the molecular characterisation of *Toxoplasma*.

Congratulations to **Wan Hon Koh** and **Jamie Conlan** who have both successfully completed their PhDs: 'The interaction of *Cryptospordium* with aquatic biofilm systems' and 'Epidemiology of Zoonotic and Neglected Tropical Diseases in the Lao People's Democratic Republic' – respectively. Congratulations also to **Tim Burge**, who was awarded a First Class Honours degree for his thesis on 'A comparison of the palatability of racemic praziquantel against its two enantioseparated isomers in juvenile yellowtail kingfish'.

Andy Thompson recently participated, along with **David Jenkins** and **Marshall Lightowlers**, at the 25th World Congress of Echinococcosis, in Khartoum which was a fantastic experience. The hotel looked out onto where the Blue and White Niles converge, and the hospitality of the local organisers was magnificent! Andy heads off to Antarctica in January for 3 weeks before taking sabbatical leave in Saskatoon and Zurich.

Dr Hosna Golipour Kanani from the Fisheries Department in Gonbad Kavous University, Iran, recently completed a three month sabbatical with Murdoch's Fish Health Unit. Hosna was working on immune responses in Western Australian native freshwater fishes to introduced parasitic diseases – she found some very interesting results and we hope that we can continue this collaborative project in the future.

Amanda Durante started a PhD in September under the supervision of **Una Ryan**, **Peter Irwin** and **Andrea Paparini**, working on blood-borne and enteric parasites in marsupials. **Khalid Al Habsi** started a PhD project in August working on enteric pathogens in Rangeland goats under the supervision of Una Ryan and **David Miller**. **Alireza Zahedi** will commence a PhD in December working on *Cryptosporidium* and *Giardia* in Catchments under the supervision of Una Ryan as part of a recent ARC Linkage project entitled "Innovative approaches to understanding and limiting the public health risks of *Cryptosporidium* and *Giardia* in animals in Australian catchments". Peter Irwin and Una Ryan were also awarded an ARC Linkage entitled "Troublesome Ticks: A new molecular toolkit to investigate tick-borne pathogens in Australia".

WA Department of Agriculture and Food

As with all parasitology groups in WA, we at the WA Ag Department are back to normal after the WAAVP conference, very pleased that home-state nerves weren't really justified. However, there've been some changes to our organisation, with the Albany laboratory no longer operating as part of the Animal Health Laboratories. Diagnostic cases will now be handled by the South Perth laboratory (**Dieter Palmer** as parasitologist), with the Albany lab as a research and extension-support unit. At Albany the team consists of **Brown Besier** as senior parasitologist, **Jill Lyon** as laboratory supervisor, plus veterinarians working on parasite projects (**Jenny Cotter**, external parasites and cattle nematodes, and **Danny Roberts**, worms in prime lambs). Life at present is dominated by two main projects, especially a new MLA-funded investigation into the effects of worms on prime lamb production, with the aims of fine-tuning integrated parasite management recommendations. With 14-odd farms enrolled and 5 or 6 visits annually, Danny and the technical team are more than busy. We are also kept busy with the Barbers Pole worm vaccine, our cooperative venture with **David Smith** et al from the Moredun Research Institute in Edinburgh. The submission for registration of the vaccine as a commercial product was sent off some time ago, and we are gearing up the Albany laboratory for large-scale produ ction, with a Scottish contingent due shortly to set up a new laboratory. And there's no shortage of bread-and-butter work, with worm egg counts by the thousand coming in, and an upsurge in testing for drench resistance. The fortunes of the sheep industry have increased of late in WA, partly due to the best pasture season for some years, and reasonable product prices. At the moment, at least, we still feel we are relevant!

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50

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