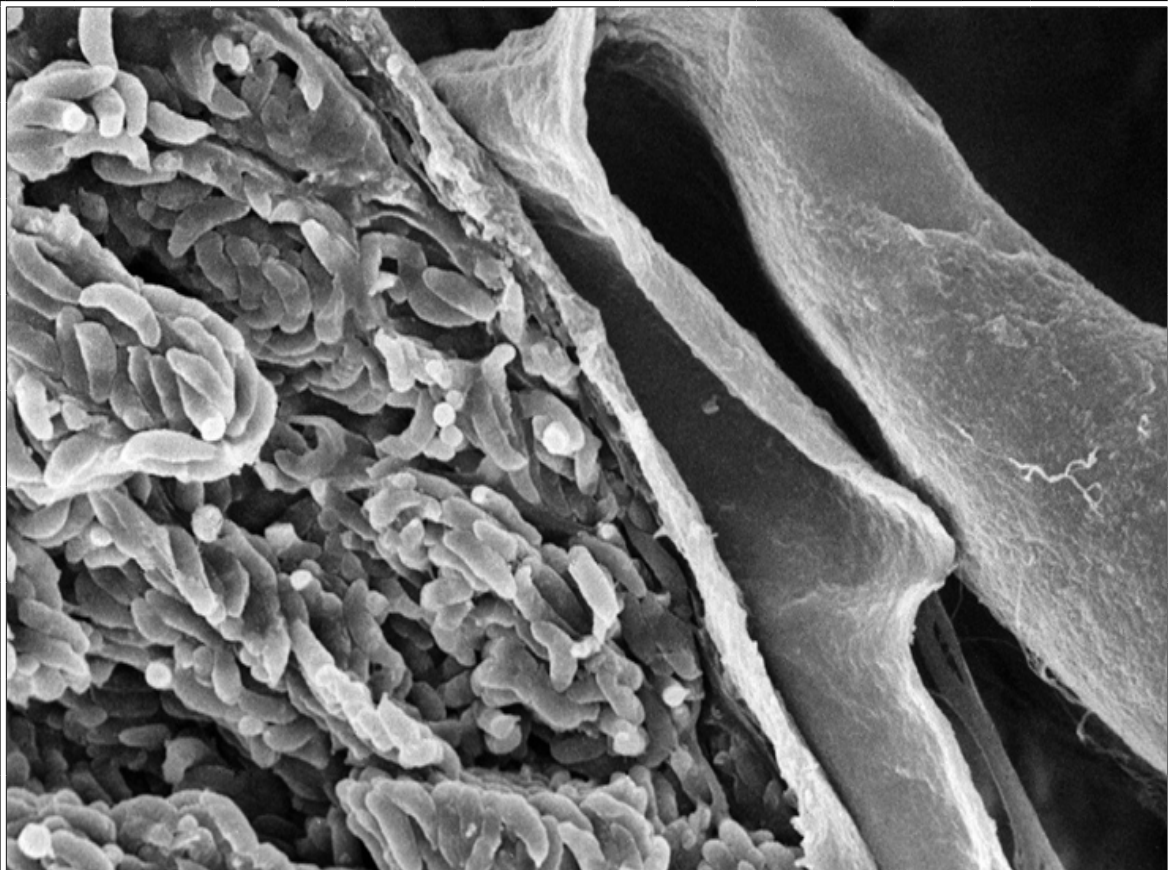


the
australian
society for
parasitology
inc.

ABN 65 979 686 445

NEWSLETTER

<http://www.parasite.org.au/>



Scanning electron micrograph of periphery of
macroscopic cyst of *Sarcocystis gigantea* from sheep

volume 14 issue 1

Print Post Approved PP 644113/00027

April 2003



australian society for parasitology inc.

NEWSLETTER page 1

THE AUSTRALIAN SOCIETY FOR PARASITOLOGY INC.

President: Tom CRIBB Dept Microbiology & Parasitology The University of Queensland Brisbane QLD 4072 Tel: (07) 3365 2581 Fax: (07) 3365 4620 Email: t.cribb@mailbox.uq.edu.au	Australian Capital Territory: Wendy COOPER Veterinary Medicines Division, Australian Pesticides and Veterinary Medicines Authority PO Box E240, Kingston ACT 2604 Tel: (02) 6272 3081 Fax: (02) 6272 5249 wendy.cooper@apvma.gov.au
Vice-President: Andrew THOMPSON Division of Veterinary and Biomedical Sciences Murdoch University Murdoch WA 6150 Tel: (08) 9360 2466 Fax: (08) 9310 4144 Email: andrew_t@numbat.murdoch.edu.au	New South Wales: Dr Michelle WOOSTER VHR Pty Ltd Private Bag West Armidale NSW 2350 Tel: (02) 67711602 Fax: (02) 67725184 Email: mwooster@vhr.com.au
President-Elect: David JENKINS Aust Hydatid Control & Epidemiology Program 12 Mildura St Fyshwick ACT 2609 Tel: (02) 6271 6331 Fax: (02) 6272 3124 Email: djenkins@effect.net.au	Northern Territory: Lois SMALL Animal Health, Primary Industries and Fisheries Berrimah Research Farm Berrimah NT 0828 Tel: (08) 8999 2245 Fax: (08) 8999 2024 Email: lois.small@nt.gov.au
Executive Secretary: Rob ADLARD Queensland Museum Box 3300 South Brisbane QLD 4101 Tel: (07) 3840 7723 Fax: (07) 3846 1226 Email: robertad@qm.qld.gov.au	Queensland: Malcolm JONES Molecular Parasitology Unit Queensland Institute of Medical Research Herston QLD 4006 Tel: (07) 3362 0405 Fax: (07) 3362 0104 Email: malcolmJ@qimr.edu.au
Treasurer: Craig HAYWARD Dept Microbiology and Parasitology The University of Queensland Brisbane QLD 4072 Tel: (07) 3365 8549 Fax: (07) 3365 4620 Email: c.hayward1@mailbox.uq.edu.au	South Australia: Ian WHITTINGTON Parasitology Section, SA Museum North Terrace Adelaide SA 5000 Tel: (08) 8207 7463 Fax: (08) 8207 7222 Email: whittington.ian@saugov.sa.gov.au
IJP Editor: Nicholas SANGSTER Faculty of Veterinary Science Building B14 University of Sydney NSW 2006 Tel: (02) 9351 7130 Fax: (02) 9036 9485 E-mail: IJP@vetp.usyd.edu.au	Tasmania: Rob GURNEY CSIRO Marine Research GPO Box 1538 Hobart TAS 7001 Tel: (03) 6232 5138 Fax: (03) 6232 5485 Email: robert.gurney@csiro.au
Archivist: Carolyn BEHM School of Biochemistry and Molecular Biology Faculty of Science, Australian National University Canberra ACT 0200 Tel: (02) 6125 2203 Fax: (02) 6125 0313 Email: carolyn.behm@anu.edu.au	Victoria: David PIEDRAFITA Centre for Animal Biotechnology School of Veterinary Science University of Melbourne, Werribee VIC 3010 Tel: (03) 8344 8002 Fax: (03) 9347 4083 Email: david.piedrafita@med.monash.edu.au
Newsletter Editor: Malcolm JONES Molecular Parasitology Unit Queensland Institute of Medical Research Herston QLD 4006 Tel: (07) 3362 3131 Fax: (07) 3362 0104 Email: malcolmJ@qimr.edu.au	Western Australia: Russ HOBBS Division of Veterinary and Biomedical Sciences Murdoch University Murdoch WA 6150 Tel: (08) 93602499 Fax: (08) 93104144 Email: hobbs@murdoch.edu.au



From the President's Desk

What is it exactly that the Council of the Australian Society for Parasitology does? Our Constitution sets out our object (indeed that of the Society as a whole) as follows: *The Society fosters association of persons interested in parasitology, fosters establishment and proper curation of collections of Australian parasites, and, by facilitating intercourse and discussion, promotes investigation and advances knowledge of parasitology.*

This sounds pretty good and, by and large, is achieved by the Society very well. In the last couple of years, however, the activity of the Society has been ratcheted up a notch by our collective sensing of that excellent parasitological phenomenon Red Queenism: if we don't start running we will be left well and truly behind. The key response of our Society so far has been the production of our Issues paper (in conjunction with FASTS) and by such initiatives as the organisation of the visit to our scientific meeting by the Minister for Science. Where has this activity taken us and where should we go next? These are complex questions that are exercising your Council right now.

Two broad possibilities were canvassed at the recent Council meeting. These were that the Society should seek to fulfil its role by further promotion or parasites, parasitism and parasitology. The second was that we should seek to support specific initiatives associated with our discipline. Effectively this latter idea means that we should support or even lead initiatives seeking funding. The attraction of this idea is that the society may be able to achieve (and point to) concrete outcomes in terms of research centres, fellowships or other funding. The conclusion of Council was, however, that although attractive, the second path should not be followed (at least for now) because it raises the prospect that the Society may be forced to choose between competing proposals to be given our *imprimatur*.

If we are NOT going to plan to support individual initiatives, then what will we do? An idea presently on the Council table for consideration is that we should seek to develop a state-of-the-parasite-nation document. Early discussions have suggested that we might seek to base one of our scientific meetings around this theme. The idea would be to detail the parasites and parasitic diseases that are present in Australia, their importance and prospects for control. The subject might be divided into parasites of medical, veterinary and aquaculture importance. In addition, we might summarise our knowledge of the parasites of wild animals, consider the threat of emerging diseases and define our role in contributing to parasite research and control in our region. Finally, we might consider the state of our discipline, where our expertise lies (as we all know we are a disparate bunch) and if there are specific weaknesses that should be addressed.

These deliberations might give rise to both pithy documents for specific lobbying of the powers that be as well as a lengthier document that might form a blue-print for future historical comparisons. That is, if we organise our information appropriately, we may be able to use it to see how we have progressed in 10 year's time.

At present these are just ideas. The detail and the reality are still to be determined. The question of "where next?" is considered a very important one by your Council and, along with the organisational minutiae, **THAT** is what your Council will be doing on the Sunday before our scientific meeting begins in Darwin.

The meeting in Darwin looks like it will be a terrific one. If you have not registered yet I encourage you to do so and I will look forward to seeing you there.

Tom Cribb, ASP President



ASP Newsletter Editor

At their last meeting in March, the ASP Council appointed Malcolm Jones as the next ASP Newsletter Editor to replace Peter O'Donoghue who is stepping down from the position after 10 years service. Malcolm should be known to many ASP members as previous Queensland representative, cestode guru and electron microscopist extraordinaire. Malcolm has extensive research experience and has eclectic tastes in parasites. He is renowned for his dry satirical sense of humour, an attribute which he will find invaluable as Newsletter Editor.

Malcolm has been appointed for a three year term and will manage the Newsletter accounts through the University of Queensland trust account. All future contributions to the Newsletter should be submitted electronically to:

Dr Malcolm Jones
Molecular Parasitology Unit
Queensland Institute of Medical Research
300 Herston Road
Herston QLD 4006
Tel: (07) 3362 3131
Fax: (07) 3362 0104

Email: malcolmJ@qimr.edu.au



INCOMING MAL



OUTGOING POD

Adieu: As retiring Newsletter Editor, I would like to thank everybody that has been involved in its production over the last ten years. I have thoroughly enjoyed the task of collating your submissions into a collegial chatty newsletter. It has always been informative, seldom laborious and often humorous. Please keep the gossip flowing and give Malcolm the same chance to have fun with your words. I will look forward to reading about your shenanigans over the next ten years and hope the Newsletter does not get lost in cyber space. Please continue to support this bit of tangible evidence that we all have something in common and like what we do. Long live parasitology!!

Cheers, POD



IJP Editor

Dear Colleague

I have recently been appointed by the Australian Society for Parasitology as Editor-in-Chief of the International Journal for Parasitology. I would like to thank the Australian Society for Parasitology for their confidence in me and the Faculty of Veterinary Science at the University of Sydney for allowing me the time.

New contact details now appear on the website <http://www.elsevier.com/locate/ijpara>, inside the cover of Volume 33 of the journal as well as below.

The Journal comes to me in good shape. Alan Johnson, and other previous Editors-in-Chief have built up the reputation of the Journal so that it now ranks very highly in the field and publishes some of the best papers in parasitology. Alan's efforts have been outstanding and we all thank him for that. His legacy is not only high standards but also an efficient editorial process and, the most important ingredient of an excellent journal, a dedicated community of willing Specialist Editors and referees. Further, Maria Meuleman has moved across to the University of Sydney so that the excellent editorial assistance that she provides will continue.

My challenge is to maintain the high standing of IJP. The journal's credentials are built on sound Aims and Scope, the submission of excellent manuscripts, active Specialist Editors, effective and impartial peer review and efficient editorial procedures, including a good relationship with Elsevier, the publishers. In order to best serve the parasitological community and the advancement of our important science I hope you can all continue to submit excellent papers to IJP and, when asked, to fairly and efficiently referee the papers of your peers.

Contact details:

Associate Professor Nicholas Sangster
Editor-in-Chief
International Journal for Parasitology
Faculty of Veterinary Science
Building B14
University of Sydney NSW 2006
Australia

Ms Maria Meuleman
Editorial Assistant

E-mail: IJP@vetp.usyd.edu.au
Telephone: +61 02 9351 7130
Facsimile: +61 02 9036 9485

New Instructions for Contributors

See IJP Home Page:

<http://www.elsevier.com/locate/ijpara>



REPORT OF ASP COUNCIL

Report of ASP Council Meeting 28th March 2003 Queensland Museum

Present: Tom Cribb, Rob Adlard, Craig Hayward, Dave Jenkins, David Piedrafita, Carol Behm, Rob Gurney, Ian Whittington, Russ Hobbs, Mal Jones, Peter O'Donoghue, Lois Small, Wendy Cooper, Michelle Crossley, Nick Sangster.

Apology: Andrew Thompson

Before the meeting started, DR gave his thoughts on the funeral for Sue Newton which he had attended on behalf of the ASP the previous day. The Council observed a moment of silence in her memory.

Minutes of previous meeting: accepted

Matters Arising:

TC reported that Dr John Hickman (member of ASP now retired) who was invited to attend the Hobart ASP conference had a marvellous time – TC suggested that this initiative of Council was successful and should be continued.

The success of ASP students at the Malaysian Society conference was noted with pride.

Maintenance of membership database – Secretariat (RGSQ) data can only be downloaded in ASCII format and does not contain historical records of joining dates, etc. (not due to RGSQ but rather because data not available from previous secretariats). Reminder notices for contact details go out with every annual subscription notice. A large non-financial component was noted by TC – POD responded that membership fluctuates between 350-380, non-financial members often rejoin but many students find new fields.

Position of Webmaster – RH believes that it is an operational position and does not

require to be attached to the Council – Council can request reports from Webmaster for their meetings.

2005 Conference: combined WAAVP/NZSP/ASP meeting? NS reported that he went to Christchurch – excellent venue, NZSP have agreed to joint meeting – ASP need to decide on our involvement. Timing issue (October) may clash with teaching – Council agreed to appoint a convenor for our 'satellite' meeting

President's Report:

TC reported that DJ and he attended Science meets Parliament – agenda for discussion driven by politicians – it was more broad agenda promotion for science (rather than specific parasitology issues) which was very effective and felt that FASTS did a great job in promoting this agenda – DJ said we should prepare some 'snappy parasite propaganda' which can be delivered once in the 'inner sanctum' of parliament – definite educational link here.

TC noted that there had been a smooth transition in the change of IJP Editor and editorial office started by AT and completed earlier this year.

TC reported that executive were very appreciate to all who showed willingness to take on Newsletter Editor position. Mal Jones was selected as replacement and will use infrastructure developed by POD. TC noted that the Newsletter position is a key function of the Society and Council were keen to support MJ through resourcing and personal assistance. POD said the computer was now out of date and software had moved on – likely need upgrades of both plus a scanner – MJ and POD to liaise and MJ to bring requirements to next Council meeting or to Executive if required before July.





Your friendly ASP Council (standing) overseeing the hard-working Executive (kneeling)
(see inside front cover for who's who)

Bancroft Mackerras Medal – TC tabled document for consideration by Council. Changes were suggested to the By-Laws to streamline committee selection process. The committee is made up of Fellows of the Society. CB stated that the BMM was set up as a 'research' award. NS said that the BM Committee had difficulty in interpreting the guidelines for the BM Medal. Council resolved the following changes:

'Each member of the Awards Committee shall serve for up to five years. Council should appoint one new member to replace one retiring member each year. Retiring members will not be eligible for re-appointment until a year has elapsed. This system will ensure both continuity and regular change in membership of the Awards Committee.'

"Nominations shall be made by a proposer and a seconder, they consist of the following documents: (I) a detailed statement of nomination describing the nature of the 'outstanding contribution to the science of parasitology' for which he/she has been responsible. The statement should make explicit reference to particular aspects of the research achievements of the nominee. This statement should be signed jointly by the proposer and seconder, or each may submit a separate statement; (ii) a curriculum vitae including a list of all publications.'

'The Awards Committee shall bring to the notice of the Executive Secretary the name of any candidate it considers worthy of nomination so that the Executive Secretary can encourage such nomination to be made'



In discussion of changes to By-laws/Constitution, POD asked who is custodian of process? Council agreed it was the Secretary.

FASTS' workshop – TC said the focus should be on maximising the benefit – WC said the website is a good communication tool and Council needs to keep its content current

TC asked about management of membership database by Secretariat – POD said they do an excellent job and data quality is a matter of individual member responsibility – DP suggested that state reps could fulfil a more proactive role – RGSQ could send a list of state members to state reps each year and Executive Secretary should send information on new members to state reps.

TC brought up the possibility of web payment for membership fees – WC stated that web payment has yet to gain wide acceptance – trust & security issues.

Conference manual has been developed according to WC who passed it onto Mark Sandeman – WC will track it down with intent to keep it as a living document.

TC raised potential for media coverage at conferences – require an experienced person to handle the media and help prepare press releases (DJ, RA). POD suggested alert local press with biographies of invited speakers – DJ stated that a catchy 'hook' required.

Treasurer's Report

CH tabled his report and profit/loss statements, he reported that the Society's accounts were now loaded into MYOB to facilitate audits. ASP Inc is now registered for GST and has applied for endorsement as a tax exempt charity – should qualify without problem. POD noted that Treasurer and Exec Secretary can be re-

elected for 5 years continuous service with a view to providing continuity despite being an onerous task – Council aware of possibilities but usually fell to goodwill of individual members.

IJP Editor's Report

NS read email from Adrian Klinkenberg which detailed an income increase for IJP against the trend of other Elsevier journals. Special Issue – May issue will have limited papers from the Hobart conference – President's address/award addresses etc.

Newsletter Editor's report

POD & MJ will produce the next Newsletter together – logistics of production remain the same (e.g. trust account at UQ) MJ to provide a budget request for the Council meeting in Darwin and books to be audited prior to AGM. TC highlighted the excellent job that POD has done over the past years.

Archivist's Report

CB reported that films made by J.D.Smyth were in her possession and suggested that she be resourced for their transfer to digital media – unanimous agreement by Council.

Webmaster's Report

RH called for links to other websites (institutional, parasitology links) - suggested he contact WolfWeb to redesign the site. Suggested that State Reps look for links within their State and forward these to RH. Discussion regards online registration for ASP conferences – generally felt that downloadable forms were preferable (easier to format and security issues).



TC led discussion of activity of Fellows, with higher activity recommended. RA suggested that the parameters for conferring of Fellowships should not include seniority, it would be beneficial to have more Fellows who remain active researchers in the field from which we could draw representatives of the Award Committees to assist more Senior Fellows. One Fellow elected, to be named at Darwin Conference.

Education

TC noted that the promotion of education in parasitology had not been moved forward as a major issue of Council – POD gave an account of the new BioSecurity CRC under which a template at tertiary level had been created for prospective PhD candidates.

POD also confirmed he had been elected as Chief Examiner for the forthcoming 15th International Biology Olympiad in Brisbane 2004. He is therefore required to review the biology curriculum at secondary level.

POD defined the major gap at undergraduate level and suggested that lecturers with electronic lecture presentations should be encouraged to share these resources through a web-based delivery system and suggested that Council should consider endorsing this. POD will trial flexible delivery by providing information to RH for inclusion on the website.

Darwin conference

LS gave an update – DJ proposed that up to \$25,000 be set aside for student assistance (up to 50% airfare plus registration and accommodation)

RH reported that the Esplanade Hotel had been secured for the conference and the organising committee chaired by Brown Besier was discussing ideas. Would be held around the 27th September (common university break).

Other Business

DP to write tribute for Sue Newton in Newsletter

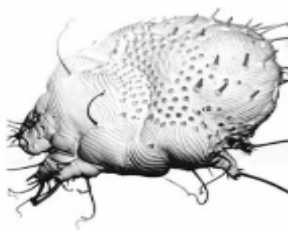
TC raised AT's 'post-issues paper' and raised the possibility of funding flow through raised profile via CRC or ARC Centre of Excellence programs. NS did not feel that a focus on 'parasitology' per se would match the CRC tight focus philosophy. TC agreed that driving of specific initiatives was not an appropriate activity for Council but we should consider support of individual initiatives on a case by case basis. WC pointed out that our conferences already support research initiatives by offering a venue for reporting.

On the question of Issues Paper update, POD suggested that the current paper be updated by the authors concerned and the Council identifies gaps to be filled, the Executive writes an 'executive summary'.

Meeting closed 4:25pm



ASP'03 CONFERENCE



ASP 2003 DARWIN

Annual Meeting of the Australian Society for Parasitology

Final Announcement

Darwin, Northern Territory
July 6-July 10, 2003

Register now!

The annual scientific meeting for the ASP is in the final stages of preparation. All we need now are lots of abstracts to complete the scientific programme. The programme is not yet finalised so go to the web site for up-to-date changes.

Conference information can be found at the ASP web site www.parasite.org.au.

What's new?

- ❖ Three malaria workshops planned for the Tuesday
- ❖ Presentation by Alan Johnson on how to make successful ARC grant applications
- ❖ Welcome reception at NT Parliament House (dress -Territory formal). You will need your invitation which will be in your satchel
- ❖ Addresses by Presidents of both the Australian and Malaysian societies
- ❖ Posters and Presidents' reception and addresses now on Monday
- ❖ Cut off date for early registration 28th April
- ❖ Rooms at Value Inn still available
- ❖ Conference dinner venue changed to wharf precinct
- ❖ A phone hot line will be available during the conference (number on web site).

For more information contact

Lois Small

Department of Business Industry and Resource Development

GPO Box 3000 Darwin

Phone 08 8999 2245 Fax 08 8999 2024

Email lois.small@nt.gov.au



ACT STATE NEWS

In a two week period last year, 4 cases of hydatids were diagnosed in unrelated children under 10 years old in an area of rural Queensland. David Jenkins has been invited to spend some time in the area in June to help with setting up a hydatid control/awareness campaign. Other forthcoming 'hydatid events' include David giving a hydatid paper at each of two one week Vertebrate Pest Control Courses run by the NSW Department of Agriculture and assisting Nick Sangster by coordinating and running an *Echinococcus granulosus* segment as part of the Sydney University Vet School course. David will be in Darwin for the ASP meeting in July and at WAAVP (New Orleans) in August. Whilst in the US David will be visiting the Veterinary Faculty at Cornell University as guest of Prof Dwight Bowman (invited speaker at the ASP meeting in Hobart 2002). David will give a seminar at Cornell, visit some parasitology labs in other universities and work hard at having a good time!

Carol Behm spent the second half of 2003 on sabbatical leave in Wellington, NZ, as an AgResearch Senior Research Fellow at the Wallaceville Animal Research Centre, working with Warwick Grant on RNA interference and *C. elegans* genetics. She is returning to Wellington in April 2003 to work for a month with Graham Le Gros at the Malaghan Institute of Medical Research on RNA interference in parasitic nematodes.

Julie-Anne Fritz has recently joined the Behm lab as a MLA Junior Research Fellow to work towards her PhD on functional genomics in *C. elegans* and parasitic nematodes.

Nick Johnson continues his work at CSIRO on the functions of ligand-gated ion channels in *C. elegans* and has created a variety of transgenic worm strains expressing green fluorescent protein or 'hairpin' RNA interference constructs.

Flavia Pellerone is pursuing her post-doctoral work on validating potential drug targets and has also started using proteomics in combination with RNA interference to investigate the function of putative ammonium transporters in *C. elegans*.

The workplace of Eva Bennet-Jenkins and Wendy Cooper has recently changed its name from National Registration Authority for Agricultural and Veterinary Chemicals (NRA) to the Australian Pesticides and Veterinary Medicines Authority (APVMA). A gala launch was held on 5 March with distribution of caps, champagne and (yet another!) fridge magnet. The name change is designed to more clearly identify the organisation's role and areas of focus. The organisation's new logo is shown below.



**Australian Pesticides &
Veterinary Medicines Authority**



NT STATE NEWS

Work on scabies continues at the Menzies School of Health Research. Dr Deborah Holt, who works with Shelley Walton managing the bioinformatics for the Scabies Gene Discovery project, is over in Capetown, Sth Africa on a WHO funded Regional Training Course on Bioinformatics applied to tropical diseases. Deb is currently a visiting scientist at the MSHR and the training gained in this course will enable her to return to both MSHR and QIMR and train and support other staff in effort to increase capacity in bioinformatics at these institutions. Dave Kemp is due back in Darwin in April for the first of his dry season visits to Darwin and the scabies lab at MSHR.

Planning the ASP 2003 conference is a large focus for parasitology at the Berrimah Veterinary Laboratories. It is becoming increasingly obvious why people are reluctant to organise conferences- hopefully all of the new organisational skills developed (ie delegation) can be utilised in other areas.

SA STATE NEWS

Flinders Medical Centre

Dr Laki Kumaratilake has accepted a 4-year position at the Department of Medical & Molecular Parasitology, New York University to work on cell biology and immunopathology of the malaria liver cycle. Laki left Adelaide in early April. Her husband, Jaliya, will be working at one of the New York University teaching hospitals. Laki's new position will present many challenges, but at the same time offers an exciting and stimulating change in her working and social life. The move for Laki is possible now that her daughter has submitted her PhD thesis and has also married. Laki will continue to collaborate with researchers at Flinders Medical Centre.

She has this message: *"Goodbye & good luck to all my ASP buddies. Please look for me if you come to New York!"*

Laki has been involved with the ASP locally and nationally for many years. We wish Laki all the best in New York and hope to hear lots of interesting news from her over the next few years.

IMVS - Queen Elizabeth Hospital

Life in medical parasitology in Australia always presents many challenges; you never know what will turn up in your laboratory. Recently, a case of visceral leishmaniasis was diagnosed in a local patient who had visited relatives in his native homeland of Greece. Also, an Australian worker returning from South America presented with a bot fly infection. There has also been an influx of Sudanese immigrants with schistosomiasis. To make life even harder, we will not have the expertise of Professor David Grove for the next 3 months because he is taking a well-deserved long service leave break to travel Europe. While David is away, he has left implicit instructions that the final chapters of Andrew Butcher's PhD thesis on *Brachylaima cribbi* (named in honour of our esteemed President, Dr Tom Cribb) must be completed before he returns. There have been 12 human *B. cribbi* infections diagnosed in South Australia to-date. These are still the only human infections worldwide and we are always interested in hearing from anyone who finds brachylaimids in land snails or adult worms in their animal hosts.



SA Museum/University of Adelaide

The monogenean laboratory is busier than ever. Five new students joined the lab early in 2003. These include PhD students, Kate Hutson, Allan Mooney and Rissa Williams who are working on various aspects of parasites on kingfish. Honours student Ben Divett (from Christchurch, NZ) is investigating the efficacy of several natural remedies in fish feed to remove skin and gill parasites from fish. Vanessa Glennon completed her work as a Research Assistant and has started Honours. She is looking at the taxonomy and biology of parasites that live in the cloaca of the southern fiddler ray. Ian and Leslie have taken the plunge into the cold southern waters and begun local collecting and have had some exciting finds. The newly refurbished Monogenean Lab on the second floor of the Darling Building is now complete and we look forward to moving into it soon.

Ian and Lesley (Beveridge and Warner) visited Ian and Leslie (Whittington and Chisholm) at the South Australian Museum late in 2002 to sort through the many boxes of paper that had accumulated in the back rooms of Helminths over the years. Their assistance was greatly appreciated and many valuable documents from T. Harvey Johnston, Pat Thomas and L. Madeline Angel have now been stored and filed in the SAM Archives. Di Barton braved the cold in April and travelled south to SAM to work on monogeneans from carangids caught off the Queensland coast. She narrowly missed Premier Mike Rann and his official opening of the newly refurbished Natural Science Building to the public in March 2003. The new South Australian Museum "Science Centre" gives the public a taste of 'behind the scenes' museum science!

SARDI

Peter James has started a project to control flies in poultry houses. He has been climbing around underneath them, collecting specimens and encountering the odd snake and

dead chook! Delightful work in the summer months, but the difficulties haven't stopped this brave researcher. Peter asks that if anyone has any spare caps they no longer use or if there are any companies with unwanted promotional caps, they will be gladly accepted and put to use. Peter was also responsible for the organization of the Merino selection demonstration flock field day in March. Guest speakers included Kevin Bell from W.A.

Ian Carmichael and staff are completing a trial using capsules in lambs on spray irrigation systems in southeast SA. One member of the group is not as young as he used to be and the continuous climbing of the sheep yard fences took its toll. Micko's recovery continues! The laboratory was recently asked to identify a tick collected from the armpit of a tourist in sunny Queensland. The interesting aspect to the request was the accompanying history. At first inspection, a medico suggested that the *skin tag* could be excised, but decided against continuing the procedure when it moved. He referred the patient to a dermatologist. The tick was removed and sent to a veterinarian for identification, albeit without a hypostome.

Richard Martin plans another trip overseas with his son who won the national cadet sailing championship this year after topping the Aussies in Germany at the world championships last year. This year, the world championships are held in Belgium in July.

Other State events

On July 30th, the local members of the ASM and ASP will get together for an informal evening of parasite talks. The idea was proposed by Andrew Butcher and is being organized with Ian Whittington. The event will take place in the Royal Society Rooms at the S.A. Museum and will include some repeat talks from folk who will attend the Darwin conference, a presentations from Andrew about *B. cribbi* (see above) and hopefully a talk from Paul Monis about his research at the Australian Water Quality Centre.



NSW STATE NEWS

Editor's Note:

Mail being sent to one of our Fellows, Joe Boray, was being returned. After a few phone calls, a current address was found and Joe is now back on our mailing list. This raises the plight faced by all Fellows. They do not have to renew their annual subscription and therefore do not have the opportunity to amend their postal addresses by regular reminders. If you know any Fellows, please check that they are getting their ASP mail. Joe was very appreciative that we rediscovered him and sent the following news items for our information.

THE BORAY'S YEARLY BULLETIN

Since my "retirement" not a great deal has happened, apart from the events in the world, which are frightening. In the last year, we became a bit older but not wiser, we have reasonably good health and are busy enough not to be bored. My snail cultures still occupy our third bathroom with a few thousand snails. I maintain three strains of *Fasciola hepatica*, one is fully susceptible to any drugs, the second is partially resistant to triclabendazole and salicylanilides and the third is totally resistant to triclabendazole at any stage of development, and partially resistant to salicylanilides. I assist Ian Fairweather and his group of Belfast in trying to find a biochemical or DNA marker for the diagnosis of resistance.

In January we completed our last sheep experiment (#107). This means that we did a fair bit of work in the last few years. Each experiment consisted of 35 to 50 sheep. According to Joanna all the thousands of sheep killed in my experiments have to pass in front of me when I die before St Peter lets me in, if he does at all. A colleague of mine, who has a large contract research organisation in Armidale does the future trials and I only supply him with metacercariae. A good arrange-

ment. In March and April I gave 12 talks to farmers in many towns in fluke endemic areas in Tasmania, Victoria and New South Wales. Both the farmers and I have learned something from the meetings.

On the 24th of April Australia's most practical and popular parasitologist, Hugh Gordon died. He was 93. I had the pleasure to work next to his room for 12 happy years at the McMaster Laboratory. A few days before his death we had a happy telephone conversation. I wish I had such a good memory and clear ideas. In July we had a reunion lunch with the ex McMaster Laboratory colleagues in North Sydney. It was nice to meet again.

Joanna and I quietly celebrated my 76th birthday in Darling Harbour, just the two of us. The area became the most interesting commercial district of Sydney, with good restaurants, museums, an indoor marine aquarium, educational exhibitions and a huge hotel. We had a good time. This year we had no organised party and the next one will be at my 80th, if I reach it. I would like to celebrate that in Budapest or in Szentendre, near Budapest. My very close friend, Neil Aitken of New Zealand reached his 101st birthday in November. We did a lot of work together in hydatid control in New Zealand in the seventies. He still works in the family property, driving tractors etc. Last year Joanna and I participated in a huge 100th birthday party attended by 300 plus people, from all over the world. The 101st celebration was not much smaller. I would like to follow in his footsteps (poor Joanna).

In November we travelled to Viet Nam for a week. I was invited by the World Health Organisation to participate and contribute to a workshop on food-borne trematode diseases in humans. The FAO was also represented. I prepared and presented a working paper on fasciolid infections, with *Fasciola hepatica*, *F.gigantica* and *Fasciolopsis buski*. Viet



Nam reported more than 700 cases of *Fasciola* infection in humans during the last 5 years based on symptoms and ELISA tests. No previous cases were reported before. It seems that the distribution of parasitic diseases is directly related to the distribution of good parasitologists. We have occasional cases in Australia. I treated three cases and the results were published. It was always associated with consuming watercress picked up on pastures, where infected sheep or cattle were present. It was a good meeting, reports on opisthorchids and *Paragonimus* were also discussed.

Australia has much trouble because of the long drought. We had no appreciable rain for 6 months, the rural industry is suffering. However I believe that we will survive that as we survived previous droughts. One thing is sure, that the snails will survive under the dry mud.

VIC STATE NEWS

La Trobe Malaria Labs

The New Year at La Trobe has seen lots of activity and some changes in the research groups. Three of last year's crop of Honours students, Sarah Frankland, Jesse Schloegel and Kleo Vingas are still with us, the first two as PhD students with Leann and Mick and Kleo as a Research Assistant with Robin. Aysun Tanrikulu has also joined Leann's group as a new PhD student. Meanwhile, a new group of Honours students have started: Catherine Jackson, Erica Logan, Solie Abdulnour and Rebecca Sgambellone.

Akin Adisa and Sonia Nikolovski were awarded PhDs at the recent graduation ceremony. They looked very grand in their gowns and caps. We've managed to hold on to Akin, who is back in the lab employed as a post-doctoral fellow developing new antimalarial diagnostic reagents. Dr Judy Scoble has also joined Leann's lab as the resident protein chemist. It's great to have her on board. Peter Macreadie is also oscillating between La Trobe University and CSIRO, Parkville, looking at new endoperoxide antimalarials.

Leann was a speaker at the American Society for Cell Biology, Workshop on Building Complex Structures in Simple Cells, San Francisco, December, 2002, and at a fantastic workshop on Redox Metabolism in Malaria at the Rockefeller Centre in beautiful Bellagio, in Italy, February 2003.

If anyone is interested, we are offering theoretical and practical training in the use of our new Leica SP2 laser scanning confocal microscope. See the Confocal Facility link on: <http://www.latrobe.edu.au/biochemistry/> Or contact Catherine Li (C.Li@latrobe.edu.au)

Andy Coley and Leann are organising a series of malaria sessions at this year's ASP meeting in Darwin. It looks like an excellent line-up. Contact Andy (acoley@bioserve.latrobe.edu.au) if you would like more information.

La Trobe Parasitology Control Laboratory

Another bloody report who is it this time - Oh ASP.... OK, what the hell has been going on?? Not much would seem to be the obvious reply. A quick review of the last report finds the same people have left or stayed and the same grants are still in limbo! Peyman has been joined this year by an honours student, Liam Cook, who is purifying worm proteins from sheep faeces and an itinerant Iranian, Norair Piazak, who spent 3 months perfecting his ELISA techniques before flying home at the start of the second gulf war. We have heard that he arrived safe and sound but that he wants to come back again. This is fine by the lab but ASIO has been asking some odd questions.



Mark Sandeman has also travelled but more locally to attend a sheep CRC meeting in Armidale. There he renewed his acquaintance with grass and various fellow travellers including Deiter Palmer, Brown Besier and Ian Colditz. They all agreed to submit a grant application for the aforementioned period in limbo and Mark flew back to no grass and noticeably warmer weather. David Chandler from Nufarm is once again visiting the lab regularly to monitor progress on his new insect aminopeptidase inhibitors while Mark's new company BMK Biotech has completed the local regulatory hurdles and is in danger of selling some diagnostics to various parts of the world. Hopefully the pig mange test developed in the PCL will be included thanks to a lot of work by Peyman.

Melbourne University Veterinary Science, Werribee

It seems Craig Kyngdon has been the one person from Werribee having a lot of fun while busy traveling to exotic locations in Malaysia. See Graig's report in this issue for details of his adventure!!!

Melbourne University Centre for Animal Biotechnology Molecular Parasitology Lab

RIP Molecular Parasitology, Monash University. That's right, at the start of April, David Piedrafita decided to relocate the lab. to the Centre for Animal Biotechnology (CAB) at the University of Melbourne; PhD students, Nick Kennedy and Rebecca Smith were crazy enough to follow David – for great brainwashing techniques please contact David! Here, Rebecca and Nick will complete their PhDs on the molecular biology and immunology of *Fasciola* and David will continue work on his ACIAR project looking at the immunological resistance of sheep to *Fasciola*.

With the move has come the chance for new collaborations, and David and Els Meeusen (the director of CAB) with Sydney Univer-

sity and CSIRO are busy applying for Meat and Livestock Association (MLA) and Australian Wool Industry (AWI) grants to fund further studies into the resistance of sheep to nematode and trematode infections.

Jill Pleasance, a former Honour's student of David at the Molecular Parasitology Lab at Monash, has decided she hadn't had enough of the tertiary education experience and has joined us at CAB to work with David. She will be accompanying David on his trips to Indonesia to collect samples from Indonesian sheep breeds to begin her studies on the resistance in these animals towards *Haemonchus* and *Fasciola*.

Meanwhile, Simone Beckham, remaining at Monash University under the supervision of Rob Pike has had some relief from *F. hepatica* Cathepsin B and is now enjoying the relative ease of working with a somewhat less complicated enzyme, Cathepsin L. Rob and Simone are now working in collaboration with parasite cysteine protease icon, Jim McKerrow (UCSF), more news on this front to come soon.

Another of our PhD students, Adam Rainczuk returned from McGill University in Montreal late last year and is close to completing the write-up of this work. While he puts the finishing touches to his manuscript, he is participating in a CRC-Vaccine Technology sabbatical scheme for three months at CSL. He is learning more about industrial biotechnology and working on a project to do with therapeutics for the bacterial pathogen *Chlamydia*.

Terry Spithill, the former director of Molecular Parasitology at Monash and now at McGill University, visited us in Melbourne during February. We had the chance to meet with Terry to discuss our various projects and catch up with him over drinks and dinner. But saving the best 'til last ... Rhoda Prowse has had her PhD thesis passed with no amendments required! Congratulations Rhoda, what a wonderful effort! And that



ends a fairly tumultuous quarter for us all - it's definitely been a time for fresh starts. (PS. Unfortunately David cannot make the ASP conference in Darwin this year but will send Nick, Rebecca and Simone to cause a similar disruptive effect in Darwin - hope to see you there!).

Victorian Institute of Animal Science

Unfortunately, we have very sad news for all the members of the ASP, and anyone who loves parasites. Dr Sue Newton, formerly head of nematode research at VIAS, whom

many members of ASP would know well passed away recently in tragic circumstances. Sue was a wonderfully energetic and passionate parasitologist and will be greatly missed.

At Sue's funeral, the ASP was represented by David Piedrafita who spoke a few words on behalf of the society at a reception of family, friends and colleagues following the funeral. Other notable speakers included Graham Mitchell and a special telegram by Sir Gustav Nossal. Jennifer Sexton, a work colleague of Sue, made a special and moving speech at Sue's funeral and is presented in this issue as a tribute to Sue.

WA STATE NEWS

Andrew Thompson visited Darwin Murrell's laboratory in Copenhagen in January, and this has resulted in a visit to Murdoch University from Rikke Langkjaer of the Danish Veterinary Institute to work on molecular techniques in *Giardia* and *Cryptosporidium* diagnosis.

Andy attended the Malaysian Society for Parasitology and Tropical Medicine meeting in Kuala Lumpur and has set up a strong link with the president Suresh Kumar. Suresh will be coming to Murdoch in May to give a talk on *Blastocystis*.

Andy has embarked on an outside study program in Canada for the rest of first semester, working on *Echinococcus* in coyotes and moose with Merle Olson at the University of Calgary.

Panlerd from Army Medical University in Bangkok spent 3 weeks with the Murdoch molecular group looking at *Giardia* and *Cryptosporidium*.

We welcomed Zablon Njiru from the Kenyan Trypanosomiasis Research Institute (KETRI) who has begun his PhD studies to unravel some of the interesting aspects of the genet-

ics of *Trypanosoma evansi* infection. Peter Wai'in from the National Agriculture and Quarantine Inspection Authority in PNG has also arrived to begin a PhD with Simon Reid and Stan Fenwick on the epidemiology of leptospirosis in PNG (it may not be a parasite but at least you can see it and it's motile!). Peter is funded by ACIAR.

We will be hosting Mr Kelsang Dhondup from Tibet who arrives in April to spend a year receiving "research training" and to hopefully leave with us his skill in using GIS to unravel sciences greatest problems, or at least ours.

Katie Simcock joins the group as an Honours student, supervised by Andy Thompson, Wayne Greene and Marion Macnish, looking at dog flea population genetics.

Congratulations to Megan Johnson and Kathy Menon for completing their PhDs. This brings the number of Murdoch University parasitology group PhD completions over the last 12 months to 6.

Louisa MacDonald has almost finished hers too, but has to finish it off in Melbourne, having found gainful employment at WEHI.



QLD STATE NEWS

Queensland University of Technology

STUDENTS FIND MAGGOTS REPULSIVE BUT INTERESTING

by Catherine Prowse

Deb Stenzel (lecturer in parasitology and cell biology at QUT School of Life Sciences), Peter Darbin (QUT graduate and now secondary school teacher) and Robert Dow (Medical Scientist with a great parasitology interest, from QUT) are booked to attend the joint conference of AIMS (Aust Inst of Medical Scientists) and their NZ counterpart (NZIMLS) to be held at the Gold Coast, Oct 6-10th, 2003. There, the trio will present a half-day workshop, entitled "Parasitology Revisited".

This workshop is designed to keep the parasitology diagnostics flag flying and the conference flyer runs as follows: Review of Medical Parasitology for the bench scientist. Microscopy continues to be an important diagnostic tool in medical parasitology. As clinical laboratory personnel become more widely multi-disciplined, the availability of medical scientists who have expertise in diagnostic parasitology at a routine level will become more limited. This "dry" workshop is designed to review the fundamentals of medical parasitology including: specimen collection, specimen processing, diagnostic methods and organism identification. Participants will be provided with a workshop manual and a compact disc incorporating the workshop presentations and manual.

Peter Darbin did his PhD on *Enterobius* at QUT. After some years teaching parasitology to QUT undergrads, he decided to educate humans at an earlier part of their lifecycle. He's been teaching in Mt Isa for about 5 years, now - but obviously still has his heart in parasitology. Only a real parasitologist would have school kids breeding maggots, as the following extract from a news article from The Northwest Star (Mount Isa) (26.2.03) attests:

The life-cycle of the lowly maggot has proved a timely subject for Year 12 science students at Spinifex State College. Multistrand science students are investigating how the life-cycle of the maggot can be used to estimate the time of death of their host, a field known as Forensic Entomology.

Teacher Dr Peter Darben said the subject was timely in light of Mount Isa's current fly plague but insisted the students were not contributing to the city's fly population. The flies that are bothering us at the moment are muscid flies," Dr Darben said. "Generally they hang around your rubbish, but they are not the ones that lay on dead meat." "Certainly the maggots we've bred are too large to be muscid maggots." He said the student's studies had shown the flies they had bred were most likely to be calliphorid flies. However, he admitted there had been some escapees. "When they are ready to pupate, they normally leave the meat. Some of them got out and we found them crawling across the floor."

Students have placed baits of chicken and lamb's fry around a site on the senior campus under various conditions. "The maggots only liked it when they were in the shade and reasonably well sheltered from the sun. "It's a great unit to teach because the kids are really into it. The unit is teaching them much the same as the butterfly life-cycle, it's just a little more repulsive."

Dr Darben said the students had drawn some conclusions about Mount Isa's current fly problem. "There's the extra wet weather and there may be more carcasses around. Even though these flies don't lay their larvae on dead meat, there is a lot more organic matter around with the moisture from the rain. That



might have encouraged the population to explode." Dr Darben said he had not seen so many flies in his six years in the city.

[There's a staged photo with four of the kids pretending to look down a microscope. Interestingly, the caption reads : "MAGGOTS (Right) : Year 12 multistrand science students Mitchell Roberts (left), Darrien Ferris, Lerisha George and Natasha Perez inspect their maggot specimens." Peter has yet to ask Mitchell, Darrien, Lerisha and Natasha what they think of being referred to as "maggots". They're such nice kids.]

Queensland Museum

The Museum is again hip-deep in oysters with the 2003 sampling season associated with Rob Adlard's FRDC program on marteiliosis in commercial rock oysters well underway. Just a shame that none of us can stomach oysters anymore.... Hmmmm must change research tack to something we can still face on a dinner plate! Last year's results from this program uncovered the notifiable pathogen in 11 estuaries where it had never been recorded previously. On the face of it not a very happy outcome, but more realistically, it is better to have a widespread disease agent that causes disease in some areas under certain conditions, rather than attempting to keep the 'genie in the bottle' through strict border control on endemic areas. In any event, we have managed to get some valuable insights into the biology of this disease and the research officers attached to the program (Steve Wesche and Jessica Worthington Wilmer) should be congratulated for their efforts.

Rob and Mal Bryant are continuing to have a significant time input into the parasite display (Intimate Aliens) that is being constructed by the Museum. We are nearing the end of the final design phase of the project with construction to begin very shortly. It has been a real eye-opener to be associated with the 'aesthetically creative' side of the Museum and we now realise the immense amount of work from a wide range of talented people (e. g. designers, educators, artificers) that is re-

quired to produce the displays you see in museums around the country.

Central Queensland University

Its business as usual at CQU, but across the road at the CSIRO Rendell laboratories Ian Sutherland has taken up residence and will give parasitology in the region a boost. It is great to have another parasitologist here. Eridani Mulder, having successfully completed her honours year (worms in rats and pythons), has decided to continue on as a PhD candidate and will begin her candidature following up on the same theme. Otherwise we have been leading a quiet life, keeping our heads down and keeping out of trouble, but we are looking forward to meeting you all at the ASP extravaganza in Darwin.

Queensland Institute of Medical Research

Janelle Wright, a student of the School of Population Health, UQ, has just joined the Upcroft laboratory at QIMR. Her PhD project involves drug resistance in the anaerobic protozoa. She joins Rebecca Dunne and Justin Ross (also UQ students) doing PhDs in the Lab. Rebecca is focussing on genome mapping of the sexually transmitted protozoan parasite, *Trichomonas*, and Justin is tackling a *Giardia* project jointly with the Physics Department at UQ.

Also on *Giardia*, Peter Upcroft obtained an ARC grant commencing this year to map telomeric regions of *Giardia* chromosomes. In April, Jacqui Upcroft will commence her Winston Churchill Fellowship, which will initially take her to South Africa and USA and later in the year to Papua New Guinea. The fellowship will fund the collection of *Trichomonas* isolates and their genotyping. The aim of the project is to identify markers for *Trichomonas* virulence, drug resistance and association with HIV transmission. Preparation for the fellowship involves Institute approvals for the project, visa applications, equipment collection, travel, etc).



Helminthology research is booming at QIMR with an influx of parasitologists over the last year. James McCarthy (formerly University of WA), an infectious diseases specialist, took up a joint appointment with QIMR, UQ and the Royal Brisbane Hospital in early 2002. James will be continuing his studies on a range of medically important parasites including *Strongyloides*, hookworms and *Sarcoptes*. James, his post-doc Cielo Pasay, and post-graduate student Alex Sykes are now well and truly settled in. Another Alex, Alex Loukas, will be returning to QIMR after two years in Washington DC. Alex has a new faculty appointment and will continue his work on schistosomes and hookworms.

Dr Yu Xinling from the Hunan Institute of Parasitic Diseases, Yueyang, China is visiting Don McManus' lab to continue research on schistosomiasis. Don has many strong links with the group in Yueyang, notably with collaborator and former student Dr Li Yuesheng.

A number of new students have joined the lab, including Luke Moertel (Central Qld University) who will be working on microarray applications, Amber Glanfield (Honours UQ) and Brigitta Osterberger (Master of Tropical Health, UQ), studying the efficacy of the novel anti-schistosome drug artemether in animal trials.

Don recently attended the Centenary Symposium to celebrate the discovery of *Schistosoma japonicum*, held in Japan in March. The symposium was excellent, but marred with sadness at the news of the untimely death of Dr Carlo Urbani to SARS.

Dr Urbani was well known to many of the symposium participants. A physician working for WHO, Carlo had many regional contacts and was based in Hanoi, Vietnam. He was the first scientist to recognise the importance of the new SARS virus. We understand that the virus, when fully identified and characterised, will be named after Carol Urbani. He will be sadly missed.

CSIRO Tropical Livestock Systems Rockhampton

Following the decision by CSIRO to build up regional capability, a parasitology group has been established in Rockhampton, in the Tropical Livestock Systems program at J.M. Rendel Laboratories. Three scientists have been appointed to the group, and recruitment of Project Officers is currently underway.

Juliet Sutherland has a degree in Parasitology from King's College London, a Ph.D. on the epidemiology of schistosomiasis from Oxford University. Her post-doctoral experience consisted of DNA fingerprinting mosquito blood-meals (Durham Univ.) and molecular and biochemical studies of *Ostertagia* (Massey Univ.). Juliet commenced work in Rockhampton in February.

Ian Sutherland (yes, they are married) has a degree in Parasitology from Glasgow Univ., a Ph.D. on drug resistance in nematodes from Leeds University and post-doctoral experience in trypanosomes and *Theileria*. For 7 years prior to joining CSIRO in November of last year, Ian was with AgResearch in Palmerston North as part of the Parasite Ecology/Epidemiology group.

Sharon Bishop-Hurley commences in mid-April. Sharon has an Agriculture degree from Lincoln Univ., a Ph.D. in plant molecular biology from Auckland Univ. and post-doctoral experience in the University of Missouri on discovering novel peptides in plant and human pathogens. Sharon joined the group in mid-April.

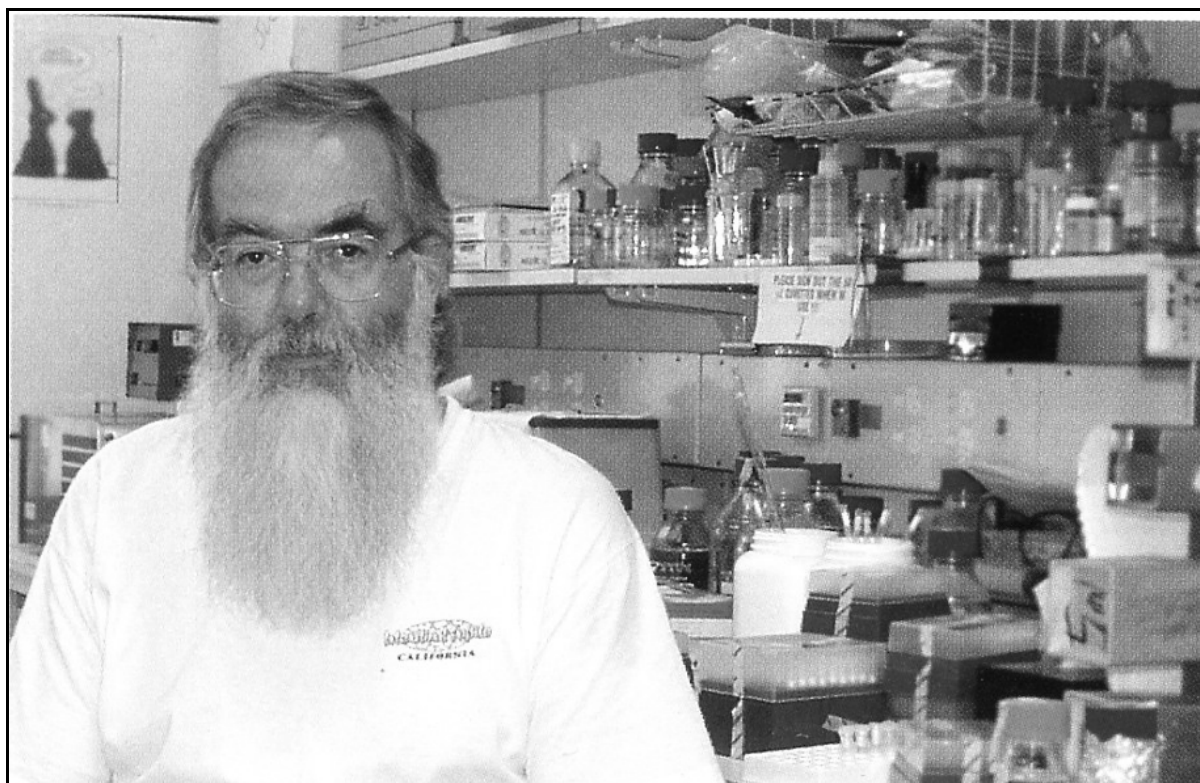
The new group has a wide range of capabilities which will provide a strong framework for future research. With no existing parasitology work in place at J.M. Rendel prior to their arrival, they have an open brief to develop relevant research. They will use knowledge of host-parasite epidemiology to identify opportunities to address using modern technology. If you are in the neighbourhood, do drop in!



COMMON PARASITE LINKED TO HIV/AIDS

Trichomoniasis is the most common sexually transmitted infection, caused by the parasite *Trichomonas vaginalis*. Infection rates have been reported as high as 67% in Mongolia, 40% in indigenous Australians over the age of 40 and 46% in highland women in Papua New Guinea. *T. vaginalis* infects one billion people each year, causing severe morbidity as vaginitis, preterm delivery, low birthweight and increased mortality of infants. Infection with *Trichomonas* also predisposes carriers to an increased incidence of HIV/AIDS and an increased risk of cervical cancer in females. Eradication of *Trichomonas* may well be the most cost effective means of decreasing incidence of HIV/AIDS

QIMR researchers, Drs Peter and Jacqui Upcroft, have spent years analysing the complexities of organisms such as *T. vaginalis*. Their research addresses the issues of strain differences in *T. vaginalis* and how these differences may contribute to differing symptoms and increased predisposition to HIV/AIDS. The Upcrofts are using their novel genotyping system to identify individual isolates of *T. vaginalis* from selected communities in different parts of the world to determine if there are a discrete number of drug resistant, pathogenic and virulent strains. This research will lead to better diagnosis and improved treatment outcomes. The research will also examine the prevalence of other sexually transmitted diseases, including *Chlamydia*, gonorrhoea and syphilis. The ultimate result is predicted to significantly reduce the incidence of HIV/AIDS.



Vale - Sue Newton

On behalf of many, I would like to take this opportunity to give you an insight into Sue's many talents as Department head of Molecular Vaccines at VIAS.

Sue began working at VIAS in 1996. Our first introduction to Sue was at the Sea World Nara resort, whilst attending a conference on vaccines. It was at this time that we discovered her undying passion for the Essendon football club and her extreme dislike of water travel due to seasickness. We also found she was a stickler for attending every conference session and she took her science very seriously.

Over the years, it became evident Sue had an unmatched passion and love for science, in particular the study of parasites. She will be always be remembered for instilling in many of us an interest in this weird and wonderful topic. One of Sue's real passions in science

was a molecule called H11. Sue spent the last 10 years working on it, with the ultimate aim of making a vaccine. Her words "We just have to tweek it in the right direction and it should work" will stay with us forever.

This line of research will be continued and any successes will be dedicated to her name.

As department head, Sue successfully led the Molecular Vaccine team, which employed up to 25 staff, for 7 ½ years. She managed a budget of over 2 million dollars each year and was always working away to ensure we maintained this level of funding. In fact, up until she was unexpectedly taken from us, she was working to secure additional funding for her team to ensure the viability of the Department.

And even with all her duties as department head, Sue always ensured Molecular Vaccines met the demand to publish, as she was



such a prolific writer of scientific papers. Whilst most of us struggled, she had 38 published papers in journals of the highest calibre and standing in the scientific community, 7 patents, and various manuscripts in preparation.

During her time as Department Head, Sue has shown herself to be a caring supervisor and a fantastic mentor. Sue thrived in the challenge of supervising and mentoring students, particularly through their PhDs. We can thank Sue for the training and mentoring of a number of our colleagues to allow them to pursue their dreams in science. And even though there was always the fear of her staff getting poached (and they regularly did) she supported further training in our varied areas of interest. She always promoted her staff's careers but at the same time she actively ensured that her staff maintained that important work/family balance. Sue always put her and Adrian's holidays as a lower priority than everyone else in the group, ensuring that the mum's could spend that precious time with their families either through support of maternity leave, part-time employment or by allowing us to take off those perpetual school holidays. Sue made leading such a large team look like a piece of cake. She was always compassionate, tolerant of differences, able to make the hard choices, and seemed to have a natural ability to make a difference.

Her efforts and achievements in this role were recognised with an Agriculture Victoria Recognition Award for Leadership in 2001. Sue had many feathers in her cap, she was project leader, department head, and Innovation team leader. As a result of her strong belief in contributing to more than just the science of an organisation, Sue was recently invited to join the Executive Science committee at VIAS. And whilst many saw Sue as a great role model for women scientists to aspire to, we feel she was a great role model to all scientists due to her awesome intellect.

During her time with us, we got to know her wicked sense of humor and fierce competi-

tive streak. She ran the footy tipping competition like no other, and was just disgusted when non-footy folks won the competition. Sue often took the opportunity to thank her staff for their efforts by cooking up a storm on the BBQ, always catering for everyone's needs and ensuring no food went to waste.

We will always be proud we introduced Sue to the television show "Buffy" so she could join in the discussions regarding the heroine's latest plight. We also discovered Sue's love for cats, and came very close to adopting a number of kittens during one of our project meetings held in Sydney.

Sue's great sense of humour was never more evident than at Christmas time for Kris Kringle, where over the course of the years she received many gifts from her staff including the infamous "Department head barbie", which came with peroxided hair and dark regrowth.

To many of us Sue was the consummate scientist, always making scientific presentations seem like a breeze. But it was nice to see on one very unusual occasion, that she too was human, when we caught a glimpse of Sue having to practice a presentation just like the rest of us. But then again the audience did include the eminent Sir Gus Nossel.

For those of you who are unable to travel back to VIAS for the following function, we will be further celebrating Sue's contribution to science. A number of short formal presentations will be given by her professional colleagues who have worked with her over her long and distinguished career.

Many of us cannot yet grasp the void Sue has left in both our scientific and personal lives. It is going to be hard to continue without her valuable advice as she was the key to our group's success. And although she was quiet by nature, we will miss her passion and drive. Sue will forever remain in our hearts and minds, and will be an on-going inspiration to us all.



ASP Announcements

Nominations for Bancroft-Mackerras Medal

The Bancroft-Mackerras Medal may be awarded to a member of the Society who, in the opinion of the selection committee, has made an outstanding contribution to the science of parasitology, particularly in work published during the last five years.

Nominations should be made by a proposer and seconder, and should consist of:

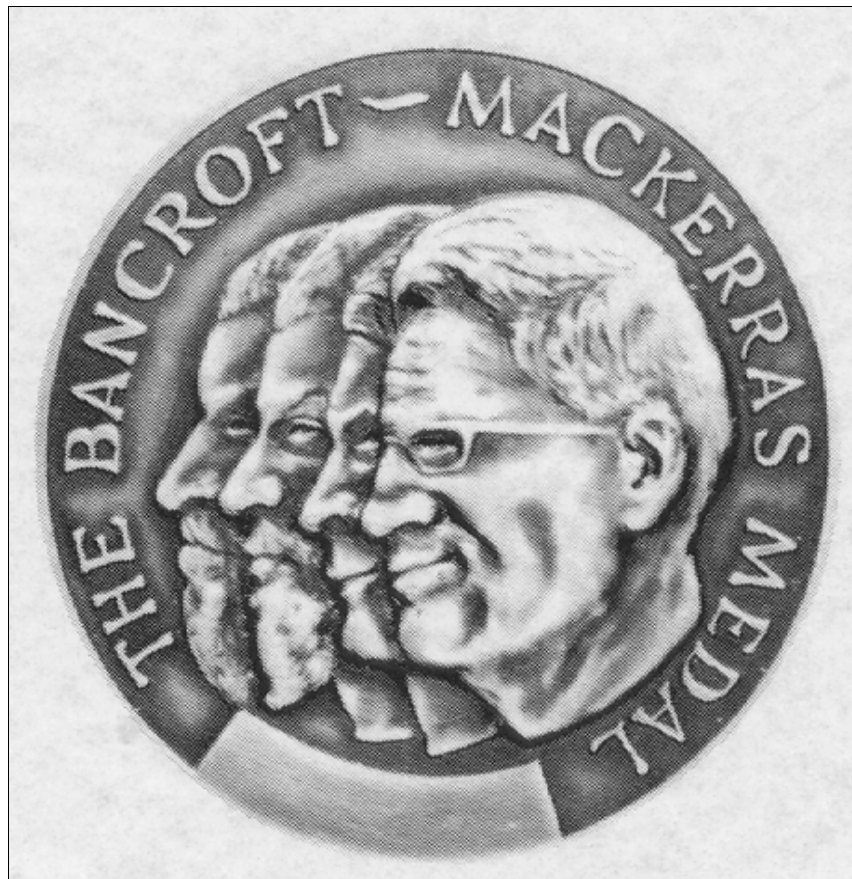
- A detailed statement of nomination describing the nature of the "outstanding contribution to the science of parasitology" for which he/she has been responsible. The statement should be

signed by the proposer and seconder, or each may submit a separate statement.

- A *curriculum vitae* including a list of all publications.

Note that the Medal is intended for members whose research program has been productive during the last five years. The permission of the nominee is not required and the nominee need not be aware of the nomination.

Nominations should be sent direct to the current ASP President. Detailed information on nomination and selection procedures is given in the By-Laws of the ASP Constitution. Nominations are due each year at the end of October.



Nominations for ASP Invited Lectureship Travel Grants

To complement the scientific presentations at the Scientific Meetings of the ASP, overseas researchers of international reputation in a field of parasitology may be invited to attend and present their work. The invited speaker's expertise must be common to a discipline or symposium conducted at the Scientific Meeting. The visitor must be nominated by a member of the Society.

The Society will provide a travel grant to assist in the finance of the trip. The support will be based on an economy class direct return airfare from the recipient's home city to Australia, the necessary interstate travel and reasonable living expenses based on actual costs. Registration at the Scientific Meeting will also be included.

The total value of the lectureship will be determined by Council but it is expected that the recipient, or his/her Australian sponsor, will also seek to provide additional or alternative financial support.

Applicants must include the following information:

Details of visiting specialist

An up-to-date *curriculum vitae* must be attached to the application. The following details should be supplied:

- Date and place of birth
- Present nationality (and former nationality, if applicable)
- Present position held
- Full address of employing institution, including phone, fax and Email numbers
- Detailed evidence of expertise in relevant discipline (list of publications, etc.).

Details of Australian nominator

- Name of member organizing the visit, including full address, phone, fax and Email numbers
- Details of all other applications which have been made for financial assistance towards travel/accommodation costs. Total value of other contributions must be included.

Details of program

The program should normally last a minimum of 2 working weeks and cover at least 2 States or Territories.

Details should include:

- Date of visit
- Program being arranged, including institutions to be visited (with dates) and the purpose of each visit (lecture, seminar, workshop, research discussion, etc)
- Aims, rationale and likely benefits of visit
- Contribution to be made at Society's Scientific Meeting

Applications plus supporting documentation should be sent to the ASP President by the end of December in the year preceding the Conference. Applicants should check with the Conference Organisers for details of conference theme, symposia, workshops, etc. before submitting an application.



Postgraduate Travel

ASP Postgraduate Travel Awards

These awards are specifically designed to assist postgraduate students attend and present their research at international conferences. Applicants must be members of the ASP Inc. of at least 6 months standing and enrolled in a postgraduate degree at an Australian university. Four scholarships will be awarded each year and applications will be considered in two rounds with closing dates in June and December of the preceding year. Each scholarship will be up to the value of, but not exceeding, \$A2000. Applicants must nominate the conference, supply an abstract and justify their attendance at a recognised international conference preferably though not exclusively held outside of the

Australasian region. The award will only be made once proof is received of acceptance of the abstract by the conference organisers. If the student does not attend the conference the ASP funds must be returned to the Society. On return from the Conference a short report must be written to the Council detailing the student's experiences. Applicants should apply to the current ASP Secretary giving details of the conference, their research and supervisor's support plus an abbreviated c.v. and conference abstract as outlined on the accompanying application form. The application must not number more than 6 pages including the c.v. and abstract. Applications must be received by the next due dates of June 30th or December 31st each year.

APPLICATION FOR AN AUSTRALIAN SOCIETY FOR PARASITOLOGY INC STUDENT TRAVEL AWARD

Name:
Address:
.....
Phone: Fax:
Email:

University:
Enrolled Degree:
Supervisor's Certification

I hereby affirm that the above-named person is a bona fide postgraduate student under my supervision.

Signed: Date:

Conference Details

Conference Title:
.....
Venue:
.....
Dates of the Conference:
Conference Address:
.....
.....

Title of Abstract (*Please attach a copy of the abstract*):

Author(s)
Oral or Poster session.
Awards will only be paid on receipt of proof that the abstract has been accepted.
Attach statement justifying attendance, budget (include all other support), brief curriculum vitae
[application not to exceed 6 pages]



ASP EXPERT DATABASE

The expert database is an initiative of the ASP Council and has been in existence for over 2 years. The aim of the database is to encapsulate all of the parasitological expertise available in Australia on one CD Rom.

This database can be utilised to quickly find appropriate people to comment on current issues or as a source of information for members looking for expertise in certain areas.

To ensure the privacy of these records is protected, they are not placed on the web site and information is only distributed to bona fide requests after permission is sought.

If you have not registered on this database, please complete the following and email to the current database custodian, Lois Small, at lois.small@nt.gov.au.

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Speciality area			
Parasite group			
Host group			



TRAVEL REPORT - ICOPA

Shane Middleton from the University of Melbourne reports on his trip to ICOPA X 2002, Vancouver, Canada

Well here I am on my way to Vancouver, Canada to attend and give an oral presentation to the 10th International Congress of Parasitology (ICOPA X) conference, 2002, with thanks to the ASP having been successful for a Postgraduate Travel Award.

The first step was to find a cheap return air ticket something under \$2,000, equivalent to finding a needle in a haystack. Just as the travel agent was becoming extremely tired (of me) the hunt paid off. I was flying China Air via Melbourne, Sydney, Taiwan to Vancouver return for \$1,790 excluding airport taxes and duties.

Well I knew I was off to a good start after disembarking and wandering to collect my luggage I was approached by a Canadian customs officer one of several that appeared to be wandering aimlessly around 'the incoming' terminal and approaching tired unsuspecting international travellers. I was asked, "and what brings me to Vancouver?" which I replied, "attending the ICOPA Conference," his immediate reply was, "and what parasite am I studying?" "worms," I said. After a minute he retorted, "are you studying the parasites of worms?" now I am thinking smart-ass, so I replied that, "my worm is the parasite, ummm or maybe it isn't a parasite at all and is just a commensal? Well depending on your definition of parasite of course." After finally escaping the Q & A session he ordered me to go through the green exit - Nothing to Declare, lucky me!

So now I am off to the conference. The conference is just massive with 3 concurrent plenary lectures every morning and 14 or more concurrent contributed papers arranged for every afternoon. So if you try to run between sessions it's like the peak hour rush on the London underground every 15 minutes. On

day one of the conference the first group of aussie delegates I had contact with had all managed to contract some form of cold, flu or wog, some of whom didn't seek medication and so got progressively worse as the week rolled on (Ian Beveridge). Well it must have been pretty cold, most Melbournians were also complaining of the temperature, a contradiction really. A local had informed me that Vancouver was having an unseasonal cold spell that started the week before the conference and it rained for the first two days of the conference.

Morning teas and coffee on day one appeared to kick off in a positive direction keeping those who just arrived awake from their jet lag. But by lunch time all the coffee cups had been packed away and were never seen again for the rest of the conference, so it was then every man for himself. Fortunately Canada seems to have a Starbucks coffee shop on every corner so during any break there was a mad rush to purchase a tall grand sized paper coffee mug starting \$1.55 CAD plus GST which equates to 6 quarters and 5 cents. So if you can find a 5 cent piece which just happens to be twice the size of a 10 cent piece which is about the same size as a quarter or 25 cents then you have avoided being short changed. Now that you have avoided being short changed and your pockets are full of loose coins there are always the beggars. Who are fluent in both english and french, if their english demands receive no response, located every 10 feet along the street and who will happily fleece you of your life saving if you are not careful.

Well the conference appeared to run smoothly for those who were wise enough to take slides along with them. But those who relied on CD-ROM (and had not taken their own lap-top) had to beg borrow or steal a lap-top from another delegate and hope that delegate was in a good mood on the day to lend it. I found this out first hand when I co-chaired one session (filling in for Robin Gas-



ser) with Xingquan Zhu where we had one speaker's lap-top and 6 speakers all telling me (well more like ordering me) they want to use it for their talk!

I will avoid going indepth about the variety of papers given suffice to say they included topics on emerging parasitic diseases in wild-life, parasitology and biodiversity, parasite ecology, advances in genomics and bioinformatics, molecular parasitology, population genetics, morphology, taxonomy and systematics, etc. just remember to read my paper

et al., called 'Molecular evidence for co-speciation between parasitic strongyloid nematodes and their macropodid marsupial hosts.' I am sure those of you who are interested in any of the topics will obtain a copy of the conference abstracts and subsequent ICOPA X published papers. So finally, I would like to thank ASP once again for providing me the chance to attend such a high profile international conference and being able to present my research results to an international audience.

TRAVEL REPORT - MALAYSIA

C.T. Kyngdon reports on travel to the Malaysian Society for Parasitology and Tropical Medicine's Parasite Fest and the 39th Annual Seminar of the Malaysian Society for Parasitology and Tropical Medicine

The Malaysian Society for Parasitology and Tropical Medicine's Parasite Fest 10th-11th March 2003, National Science Center, Kuala Lumpur, and Faculty of Science, University of Malaya

Malaysia has only comparatively recently attained independence from Britain. The Malaysian Government has aimed to improve the economy and infrastructure of the nation in a series of 5-year-plans, culminating in the year 2020 when Malaysia is hoped to become a developed nation.

An enormous red neon sign adorns a skyscraper in Kuala Lumpur, burning "WAWASAN 2020" ("VISION 2020") into the night sky. New highways and rail links are being built in an effort to overcome the crippling traffic jams at peak hours- a twenty-minute journey at 7am in KL can take you two hours if you leave at 7:15am- yet many are reluctant to use the new highways because of the tolls.

Several telephone companies have started operations within Malaysia, yet many of their telephones (outside of shopping plazas) are not adequately serviced. Malaysians openly speak of "Wawasan 2020", and describe their nation as one entering the developed world.

The Parasite Fest was an initiative of the MSPTM, and it was a lot of fun. The Fest had several aims, including:

- To raise the profile of the Society within Malaysia
- To demonstrate to the Malaysian Government, and to the community, the relevance of the MSPTM
- To inform senior High School students of the profession of Parasitology
- To motivate 3rd Year Science students to undertake postgraduate study in the field of Parasitology
- To generate an air of excitement surrounding the study of parasites.

10th March 2003: In the morning, senior High School students from 6 schools in Kuala Lumpur were entertained at the National Science Center. Prof. Huw Smith (Scottish Parasite Diagnostic Laboratory) and Prof. Suresh Govind (University of Malaya) each gave a humorous, informative and motivational lecture on how they had arrived at the study of parasites for a living, and on the importance of Science to the community.



After lunch, the students were broken into groups of 15 and taught about parasites. Members of the Department of Parasitology (University of Malaya) manned 12 displays showcasing their work. Each student had a list of questions, and each group was given 10 minutes at each display in which to get the answers. At the end of 10 minutes, a bell sounded, and each group moved to the next display. At the end of the session, the papers were marked, and a prize bestowed upon the person with the highest mark.

The design of this “tutorial” worked exceptionally well. My favourite display was in a room to one side. Some forensic entomologists took a digital camera to a re-created crime scene- a dead body buried in a shallow grave in the jungle- and talked to the forensic entomologist as he started to take insect specimens from the body. This formed part of a 10-minute powerpoint display that really caught the students interest.

11th March 2003: In the morning, Prof. David Halton (Queen’s University, Belfast), the vice-Chancellor of the University of Malaya, Prof. Zain, and some other prominent Malaysian Scientists spoke at the Faculty of Science. Government Ministers were present, and the MSPTM was praised for its initiative in organising this and several other community-based schemes involving parasite awareness and control. After lunch, there was a poster session, however the authors of the posters were nowhere to be seen! I took a few names and cornered them later.

12th March 2003: The opening ceremony of the 39th Annual Seminar of the Malaysian Society for Parasitology and Tropical Medicine began at 3pm, with talks by the MSPTM President, Assoc. Prof Dr Suresh Govind, the vice-Chancellor of the University, Prof. Zain, and the keynote address given by Prof. Andrew Thompson (aka “Prof. Andy”, “Prof. Anderson”). This was followed by Hi-Tea and poster presentations. Approximately 140 people were present. When Suresh invited everyone to come the following day, he said he was “worried that most of you won’t be

here tomorrow”. Tomorrow came, and most of them weren’t. It was quite an eye-opening experience, and indicative of the decay in Malaysian Parasitology that the MSPTM is trying to rectify.

13th March 2003: The second day began with talks by Prof. Ramachandran (University of Malaya), Prof. David Halton, Prof. Huw Smith, and Dr. Stephen Ambu (Institute for Medical Research, KL). The remainder of the morning was devoted to concurrent workshops that focussed on the state of Parasitology within Malaysia. The workshops aimed to formulate ways to rectify the current shortage of ‘baseline’ data on parasite distribution, prevalence, and illness caused by parasitic infection. The visiting professors, including our own Prof. Andy, contributed substantially to the debate, to good effect. After lunch, the deliberations were compiled into a set of recommendations. Several recommendations on tropical disease management, emerging diseases and the environment were proposed, as were quite radical changes to the method by which research funding is peer-reviewed. The MSPTM will lobby the Government to compel researchers to join societies and become more accountable to the community that funds them. It was quite an interesting exercise, and prompted me to view Malaysia as a developing country only in mindset, not in means.

After lunch, oral presentations got underway. Subjects were as diverse as monogenean gill parasites in freshwater aquaculture, to the detection of *Cryptosporidium*, to the re-emergence of malaria in West and Central Java. The Science was good, and it was an excellent forum for two of the MSPTM’s Masters students to present their work in.

The Annual Dinner: The ASP students were asked by Suresh to make a ‘cultural presentation’ at the conference dinner. After some deliberation, Craig made a powerpoint presentation of John Williamson’s *Home Among the Gum Trees* (with the assistance of Sonja Gauci, who provided him with a live, auto-graphed version from her extensive Country



& Western collection). Michelle bought hats with dangling corks, and Ying bought clip-on Koalas to give to members of the audience. The students were ready to perform, with maximum audience participation. But it was like the movie *The Usual Suspects* - the job needed one more guy. That guy was Andy Thompson. We had a ball, and did an encore in which even the kitchen staff joined in.

14th March 2003: The third day was comprised of scientific presentations, most of which were given by Masters or PhD students. Debate started slowly, but became quite lively, none more so than when a Government scientist in the audience said that the water from the tap was potable, and that all the criticism of his department was conjecture without scientific evidence. I felt like fetching a glass of water from the student accommodation block, and offering him a drink. Unfortunately, he is right: there is no data to support what the MSPTM scientists, and the people in the community, are saying. This event poignantly depicts one of the new objectives of the MSPTM- to meet the need of the community, and provide the data to support public health reforms.

Lunch was scheduled from 12:45pm until 3pm, something we didn't understand until we were told that this allowed enough time to travel to the mosque for Friday prayers (a practice observed every Friday by Muslim men), and return to the conference. So, 3pm brought the much-anticipated Student Paper Competition. The Competition, and the enormous trophy, were the final drawcards in the Parasite Fest, and the pressure and suspense were maximised to increase the air of excitement. It was a lot of fun, and a relief when finally over!

The MSPTM is organising a similar competition to be held next year, and they hope to involve students from Canada and Britain, as well as from the ASP and MSPTM. It would be well worth the trip, so get those presentations shmicko and get over there!

I would like to take this opportunity to sincerely thank the Australian Society for Parasitology, and the Malaysian Society for Parasitology and Tropical Medicine. It was an opportunity made possible by your generous financial assistance, but one made great by the generous character of all involved.

SUCCINCT SCIENTIST

Wendy Cooper drew our attention to this gem!

Britain's most succinct scientist
Published: 21 March 2003

The winner of The THES 24/7 competition - in which contestants had to give a seven-word summary of their research and explain it in 24 seconds - is A. Sturdee of Coventry University

Subject: *Cryptosporidium*

In 24 seconds :
Oocysts travel faecal-oral
Making millions
Infecting thousands

Loving water
And the bowel
Hidden, small
Cryptosporidium
fluorescence sees them.
Human parasitic protozoan
In mammals, nice and nasty.
Environmental epidemics
Intestinal Armageddon
You get sick
Aches and pains
dehydration
No drugs that work
be not impatient
Your system may prevail

In seven words:
Cryptosporidium means a fortnight on the loo



BALLAD

Ian Sutherland from CSIRO drew our attention to this after-dinner speech given at last year's New Zealand Society for Parasitology by Allen Heath, AgResearch, Wallaceville.

THE BALLAD OF PARASITE LIFE (AND DEATH).

When a man gets old and his face unfolds,
And his bits are no longer new,
When he knows most of the frights that involve parasites,
He'll tell you a tale or two.

Now list' to me and sit quite close,
And a tale to you I'll spin,
Of parasites and their blighted hosts,
That they infest or feed within.

There are nematodes, and ticks and flies,
And flukes and tapes and keds,
And fleas and mites and sucking lice,
And bugs that hide in beds.

These little creatures feed on blood,
Or on your skin they sit,
And some with neither taste nor style,
Prefer to live in shit.

They penetrate, they defecate,
And some just sit and soak,
Atop the lining of your gut,
Until the day you croak.

Some burrow in your membranes,
Or sequester in your glands,
And some just enter with your food,
If you forget to wash your hands.

They place their eggs or oocysts,
In ducts and diverticula,
While some are subcutaneous,
And irritate and tickle ya.

The bile duct and intestine,
Are home to fluke and strongyle,
And even after drenching,
They sometimes stay a long while.

See the microvilli of the gut,
Where the trichostrongyles dance,
In orgies of entwining lust,
Then they leave the rest to chance.

Dispensing their eggs to the flowing slime,
And remnants of digestion,
There, mixed and moulded to steaming turds,
In the grip of the small intestine.

If these images of gastric life,
Are somehow not to your liking,
Spare a thought for the pubic louse,
Who must take a crutch, when hiking.

In fact, the types of lice are few in number,
Just the chewing and the sucking,
Like the one who lives in your pubic hair,
Just where your undies tuck in.

There're mites that chew, and those that suck,
And burrowers like *Sarcoptes*,
That give promiscuous humans hell,
But nothing like *Chorioptes*.

That tiny mite of scrotal mange,
Has macroscopic gall,
As it slowly strides on each ram's pride,
Raising scabs on every ball.

Little *Demodex*, the follicle mite,
In biology and shape is simple,
It comes onto the skin from your nasal crease,
In pus that's squeezed from pimples.

The Ixodidae are an interesting group,
And are commonly called the hard ticks,
But the name has some malice, it's not about phallus,
Because male pricks get their kicks without pricks.

There are many more I have ignored,
But it would take a longer list,
And you would soon get very bored,
Preferring to get pissed.



This catalogue of awful beasts
Makes every layman shudder,
But Parasitologists just smile,
They are their bread and butter.

They are theirs' to study and control
With dips and anthelmintics,
So sit awhile, and I tell to you,
A little of those antics.

The drenching guns are loaded up,
The sheep are penned and ready,
The samplers sniff the morning air,
For the smell of shit is heady.

The sheep are crowded in the race,
The latex gloves are snapped on,
The gumboots save their dainty feet,
From being stepped and crapped on.

Their facile fingers flex and crack,
Only one is held out straight,
To pierce the woolly nether parts,
Where the shiny pellets wait.

The rigid knee prevents escape,
The left hand grasps the neck,
The darting digit finds its mark,
Each sheep's a nervous wreck.

The flighty, startled maiden ewes
Begrudge each small deposit,
But many a shy, uncertain wether,
Has come out of the closet.

When every stubborn rectum
Has yielded up its load,
And the sample jars sit steaming,
It's time to hit the road.

Back to lab. and saline,
Back to mix and mount,
To search for all those floating eggs
And carry out the count.

Now, what about the ecto types
Who do not drench but dip,
Who do not use a furtive grope,
Or fear the rectum's grip?

Those noble types who smile a lot,
Who rarely groan or grouse,
As they search for maggot, mite and ked
And the little scuttling louse.

Their eyes are keen, they scrutinise,
They search each reeking dag
For signs of the eggs the blowfly lays,
After her one and only shag.

The crawling mass of maggots bold,
The proteinaceous slurry,
The rich aroma's clinging pong,
Is not the 'wormy's' worry.

The Platyhelminthologists,
The wormy lads and lasses,
Have nothing in their world so bad,
As the sight of fly-struck arses.

The weeping, reddened, angry skin,
Alive with writhing rice,
The maggots as they suck and stink,
I can't make it sound more nice.

Let's leave this scene of larval carnage,
I don't want to make you sick,
Let's look a while at something bland,
The louse and rotund tick.

These little buggers scrape your skin,
Causing dermatitis miliary,
Or penetrate quite deeper still
To find a full capillary.

If you let a louse upon a sheep,
The end result is cockle,
And not just one will have the lumps,
Fairly soon the whole damn flock will.

Each month the louse makes one large egg,
She's not too energetic,
But males just have to do without,
For she's parthenogenetic.

The tick meanwhile, just sits and sucks,
Her need for blood is drastic,
The male can only wait and sigh,
For his scutum's not elastic.



His spermatophore is waiting poised,
He's getting really randy,
But while she expands and fills with blood,
Her aperture's not handy.

At last her hypostome comes free,
It's time for her to roam,
Then he slips beneath his lady love,
And slides his packet home.

But enough of this lascivious talk,
It's ectopornographic,
Let's just see how dipping's done,
It's fun, but sometimes havoc.

You mostly use a farmer's gear,
An old shower with rusted nuts,
Just pour some petrol in the tank,
Then kick her in the guts.

The sump is small and full of slime,
The yards are full of shit,
But beggars can't be choosers boy,
Just make the best of it!

It's been a year since she's been used,
But she always works first go,
What do ya mean the nozzles are blocked?
What do you townies know?

The power is on, but nothing works,
Blast the bloody pump!
Naught but dribbles from the shower,
There's a hedgehog in the sump!

At last the boom is spinning round,
Like the rotor on a chopper,
The sheep are stunned, but stay quite dry,
Though neither yards, nor grass, nor crop are.

What's with the gloves and plastic leggings?
I won't play your sissy game,
I've used Ops for 30 years,
And I can just recall my name.

I've used a plunge, and with bare feet
I've pushed those woollies under,
And afterwards I've walked in circles,
And had a little chunder.

But, spare me days and spare me sermons,
I'm not getting any strife;
I might look like I've got Parkinsons',
But it satisfies the wife.

Another long day's dipping done,
We head home with quiet elation,
Then bugger me, I've had a thought,
We didn't add the formulation.

So there we have the dirty side,
Our discipline's hard core,
The bucket chemistry brigade,
Do I need to tell you more?

But only half the story's told,
If gene jockey's aren't mentioned,
They spend their day slicing DNA,
They're dim but well intentioned.

Like alchemists in modern dress,
Lighting dark genomic nooks,
With the help of faith and PCR,
And flabby rubber chooks.

They manipulate and cannulate
The lymphatic system splenic,
And poke holes in poor *C. elegans*,
To make it go transgenic.

Their days are filled with acronyms,
Their nights are filled with dreams,
Where vaccines outwit drenches,
With megalomaniacal schemes.

You've listened long and patiently,
To many tales of old,
Where the wily parasitologist,
Goes in search of research gold.

To the layman's ear they sound arcane,
And even sometimes weird,
But their lives and ours are much the same,
Not as different, as they feared.

For, no matter what I've told you,
And what you think of it,
No matter what we do in life,
We're always in the shit.



OVERSEAS NEWS

News Story by Lori Bona Hunt

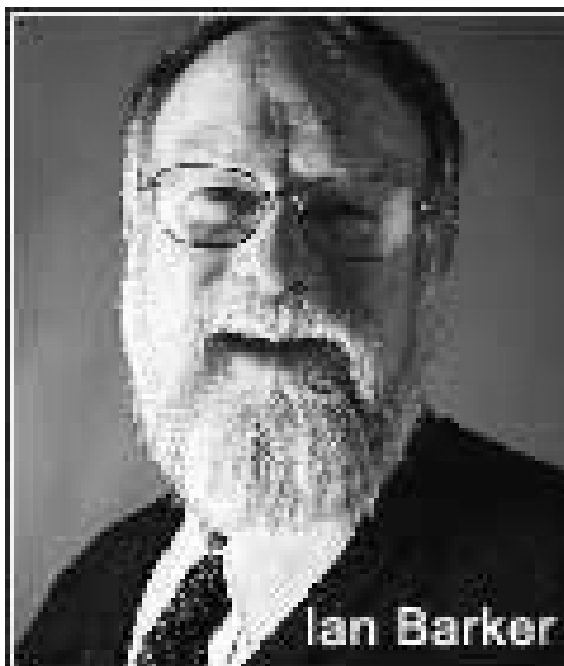
When Health Canada decided it needed a national strategy to deal with the challenges posed to public and animal health by the imminent arrival of West Nile virus, it turned to the country's four veterinary colleges.

The year was 1999 and the mosquito-borne West Nile virus had just begun to create fear and confusion in New York. Commonly found in Africa, Eastern Europe and the Middle East, West Nile virus is carried by mosquitoes but also infects birds, horses, humans and some other mammals.

Officials from the Canadian Co-operative Wildlife Health Centre (CCHWC) — a network of wildlife health experts at U of G's Ontario Veterinary College, the Faculty of Veterinary Medicine at the University of Montreal, the Atlantic Veterinary College at the University of Prince Edward Island and the Western College of Veterinary Medicine at the University of Saskatchewan — were among a group called to a special meeting in Ottawa.

"We had been watching the situation in the United States very closely," says Peter Buck, an epidemiologist with Health Canada's Population and Public Health Branch and an OVC graduate (DVM '93 and M.Sc. '96). "By the end of 1999, we realized we'd better get our ducks in a row, so to speak, and make plans for surveillance and response in Canada."

OVC pathobiology Professor Ian Barker, who directs the Ontario/Nunavut region of CCWHC, travelled to Ottawa in February 2000. "It was unique and precedent-setting for us (CCWHC) to be involved in an activity that was more focused on public health than animal health," says Barker. "At the time, very few people knew anything about West Nile virus."



Indeed, Health Canada "was starting from scratch," says Buck, and it was logical to begin with the nation's veterinary schools. "Veterinarians have a very important role to play in public health," he says. "Our background and training are quite broad, and many of the diseases that affect animals also affect humans. It's important to have an understanding of all the issues behind a disease other than just how it affects people." In addition, the four wildlife centres are "wonderful partners," he says. "They have tentacles that stretch across the entire country, including elaborate links with various wildlife agencies and groups and ministries of natural resources and conservation."

Because of its experience in monitoring wildlife disease across Canada, CCWHC was charged with the task of organizing a national plan for West Nile virus surveillance in dead birds. Barker, who also serves on Health Canada's West Nile virus steering committee, co-ordinated the CCWHC surveillance system and implemented it in Ontario through facilities shared by OVC and the Animal Health Laboratory. "The idea was that we would monitor and detect West Nile virus activity in the ecosystem using dead birds, and



do it in a timely manner to permit public health preventive measures."

This has meant that for the past three years, public-health units across the province have been shipping dead birds — mostly crows, the province's unofficial sentinel — to Barker's lab at OVC. Specimens are collected and sent to Health Canada's National Microbiology Laboratory in Winnipeg for detection of West Nile virus. "At times, we've been swamped," he says. This year alone, about 5,500 birds arrived at the nation's wildlife centres, one-third of them in Guelph, and more than 3,500 have been tested.

"Ian Barker and the regional wildlife centres have played a very important role in the surveillance and early warning system for human health," says Buck. The dead birds that test positive for West Nile virus provide early warning signals to health units across the country, letting them know where the virus is active and where human cases might appear, he says. Other veterinarians central to the response in Ontario include OVC graduates Chuck Le Ber, DVM '71 and Grad Diploma '77, and Dean Middleton, B.Sc. '86, DVM '87 and M.Sc. '95. Both are epidemiologists who co-ordinate Ontario Ministry of Health and Long-Term Care activities related to West Nile virus, helping to promote awareness about how individuals can protect themselves.

The first human cases of West Nile virus in Canada were confirmed in the fall, and in November, a cancer patient from Cambridge died after becoming infected with the virus. Throughout it all, Barker has been inundated with calls from media and the general public looking for background information and updates. But he doesn't mind the extra effort. "To me, public service is part of our role as faculty. The government and public are all our clients, in one way or another." That philosophy of public service is prevalent at OVC and in many other colleges at the University, where faculty and staff have been at the forefront of West Nile virus surveillance, detection and treatment.

"We've all been aware that West Nile virus was moving northward for a number of years," says Michael Taylor, the staff veterinarian in OVC's avian and exotic animal service who runs U of G's Wild Bird Clinic. "The University has, collectively, been there since day one, playing a key role in keeping people informed."

Environmental biology researcher Jamie Heal's role began in the summer of 2000. He and summer student Marjorie Gratton-Ferguson analysed more than 50,000 mosquitoes for Health Canada. The mosquitoes were collected from various locations throughout Ontario and were sent to Heal's lab to identify. The lab has been working with mosquitoes and repellent for some 15 years. They were looking for the *Culex pipiens/restuans* species, which is common in Ontario and can carry West Nile virus. Making an accurate identification required Heal and Gratton-Ferguson to examine the insects under a microscope. It was a painstakingly slow process. The mosquitoes had to be alive but cold, so they wouldn't move around too much on the microscope's slides. "We would identify them by things such as hair and scales," Heal says.

Mosquitoes were frozen and shipped to Winnipeg for further tests to determine if they carried West Nile. This was an important first step in verifying that West Nile virus had crossed the U.S.-Canada border. The first confirmation that the virus was in Canada's bird population came in August 2001 when it was detected in a crow from Windsor. A year later, OVC's Veterinary Teaching Hospital confirmed the first case of West Nile in a horse in Ontario. The hospital went on to treat 28 horses with the virus last summer and fall.

In addition, the Wild Bird Clinic cared for about 30 wild birds such as red tail hawks and owls that were also ailing from West Nile, says Taylor. "We've just been waiting and watching for it for a long time. What did catch me by surprise was how vigorously it spread." Clinical studies professor Scott



Weese, a specialist in large-animal infectious disease, agrees. "We knew it was coming; we just didn't know when."

Among the first group of horses treated for West Nile virus was a two-year-old thoroughbred from Westhaven Farm in Caledon. Farm manager Bob Hancock knew something was dreadfully wrong with the race-horse-in-training. "He seemed confused and was stumbling and falling down. It happened so fast. The horse had been training on a track in Etobicoke, and two hours after running, he was showing these signs. The doctor at the track put two and two together and said he thought it was West Nile."

There was no hesitating. The horse was loaded into a trailer and taken to OVC, "the only place that could handle it," says Hancock. He was convinced the animal would never race again or that it might not survive at all.

Although West Nile does come on suddenly, frightening owners and horses alike, it actually has better survival rates than most other neurological disorders, between 60 and 70 per cent, says Weese. "And the horses that survive tend to do well." Indeed, after about a week of treatment, the thoroughbred from Hancock's farm recovered, as did about 60 per cent of the confirmed cases that were treated at OVC.

Weese goes on to explain that West Nile virus has no specific pattern in horses. "In people, it seems to affect those who are older or have weakened immune systems, but in horses, young and healthy animals appear to get sick as often as older ones," he says. It's also unclear why horses — like people — appear to be more susceptible to the virus than other animals are.

Weese notes that although vaccines are available, their effectiveness is uncertain. He does predict that there will be widespread vaccination of horses in Ontario in 2003, and says the Large Animal Medicine Section is recommending vaccination of horses this spring.

Both horses and people are considered "dead-end hosts" of West Nile, meaning they can't spread it. "They have low levels of the virus in their blood," says Weese. "If a person or a horse with West Nile is bitten by a mosquito, it's not enough for the virus to be transmitted to someone else." The exception appears to be transmission through a blood transfusion or organ/tissue transplants. Scientists and doctors at Health Canada are still trying to determine how a Cambridge woman undergoing cancer treatment contracted the virus from a blood transfusion. They believe it was due to the compromised state of her immune system and the fact that transfusions often involve a number of different blood components from many donors.

It's another situation entirely in the bird population. Although not all species of birds infected with West Nile virus get sick, some are particularly prone to develop the disease. These include members of the crow family, hawks and owls and even some pet birds. "We know, based on research, that infected birds have a higher level of the virus in their blood, so they're hosts that help replicate the infection," says Taylor. "They can transmit the virus through their blood or secretions. We had to be really careful in how we handled and housed these birds."

He notes that although West Nile didn't affect the number of birds treated at the Wild Bird Clinic (typically between 500 and 1,000 a year), it did dramatically change the demography. "We were admitting a different group of birds during the summer than we have in the past eight years I've been here. We were seeing more birds that were truly ill and not just traumatically injured, and that seems to go along with the West Nile picture."

The Wild Bird Clinic also provided advice and support to wild bird rehabilitators and aviaries that were hard hit by the virus. One owl breeding and rehabilitation sanctuary in Niagara that was investigated by pathobiology professor Bruce Hunter saw nearly 80 per cent of its population destroyed. Scientists are still trying to figure out why some



mosquito species carry West Nile and others do not, says Heal. The *Culex pipiens/restuans* species is known to prefer feeding on birds, "but there are other species and even other insects, such as blackflies and deer flies, that also bite birds and mammals." For now, the best option for prevention is public education, teaching people how to reduce mosquito populations and avoid encounters by dressing properly and using repellents, he says.

"Completely eliminating mosquitoes is not an option. They are a natural part of the ecosystem." The cold winter weather has provided a reprieve from the spread of the virus, which Taylor says he is using to prepare for the next wave. He's focusing on education programs aimed at owners and breeders of wild and pet birds. "We have to get the word out there about what to do prevention-wise. I think the captive bird population is the next to be hit."

Winter has also given Barker some catch-up time. He spent the first three years determining whether dead birds were carrying the virus, but says the scope of his work has now changed. West Nile is active in Canada, "so the question now is, what to do about it?" Technicians working in Barker's lab and others across the country have been accessioning and dissecting dead birds, collecting specimens, then posting, tracking, mapping and accounting activity on national Web sites.

"West Nile has implications for wildlife populations, zoos, endangered species, handlers, wildlife rehabilitators, veterinarians and animal and pet owners," says Barker. "But it also has significant implications for public health." This is a fact Health Canada knows all too well. It used the information generated by CCWHC and the Winnipeg lab to provide daily updated tables and maps showing West Nile virus activity across the entire country. The information will also be

incorporated into Health Canada's 2003 planning and strategy sessions.

"Predicting what's going to happen in 2003 is extremely difficult," says Buck. "West Nile is new to the Western Hemisphere, so there's a steep learning curve here to figure out this virus and exactly how it will persist in the ecosystem," he says. This includes determining which bird species will be the reservoir host, how effective the virus was at "overwintering" (surviving the cold weather in native mosquitoes), the degree of its introduction into an area by migratory birds and the size of this year's mosquito population, which is determined by a variety of climatic conditions.

Weese adds that recent information from the United States based on virus levels in mosquitoes suggests that the peak of the disease is likely a few years away. In Barker's lab, technicians work to finish their analysis of the dead birds submitted during 2002 before mosquitoes start to make their appearance this year.

The next goal is to take the information collected and use it to make predictions about which areas of Ontario and Canada pose the greatest public-health risk, based on mosquito and human population.

In this step, Barker will be working with yet another Guelph graduate, Robbin Lindsay, PhD '95, a medical entomologist with Health Canada. "I'm very pleased with what's been done so far," says Barker. "We've had huge geographical and jurisdictional issues to deal with, but the information has been getting out to the public-health agencies, and I think it's safe to say we've had some impact. It's been very interesting to be involved in such a multi-faceted, multidisciplinary and multi-agency project and see it work, despite a fair number of obstacles."

Late News: The University of Guelph Faculty Association honoured Dr Ian Barker of the Department of Pathobiology with an award recognizing his commitment to teaching. Barker, a wildlife and zoo animal pathology expert who works on Lyme disease, West Nile virus and gastrointestinal pathology, received a Distinguished Professorial Teaching Award. A supporter for his nomination wrote "His enthusiasm for scientific investigations is infectious."



Announcing a special issue:

Vaccines in the 21st Century: Expanding the Boundaries of Human and Veterinary Medicine

Guest Editor: D.A. Brake



International Journal for Parasitology, Volume 33 (5-6)

Invited Reviews

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- Recent advances in veterinary vaccine adjuvants
M. Singh, D. T. O'Hagan
- Plant-Based Vaccines
S.J. Streatfield, J.A. Howard
- Hemolysin A and Listeriolysin – two vaccine delivery tools for the induction of cell-mediated immunity
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- A review of the effectiveness of vaccine potency control testing
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- Exploiting immune mechanisms for cancer vaccine efficacy
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- Rational antibacterial vaccine design through genomic technologies
G. Grandi
- Helminth vaccines: from mining genomic information for vaccine targets to systems used for protein expression
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- T cell epitope identification for bovine vaccines: an epitope mapping method for BoLA A-11
A.S. De Groot, V. Nene, N.R. Hegde, S. Sriksunaran, J. Raynor, W. Martin
- The effectiveness and limitations of immune memory: understanding protective immune responses
M. Campos, D.L. Godson

Beginning with the first intentional immunization of a human to treat an infectious animal-derived disease in the late 18th century (Jenner, 1798) and continuing into the early 21st century with the commercialization of multivalent recombinant human and veterinary medicine vaccines, the art and science of vaccinology over the past 200 years continues to evolve and expand in promising ways. Global and national disease eradication vaccination campaigns have contributed to the significant decline and in some cases the eradication, of infectious diseases responsible for the morbidity and mortality of humans and livestock. Although we have largely won the global battle against smallpox, polio, rinderpest and vesicular stomatitis virus, old enemies such as malaria and tuberculosis and new foes such as HIV, West Nile virus and highly pathogenic avian influenza virus require new innovative strategies for the battlefield and ultimately, for final defeat.

New scientific discoveries and technical innovations have created the path on which bacteriologists, virologists and parasitologists engaged in infectious vaccine research and development currently tread. Very recently, oncologists, gastroenterologists and neuroscientists have also joined the quest as experimental prophylactic and therapeutic vaccines for cancers, gastric ulcers and Alzheimer disease have begun to emerge out of the laboratory and into human clinical trials. This thematic issue provides a snapshot of the many important facets of vaccine research and development and how new discoveries and emerging technologies are being implemented to design and test potent new weapons against human and animal diseases.



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Conference Program

Program Outline (subject to change)

<i>Sunday</i>	<i>Afternoon arrival. Registration. Dinner provided.</i>
<i>Monday</i>	<i>Submitted papers.</i>
<i>Tuesday</i>	<i>Birding breakfast at Badger Weir, tour of Healesville Sanctuary and evening nature walk through the Coranderrk bushland.</i>
<i>Wednesday</i>	<i>Submitted papers and AGM.</i>
<i>Thursday</i>	<i>Field trip to be announced.</i>
<i>Friday</i>	<i>Submitted papers and close.</i>



Scientific Papers

Do you intend to submit a paper?

YES ☐ NO ☐

Presentation of papers is encouraged and a monetary prize will be given for the best undergraduate and postgraduate presentation. Papers which address the conference theme of 'The Future Health of Australian Wildlife' are highly sought. Poster presentations are also acceptable.

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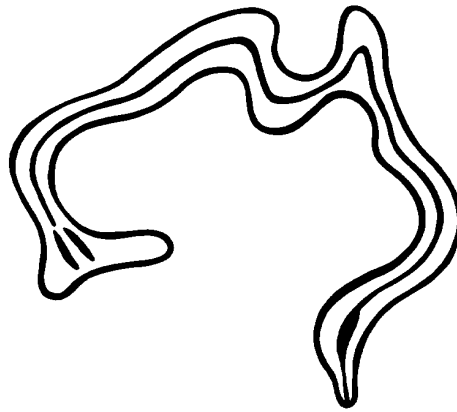
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