

NEWSLETTER

Volume 23 Issue No. 2 June 2012

From the President's desk

Dear Members,

I am pleased to announce that Council has unanimously approved the election of Jacqui and Peter Upcroft as Fellows of the ASP. This brings the total number of fellows to 37. The citation for Jacqui and Peter will be presented at the Launceston AGM which unfortunately Jacqui and Peter are not able to attend. A small celebration will be held in Brisbane with Jacqui and Peter towards the end of July or early August; members will be notified of the exact date and location and invited to participate in this event.

Congratulations and thanks are also due to Lisa Jones and Nick Smith for the recent award to ASP of an *Inspiring Australia* grant (\$30,000) by the Department of Industry, Innovation, Science, Research and Tertiary Education (Commonwealth of Australia). The goal of this grant is to promote public outreach activities to engage the general public in science and inspire students towards a career in science.

In a similar theme, progress has been made in establishing an Australia-based Parasitology Course for students and early career researchers. Following responses to my call of interest issued to members in the last newsletter, a Working Group has been established to discuss, develop and plan the course. This group consists of Kiaran Kirk, Geoff McFadden, Stuart Ralph, Alex Maier, Melanie Rug, Kathy Andrews, Lisa Jones, Nick Smith and myself. The current status will be presented to members at the AGM at the Launceston meeting, with the opportunity for constructive feedback.

The International Journal for Parasitology – Parasites and Wildlife (IJP-PAW) will be launched at the Wildlife Diseases Association Conference in Lyon at the end of July. The mandate of this journal is to publish the results of original research on parasites of all wildlife, invertebrate and vertebrate. This includes free-ranging, wild populations, as well as captive wildlife, semidomesticated species and farmed populations of recently domesticated or wild-captured species. Members will be notified when on-line submission will be accepted, tentatively towards the end of July (http://ees.elsevier.com/ijppaw/).

The International Journal for Parasitology – Drugs and Drug Resistance (IJP-DDR) is getting established, with 59 papers



received to date. Consistent with the high standards of IJP, the current rejection rate by IJP-DDR is approximately 40%.

In other journal news, Council has agreed that Elsevier will apply a Creative Commons License to articles published in *IJP: DDR* and *IJP: PAW*. This follows a decision by Elsevier that their open access journal titles will move to a Creative Commons license for individual articles. Detailed information about this license can be found on the Creative Commons information page here: http://creativecommons.org/licenses/ by-nc-sa/3.0/legalcode and a simplified description of the license can be found here: http://creativecommons.org/licenses/ by-nc-sa/3.0/

The Constitutional amendments tabled at the last AGM, as well as the recently proposed changes regarding membership dues, have been approved by the membership and will be lodged via the Incorporations Secretary, Chris Peatey, with the Queensland Office of Fair Trading.

It is with regret that I note the passing of Bill Southcott, a foundation member and Fellow of the ASP. Also, the passing of Thomas Schnieder who was a great ambassador of veterinary parasitology and a great friend to many ASP members. An obituary for Bill is included in this newsletter; an obituary for Thomas will feature in a future newsletter.

Other news is more pleasant with the announcement that Professor Sandy Trees has been appointed to the House of Lords in the UK. Prof Trees was President of the Royal College of Veterinary Surgeons CVS in 2009-2010 and served on the College Council for 12 years. He becomes only the

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From the President's desk

second veterinary surgeon to take a seat in the House of Lords.

I also wanted to communicate to members that the Strategic Plan will be uploaded on the WildApricot site and progress against each of the actions regularly updated for the information of members. Members will recall the four "pillars" of this plan: Strategic Pillar 1 - Recognizing Excellence; Strategic Pillar 2 - Advancing knowledge; Strategic Pillar 3 – Serving Members; Strategic Pillar 4 – Delivering Training and Education.

Please note that the 2010 & 2011 ASP Network for Parasitology Annual Reports are available for download from the ASP website. Further detail is availaable on the Network News page of this newsletter.

A reminder to members that all minutes of Council meeting are now uploaded into the WildApricot site, rather than circulated to the membership via the Newsletter. Hardcopies of the minutes will continue to be mailed to those members who receive a hard copy of the newsletter.

Finally, I wanted to thank Kathy Andrews and Maureen Engler and other Council members for their efforts in reviewing the profile of ASP Undergraduate prizes. It was apparent that there were huge discrepancies between Universities regarding these awards and the formal revision of the text as communicated by Kathy to the membership should ensure that all appropriate courses be recognized.

I hope to see many of you in Launceston where the 2012 annual meeting promises to be informative and exciting. I want to take this opportunity to thank the Organising Committee (Lisa Jones, Nick Smith, Brendan McMorran, and Barbara Nowak) for their fantastic efforts on behalf of the Society.

With best wishes

Denise Doolan President

ASP MEMBERSHIP CHANGE OF ADDRESS

If you have changed your address, title or name; or if there is a mistake in your mailing label, please fill out the details below and send them to:

Postal Address	

Postcode.

Vale William Henry Southcott 17th July 1920 - 22nd May 2012



Bill Southcott, a foundation member and Fellow of the Australian Society for Parasitology, passed away in May 2012.

William Henry Southcott gained the degree of Bachelor of Veterinary Science from the University of Sydney in 1941. After graduation he spent five years in Tasmania as a veterinary officer with the Department of Agriculture performing general disease investigations, quarantine duties, and was also in practice under the Nationalised Veterinary Service that had recently commenced. He then joined the firm of William Cooper and Nephews as an adviser and research veterinarian and this appointment provided valuable contact with commerce and with the problems of the cattle industry in Queensland.

In 1947 he joined the CSIR as a research officer and was stationed at the newly commissioned Pastoral Research Laboratory at Armidale NSW. On retirement in 1982, he had completed 35 years of service as a scientist and scientific administrator in CSIRO. During this time he was stationed at the Pastoral Research Laboratory at Armidale and worked successively in the Divisions of Animal Health and Production, Animal Physiology and Animal Health. In 1976 he was appointed Assistant Chief in the Division of Animal Health with special responsibilities in research administration at Armidale and the Division's laboratories at Indooroopilly and Townsville in Queensland.

Throughout his professional career Bill worked principally on the applied animal health and production problems of the Australian grazing industry. In the 1950s, one problem that was increasing in frequency and severity with the development of sown pastures was ovine posthitis. At the time many thought that the disease was solely due to environmental conditions and non-contagious. Bill's studies isolated diphtheroid bacteria that were responsible for initiating the ulceration that was precursor to the disease. Testosterone implants were found to be a control measure with much of the testing of these implants being done at the Pastoral Research Laboratory. The originality and importance of this work was recognised by the award of the Payne Exhibition to Bill by the University of Melbourne in 1966. In 1972 he was awarded the Degree of Doctor of Veterinary Science for the published work Studies on Posthitis and Vulvitis of Sheep.

Bill always championed the cause of integrated control of gastro-intestinal parasites in order to decrease reliance on anthelmintics as the sole control measure. His early studies with his colleagues at Armidale were on parasite epidemiology aimed at discovering weak links in their life cycle that could be taken advantage of in control systems. These studies lead to the use of alternate grazing of sheep and cattle as a means of reducing the worm burdens in both hosts and also provided the information for the development of simulation models of the parasites life cycle.

Bill's interest in the possibility of selecting sheep for parasite resistance commenced in 1949 when he noticed in the Merino Strain Trial that strong wool sheep had smaller parasite burdens than the fine wool strains. Bill then spent many subsequent years arguing the case for the CSIRO to undertake such a project. Until finally in the early 1970s basic heritability studies were commenced at Armidale leading to the selection programs that succeeded in producing parasite resistant sheep.

In the inaugural years of the Faculty of Rural Science at the University of New England, Bill organised and taught the Parasitology course and he supervised candidates for PhD and Masters Degrees. He was also a kind and supportive mentor for young people starting their careers in CSIRO. Bill always encouraged them to undertake further education and training. After his retirement, Bill continued his support for young scientists with the establishment of the Southcott Scholarship that provides financial assistance for Honours Students in parasitology at the University of New England.

After retirement from CSIRO, Bill and his wife Beth became full time farmers. They moved out of Armidale to take up residence on one of their properties in the Armidale district where they ran a sheep and cattle enterprise. Only in the past couple of years did Bill finally hang up his drenching gun and move back into Armidale to commence a real retirement.

Bill Southcott was a Foundation Member of the Australian Society for Parasitology and was President in 1976. He was also a Fellow of the Society.

Bill was a caring and thoughtful friend and will be sorely missed by his colleagues and his wife Beth and children Bruce, Margaret, Keith and Paul.

Prepared by Leo Le Jambre

News from the ASP Network for Parasitology

We are delighted that the Launceston 2012 Parasitology Conference is ready to go and look forward to seeing you all in Launceston. We have some great international visitors speaking at the meeting including Professors Grace Mulcahy, David Sacks and Carlos Carmona, as well as a host of out outstanding Australian parasitologists on show.

The ASP Conference Abstract Book is available for download at http://parasite. org.au/arcnet/programme.html

We're also delighted to announce that we've been successful in winning an Inspiring Australia grant to develop and run outreach initiatives to promote parasitology to the general public over the next 3 years, which will be a particularly exciting time in the lead-up to the 2013 joint ASP and WAAVP International Conference in Perth and the ASP's 50th Anniversary Conference and celebrations in Canberra in 2014. We're kick-starting the Inspiring Australia project with Parasite Encounters in the Wild, featuring Greg Woods, Ian Beveridge, Andy Thompson and a Tasmanian Devil!

And, we hope you will enjoy our latest Annual Report, which can be downloaded from the ASP website http://parasite.org. au/?page_id=282

And, finally, and most importantly, we'd like to congratulate James Pham (Bio21 Institute, University of Melbourne) and Leigh Schulte (QIMR) for winning the most recent JD Smyth Awards, and the following winners of ASP Network Researchers Exchange, Training and Travel Awards. Congratulations also to Jana Hagen (The University of Melbourne), who was awarded the Sunshine Foundation Scholarship in Veterinary Science. Jana will use the money to visit the 7th Conference on Molecular and Cellular Biology of Helminth Parasites, Hydra, Greece, to present data on her project, "Exploring the role of Schistosoma mansoni egg proteins in immune regulation using virus delivered microRNAs.'

Nick Smith

Convenor, ASP Network for Parasitology

Lisa Jones Communications Coordinator

Congratulations JD Smyth Travel Award Winners

James Pham, (Bio21 Institute, The University of Melbourne) for a Researcher Exchange to Hou Laboratory, Philadelphia and to attend Biology of Parasitism, Marine Biological Laboratories.

Leigh Schulte, (QIMR) for a Researcher Exchange to laboratory of Dr Conor Caffrey, University of California San Franciscol

Congratulations ASP Network Travel Award Winners

Catherine Gordon (QIMR) for a Researcher Exchange to Pontifical Catholic University of Rio Grande do Sul (PUCRS), Porto Alegre, Brazil.

Severine Navarro (James Cook University) for Researcher Exchanges to TWINCORE Zentrum fur Experimentelle und Klinische Infektionsforschung in Hannover, Germany, for animal lymph node transplantation and an Exchange to the Laboratory for Infectious Diseases, Autoimmunity and Allergies INSERM 924 at the Institut de Pharmacologie Moleculaire et Cellulaire in Sophia Antipolis, France, for Invasive Plethysmography training.

Closing Dates for Awards

ASP Network Travel Award (includes JD Smyth Award)

Friday 5 October 2012

OzEMalaR Travel Award

Friday 13 July 2012 Friday 7 September 2012 Friday 9 November 2012

Bancroft-Mackerras Award

30 September 2012 (for award in 2013)

ASP Fellowships

9 January 2013

Visit the ASP website for more information **www.parasite.org.au**

ASP Network for Parasitology Annual Reports

Both the 2010 and 2011 Annual Reports are available in PDF format on the ASP website

http://parasite.org.au/?page_id=282





Outreach

The Australian Society for Parasitology has won an Inspiring Australia grant to to run a series of free public events to explore the world of parasites.

The ASP grant, won by Nick Smith and Lisa Jones from The ASP Network, is one of 63 *Unlocking Australia's Potential* science communication grants announced on June 12th 2012 by the Minister for Science and Research, Senator Chris Evans.

"Parasites are barometers for the health of any ecosystem and public knowledge about them, and the scientists who research and combat parasitic disease, can only be beneficial," said Nick. "Parasites are a part of everyone's life; they infect our pets, the meat and crops we eat, and us. They also infect our iconic marsupial wildlife and the fish in our unique oceans and reefs, sometimes with devastating consequences."

"Parasites are a fascinating and very popular science topic. There is a grossout factor that both repels and intrigues people to want to know more," Lisa Jones, communications coordinator for the ASP Network for Parasitology said. "We have public events planned across Australia suitable for children, teens and adults. We want to enable audiences to get 'under the skin' of Australia's parasitologists, and the best way we have found to do this is by engaging scientists, communicators and the general public in discussions about, and activities that describe, the lifecycle of parasites and how parasites fit in with their individual lives." she said.

This Inspiring Australia initiative is supported by the Australian Government through the Department of Industry, Innovation, Science, Research and Tertiary Education in partnership with the Australian Society for Parasitology Inc.

Parasite Encounters in the Wild

The first public lecture since the announcement of the ASP's Inspiring Australia grant will take place at the Annual Conference in Launceston.

This event (the flyer for which is printed on the next page) will feature a diverse range of speakers, including Greg Woods from the Menzies Research Institute Tasmania, Andrew Thompson from Murdoch University, Ian Beveridge from Melbourne University and Androo Kelly from Trowunna Wildlife Park, Mole Creek Tasmania. Androo Kelly will bring a Tasmanian Devil.



An Australian Government Initiative



Outreach Funding

ASP members are encouraged to apply for ASP funding to suport outreach in their state. \$2000 per annum per state is available for seminars, symposia, group events, networking etc. Proposals are to be submitted for consideration by State Representatives. Initiatives should foster outreach by members and advance the field of parasitology.

Proposals are to be submitted for consideration by State Representatives.

The event is designed to appeal to all ages. A workshop for children - the "Young Parasites Club" - will run during the presentation, where attendees will build models of parasites and enjoy other fun, free, supervised science activities. Teenage attendees will be able to work their way through a series of riddles on wildlife parasites using electronic resources and the ASP photographic exhibition Parasites in Focus.

To allow a wider participation in the event, the main presentations will be streamed live on the internet at http://www.livestream. com/cctas

Following its success at ICOPA in 2010, the Gene Technology Access Centre, in association with the ASP, is repeating the one-day Outreach program, "Parasites in Focus" on 17th August 2012.

The day, which is aimed at students in Years 10 and 11, involves an introductory talk by Marshall Lightowlers, followed by the running of several workstations. Each workstation, staffed by demonstrators from the ASP, will show a different experiment from which students will learn about parasites. The organisers expect student numbers of around 90.

Any graduate students or other willing parasitologists that would like to participate in the workshops and interact with enthusiastic school students, should contact Tony Chiovitti, Deputy Director of GTAC at: tchiovitti@gtac.edu.au

FREE PUBLIC EVENT

ALL WELCOME SCIENCE ACTIVITIES FOR KIDS MEET A TASMANIAN DEVIL FREE DRINK ON ARRIVAL



Leishmania by J.Curtis & E.Handman, WEHI Toxoplasma by D.Ferguson, Oxford Universit Tasmanian Devil by Mike Calder

PARASITE ENCOUNTERS IN THE WILD

GREG WOODS

Is Devil facial tumour disease the perfect parasite?

Greg Woods from Menzies Research Institute Tasmania will tell us how this disease has developed a clever way to be transmitted and to affect the host immune system, causing its death but not before it moves to another host.

ANDREW THOMPSON

What parasites do we give to wildlife?

Are Australian wildlife more at risk of succumbing to parasites of human origin particularly as we encroach more on wildlife habitats? Andrew Thompson from Murdoch University will investigate our ideas of "One Health".

IAN BEVERIDGE

Parasites: the hidden part of biodiversity

What parasite is on Tasmania's endangered species list? Ian Beveridge from The University of Melbourne will turn you into a citizen scientist, revealing all of the discoveries to make along Australian roadsides .

SCIENCE ACTIVITIES DESIGNED FOR KIDS

Special guest appearance of a Tasmanian Devil from Trowunna Wildlife Park, Mole Creek,

Tasmania. "Young parasites science club" - free, fun, supervised science activities for young scientists available during the presentation. Bookings essential for the science club.

WHEN AND WHERE MONDAY 2ND JULY 2012 5.45PM

Country Club Tasmania, Country Club Avenue, Prospect Vale near Launceston Watch us online! STREAMING LIVE FROM 6PM http://www.livestream.com/cctas

REGISTRATION IS FREE send an e-mail to lisa.jones1@jcu.edu.au or call Lisa Jones on 07 4042 1311 before June 30th 2012



This Inspiring Australia initiative is supported by the Australian Government through the Department of Industry, Innovation, Science, Research and Tertiary Education in partnership with the Australian Society for Parasitology Inc.

An Australian Government Initiative



News about Australia/Europe Malaria Research Cooperation

ASP Conference

The 2012 ASP Annual Conference will be taking place, perhaps as you read this newsletter, in Launceston and I hope to see many OzEMalaR participants there. The program looks excellent and is available to view online <u>https://www. conftool.net/parasitology2012/sessions.</u> php The 2012 ASP Annual Conference abstract book can be downloaded from the conference website <u>http://parasite.org.</u> <u>au/arcnet/conference/2012ConferenceAbs</u> <u>tractBooksmall.pdf</u>

Publications

Professor Ivo Mueller and colleagues from the Walter and Eliza Hall Institute (WEHI) and collaborators at the Swiss Tropical and Public Health Institute, University of Basel and the Papua New Guinea Institute of Medical Research have published a paper in *Proceedings* of the National Academy of Sciences of the United States of America about a new molecular technique to genetically differentiate *Plasmodium falciparum* parasites.

WEHI researchers **Dr Ariel Achtman**, **Dr Sandra Pilat-Carotta** and **Professor Louis Schofield** and their colleagues, along with collaborators at the University of British Columbia, Canada, published a study in *Science Translational Medicine* about a new class of anti-inflammatory agents, called IDR (innate defense regulator) peptides, that could help to increase survival from severe clinical malaria when used in combination with antimalarial drugs.

The two WEHI media stories from these researchers can be found later in this newsletter, in the Researcher News section.

Congratulations to our latest OzEMalaR Travel Award winners:

Pravin Rajasekaran (Infection and Immunity Division, Walter & Eliza Hall Institute) for a Researcher Exchange to visit Professor Robert Menard at Pasteur Institute, Paris, France.

Michelle Boyle (Burnet Institute) for a Researcher Exchange to visit Kenya Medical Research Institute, Peter Bull to use plasma samples available in Kilifi to investigate the role of complement in humoral immunity targeting *P.falciparum* infected RBCs (pRBCs) and develop assays to measure complement fixation by antibodies.

Dr Simon Apte, (QIMR, Molecular Vaccinology) to attend Cyto2012, Workshop - Malaria Cytometry in Leipzig Germany and then a Researcher Exchange to National Institute for Medical Research, Mill Hill, London; Prof. Jean Langhorne's Laboratory to help the host immune response to infection, in particular the role of CD4+T cells.

Uyen To Nguyen (Research School of Biology, The Australian National University) for a Researcher Exchange to visit Odile PUIJALON Institut Pasteur, Molecular Parasite Immunology Unit, Dept of Parasitology and Mycology to learn protocols and techniques in tissue culture and in the manipulation of isolated perfused human spleens and micro-beads systems and then conduct the perfusion experiments with human spleen.

The closing dates in 2012 for OzEMalaR Travel Awards are:

Friday 13 July 2012 Friday 7 September 2012 Friday 9 November 2012

Visit our website <u>www.ozemalar.</u> 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 <u>www.evimalar</u>. org. 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.

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

Geoff McFadden Convenor, OzEMalaR



Above: *Plasomdium* pseudocolour EM Image by Geoff McFadden

Researcher News

IDR peptides, a novel antiinflammatory drug could help to improve survival in the most severe cases of malaria by preventing the immune system from causing irrevocable brain and tissue damage.

Walter and Eliza Hall Institute researchers have shown that a new class of antiinflammatory agents, called IDR (innate defense regulator) peptides, could help to increase survival from severe clinical malaria when used in combination with antimalarial drugs.

A research team fronted by Dr Ariel Achtman and Dr Sandra Pilat-Carotta, and led by Professor Louis Schofield from the institute's Infection and Immunity division, published the study today in the journal *Science Translational Medicine*.

Dr Achtman said that many drugs that prevent malaria infections are not effective in sick patients at preventing tissue damage that arises from the inflammatory immune response. "The most severe forms of malaria, such as cerebral malaria which causes brain damage, are actually the result of the immune system trying to fight infection and causing collateral damage," she said.

Dr Pilat-Carotta said the team used a treatment approach combining drugs that suppress potentially harmful inflammation with antimalarial agents that fight the parasite, in mouse models infected with the malaria parasite *Plasmodium berghei*. "In this study, we showed that a new class of drugs could prevent inflammation in the brains of mice with malaria and improve their survival. This is an example of a 'host-directed' therapy – a treatment intended to act on the host not the parasite," Dr Pilat-Carotta said.

Malaria kills up to one million people worldwide every year, particularly children under five and pregnant women, who often develop severe clinical symptoms such as brain damage and multiple organ failure.

Professor Schofield said up to 25 per cent of severe clinical malaria cases are fatal even with access to the best health care. "Antimalarial drugs are very effective, but only if they are given before serious clinical symptoms develop. On their own, antimalarial drugs fail in approximately one out of every four cases of severe clinical malaria, because by the time the patient arrives at a hospital they are already very sick and inflammation caused by the immune response to the parasite is causing major organ damage," Professor Schofield said.

IDR peptides are a new class of antiinflammatory agent developed by Professor Robert Hancock and colleagues at the University of British Columbia, Canada, which enhance beneficial aspects of the initial immune response while dampening harmful inflammation, Professor Schofield said. "IDR peptides are also relatively cheap to produce and easy to use, making them a good option for medical treatments in developing countries," he said.

Dr Achtman said the development of preclinical models of severe malaria could improve pre-clinical drug screening and potentially prevent some of the drug failures that happen at the human clinical trial stage. "Professor Gordon Smyth and Ms Charity Law from the institute's Bioinformatics division used sophisticated bioinformatics-driven analyses to identify early changes to inflammatory processes, days before the mice show visible changes in malaria disease symptoms. Hostdirected therapies are a good treatment option because parasites are less likely to evolve resistance, and we believe they will eventually increase the number of successful treatment interventions in the short time window between hospitalisation with severe malaria and death," Dr Achtman said.

The research was supported by the Grand Challenges in Global Health Research program through the Foundation of the National Institutes of Health and Canadian Institutes for Health Research, National Health and Medical Research Council of Australia, and the Victorian Government.

Source: WEHI



Dr Sandra Pilat-Carotta, Professor Louis Schofield and Dr Ariel Achtman. Image: WEHI

A new technique that accurately determines the risk of infants in endemic countries developing clinical malaria could provide a valuable tool for evaluating new malaria prevention strategies and vaccines.

The technique could even help to understand how anti-malarial vaccine and treatment strategies act to reduce malaria, say researchers from the Walter and Eliza Hall Institute, Swiss Tropical and Public Health Institute, University of Basel and the Papua New Guinea Institute of Medical Research.

Professor Ivo Mueller from the Walter and Eliza Hall Institute said the research team discovered that the number of new malaria parasites that infants acquire over time is strongly linked to the risk that the child will develop clinical disease.

"It was very clear that infection with new and genetically different malaria parasites was the single biggest factor in determining the risk of an infant becoming sick from malaria, more than any other factor including age, the use of bed nets or the risk of transmission in the area. We were actually surprised by how clear the correlation was," Professor Mueller said.

The molecular technique to genetically differentiate *Plasmodium falciparum* parasites was developed by Dr Ingrid Felger at the Department of Medical Parasitology and Infection Biology, Swiss Tropical and Public Health Institute, Switzerland. Professor Terry Speed from the Walter and Eliza Hall Institute's Bioinformatics division helped to develop mathematical algorithms to process the data.

Dr Felger said the researchers used highthroughput screening to determine the number of genetically-distinct *Plasmodium falciparum* malaria parasites that acquired by Papua New Guinean children aged one to four over a period of 16 months. The research was published today in the journal *Proceedings of the National Academy of Sciences of the United States of America*.

"This new research tool is elegantly



Professor Ivo Mueller Image: WEHI

simple but very powerful, and easily applicable in many circumstances, without a high level of technology or training," Dr Felger said. "We think it could have profound applications. This technology will be particularly useful for assessing ideal vaccine candidates for preventing malaria, help to develop better ways of performing future human trials of new potential malaria vaccines, and identifying the mechanism of action for existing vaccines and treatments."

Each year more than 250 million people worldwide contract malaria, and up to one million people die. Malaria is particularly dangerous for children under five and pregnant women. *Plasmodium falciparum* is the most lethal of the four *Plasmodium* species, and is responsible for most clinical disease.

Professor Mueller said the technology is already being used in the field, recently helping to explain why people with sickle-cell anaemia are less at risk of malaria infection. He said that accurately assessing the burden of malaria parasites acquired by children in countries where the disease is endemic is invaluable.

"One of our biggest problems in developing useful vaccines, treatments and

preventative strategies for malaria is reliably predicting the distribution and risk of malaria at an individual level. There is huge variation in the risk of developing clinical malaria within a community or village, or within a particular age group, and we now have an accurate way to measure this," Professor Mueller said.

The research was supported by the Swiss National Science Foundation, National Institutes of Health and the Victorian Government.

Source: WEHI

Events

Professor Alan Johnson invites you to join him for a free mentoring webinar.

Professor Johnson Writes: "On July 11th I will be presenting a free webinar entitled "Charting a Course for a Successful Research Career" at Trinity College, Dublin as part of the European Science Open Forum 2012, from 11:30 -13:00 Dublin time.

I invite you and your colleagues to register for this webinar at <u>http://mail.elsevier-alerts.com/go.asp?/</u> <u>bECU001/mPQUEH3F/qPHU5H3F/</u> <u>uX8OW43F/x87IZH3F/cutf%2D8</u>

My webinar will be based on the Book I wrote for your Early Career Researchers and freely distributed by Elsevier. It is available for free download in Engliah and 9 other languages (Arabic, Chinese [modern standard], French, German, Italian, Japanese, Korean, Portuguese and Spanish) at:

www.biggerbrains.com/featured

Please feel free to distribute this information among your staff and students and I look forward to working with you on this exciting initiative.

CHARTING A COURSE FOR A SUCCESSFUL RESEARCH CAREER

A Guide for Early Career Researchers 2nd Edition

Professor Alan M Johnson AM M.A. (Hons), M.Ed.Mgmt., B.App.Sc., Ph.D., D.Sc.





Parasitology & Tropical Medicine SIG

Parasitology Masterclass

Adelaide 2013

Preliminary notice Friday 1st March – Sunday 3rd March Special guest: Lynne Garcia Practical sessions, theory and updates - Make sure not to miss out! www.parasitologymasterclass.org



25-29 August 2013

Perth Convention Exhibition Centre Western Australia



24th International Conference of the World Association for the Advancement of Veterinary Parasitology

ICOPA XIII

The 13th International Congress of Parasitology will take place in Mexico Cityy in August 2014. For the most current information, please visit http://www.icopa2014.com





The 6th International Veterinary Vaccines and Diagnostics Conference Cairns, Queensland, Australia 29th July - 1st August 2012

6th International Veterinary Vaccines and Diagnostics Conference

The preliminary program for the 6th International Veterinary Vaccines and Diagnostics Conference at the Cairns Convention Centre (29th of July to the 1st of August, 2012) is now on the conference website: **www.ivvdc2012.org**

While oral abstracts submission is now closed, we are still accepting poster abstract submissions till 13th July. The IVVDC Conference has been well established as one of the most important meetings in the field of animal vaccines and diagnostics. This year, the conference is poised to attract leading international academic, commercial and veterinary experts in their field. With its interactive format and idyllic setting, this meeting is a must for scientists, managers and veterinarians interested in the latest advances and results.

INFORMATION & REGISTRATION: Registration and poster abstract submission can be done online at the conference website. ENQUIRIES: Don't hesitate to contact the meeting secretariat on ivvdc@asnevents.net.au

IJP Highlights



INTERNATIONAL JOURNAL FOR PARASITOLOGY

May 2012 Issue

Representational difference analysis identifies specific genes in the interaction of *Giardia duodenalis* with the murine intestinal epithelial cell line, IEC-6 **S.Y. Ma'ayeh, P.T. Brook-Carter**

5. f. Ma ayen, F.I. BIOOK-Carter

In vitro cultured Neoparamoeba perurans causes amoebic gill disease in Atlantic salmon and fulfills Koch's postulates P.B.B. Crosbie, A.R. Bridle, K. Cadoret, B.F. Nowak

Molecular Approaches to Malaria Special Issue 2012

Malaria parasite colonisation of the mosquito midgut – placing the *Plasmodium* ookinete centre stage **Fiona Angrisano, Yan-Hong Tan, Angelika Sturm, Geoffrey I. McFadden, Jake Baum**

Invited Reviews

Analysis of malaria parasite phenotypes using experimental genetic crosses of *Plasmodium falciparum* Lisa C. Ranford-Cartwright, Jonathan M. Mwangi

Naturally acquired immune responses against *Plasmodium falciparum* sporozoites and liver infection **Vittoria Offeddu, Vandana Thathy, Kevin Marsh, Kai Matuschewski**

T cell-derived IL-10 and its impact on the regulation of host responses during malaria **Ana Paula Freitas do Rosario, Jean Langhorne**

Innate recognition of malarial parasites by mammalian hosts **Peter Liehl, Maria M. Mota**

A model for the progression of receptor-ligand interactions during erythrocyte invasion by *Plasmodium falciparum* **Katherine L. Harvey, Paul R. Gilson, Brendan S. Crabb**

Functional analysis of erythrocyte determinants of *Plasmodium* infection **Amy K. Bei, Manoj T. Duraisingh**

Current Opinion

Dendritic cells: The Trojan horse of malaria? Michelle. N. Wykes, Joshua Horne-Debets

Original Research Articles

Genetic clonality of *Plasmodium falciparum* affects the outcome of infection in *Anopheles gambiae* Sandrine E Nsango, Luc Abate, Martine Thoma, Julien Pompon, Malou Fraiture, Annika Rademacher, Antoine Berry, Parfait H. Awono-Ambene, Elena A. Levashina, Isabelle Morlais

Plasmodium subtilisin-like protease 1 (SUB1): insights into the active-site structure, specificity and function of a pan-malaria drug target

Chrislaine Withers-Martinez, Catherine Suarez, Simone Fulle, Samir Kher, Maria Penzo, Jean-Paul Ebejer, Kostas Koussis, Fiona Hackett, Aigars Jirgensons, Paul Finn, Michael J. Blackman

Jobs

PhD Scholarship opportunity Macquarie University





Project title: Wildlife conservation: altering host-parasite interactions and impacts to biodiversity and ecology

Australia has one of the world highest extinction rates, with 54 vertebrate species becoming extinct over the past 200 years. In today's changing world, the increase in emergence of disease represents a significant, but largely unrecognised threat to global extinction rates.

The threat of emerging disease is particularly important for conservation of endangered wildlife but risks of disease are heightened by the very actions used to conserve wildlife. Conservation strategies such as supplementation of wild populations with captive bred animals not only introduce endangered individuals to populations but also a range of microorganisms that are inhabiting translocated individuals.

This project involves characterising protozoan parasites and bacteria of captive and wild brush-tail rock wallabies. The majority of research will be laboratory based and involves isolation of parasites and bacteria from rock wallaby samples, molecular analyses, taxonomy and phylogenetics. There is some opportunity to participate in fieldwork with project collaborators Department of Environment and Climate Change and the Australian Museum

Applicants should have a current drivers licence and experience in any of parasitological techniques, molecular analysis or wildlife handling.

Interested prospective applicants should contact the principal supervisor in the first instance, Michelle Power. e-mail: michelle.power@mq.edu.au. Phone: 02 9850 6974.

Further information can be found at http://www.hdr.mg.edu.au/information_ about/scholarships/hdr_scholarships_ domestic candidates only

Canada Research Chair in the Molecular Ecology of Waterborne Microbes, Faculty of Veterinary Medicine, University of Calgary



The University of Calgary Faculty of Veterinary Medicine (UCVM), is seeking applicants for a Tier 2 Canada Research Chair (CRC) in the Molecular Ecology of Waterborne Microbes to contribute to its strategic research activities in disease ecology and food/water safety.

The Tier 2 CRC will be expected to establish an independent, externally funded research program with an emphasis on the molecular ecology of water borne microbes that are of concern to animal and human health. In addition to collaboration with UCVM faculty members, the successful applicant will work with a group of researchers at the Univeristy of Calgary engaged in research in water quality and water biology. The Advancing Canadian Wastewater Assets (ACWA) is a unique partnership between the City of Calgary and the University of Calgary focused on advancing wastewater treatment technologies as well as addressing environmental and health issues. The position also provides an excellent opportunity to interact with other established research groups in the Faculties of Veterinary Medicine, Science and Medicine. This is primarily a research position, but the successful candidate will be expected to contribute to teaching in the DVM and graduate programs in areas related to their expertise.

In accordance with the regulations set for Tier 2 CRCs (www.chairs-chaires.gc.ca/ <u>home-accueil-eng.aspx</u>), the candidate will be an excellent emerging researcher

who has demonstrated research creativity and innovation, and the potential to achieve international recognition within the next five to ten years. Qualifications include a PhD and postdoctoral training in an appropriate area. A DVM, MD or equivalent degree is considered an asset. As this is a Tier 2 CRC, applicants must be within ten years of receiving their highest degree and will be appointed at the a rank of assistant or associate professor, commensurate with experience

UCVM is Canada's fifth accredited veterinary college and its first class will graduate in May 2012. UCVM is a research-intensive Faculty with rapidly expanding research and graduate education programs. The DVM program combines a comprehensive general veterinary education with enhanced opportunities in selected areas. The integrated core-elective curriculum combines discipline-based courses with extensive on-campus and offcampus practical learning. UCVM uses a distributed veterinary learning community including public and private practice partners to deliver its fourth year practicum program. Clinical activity is through engagement with regional practices. Descriptions of the Faculty, its departments and research programs can be found on the UCVM website (www.vet.ucalgary.ca).

Calgary is a vibrant, multicultural city of 1,000,000 near the Rocky Mountains, Banff National Park and Lake Louise. The University of Calgary is a research-intensive, comprehensive university that supports innovation in research, education and service to the community.

Review of applications will begin July 15th, 2012. Interested individuals should submit current curriculum vitae, a statement of teaching and research interests, and the names of three referees to:

Ingrid Middleton, Faculty Assistant

Department of Ecosystem and Public Health Faculty of Veterinary Medicine, University of Calgary Tel: (403) 210-8672, Fax: (403) 210-9740 Email: irmiddle@ucalgary.ca

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