



Australian Biosecurity CRC for Emerging Infectious Disease

JUNE
2006

WINTER
EDITION

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FROM THE CEO*Dr Stephen Prowse*

The Hon Michael Johnson MP, Federal Member for Indooroopilly, met with the CEOs of four CRCs with headquarters in his electorate - namely the Australian Biosecurity CRC, CRC Mining, CAST and CRC for Sugar Innovation through Biotechnology – on 26 April 2006. The meeting was held at the Bureau of Sugar Experimental Stations in Indooroopilly. The purpose of the meeting was to brief him on the activities of the CRCs located in his electorate. I was able to give him a summary of the activities of the AB-CRC, highlighting contributions made by the AB-CRC to enhancing biosecurity capability. I was then able to spend a little more time on bird flu, a topic in which he expressed a particular interest. I demonstrated re-assortment in flu using the flu interactive developed by Corinna Lange for Biotechnology Online (www.biotechnologyonline.gov.au/popups/int_birdflu.cfm). Michael found the briefing of great value, hearing about the beneficial outcomes of the individual CRCs as well as getting a better understanding about the CRC Programme in general.

Planning for the Third Year Review is well underway. The review panel, consisting of Dr Andrew Turner, Dr Les Simms and Professor Richard Smallwood, will visit the major nodes of the AB-CRC and interview end users and members of the management team. The Third Year Review process is being organised by Kris Trott and is overseen by a Board subcommittee. The panel will report to the Board by the August Board meeting.

The Board of the AB-CRC met in mid-May and discussed a range of matters, the most significant of which were:

- The Board considered a number of activities aimed at improving and prioritising our adoption activities. A key component of this was to approve funding for a full-time Application & Linkage Program Coordinator. This will enable heightened focus on the adoption activities in the AB-CRC.
- There was also a discussion of the role of the AB-CRC in facilitating discussions concerning national policy. This has arisen as a consequence of the outcomes of a number of AB-CRC projects where technology advances have created a need to consider policy. The Board recognised that there is a role for the AB-CRC, but any activities need to be undertaken with a full understanding of the context and sensitivities.

- The Board approved the project entitled *Spatio-temporal assessment of bluetongue virus and Murray Valley encephalitis host and vector dynamics* led by Graeme Wright from Curtin University of Technology.
- The continued appointment of the visitor, Dr Paul Wood, was also approved by the Board. Paul continues to make an important contribution to the AB-CRC with his experience in both animal health and CRCs.



Michael Johnson admires his AB-CRC luggage lock.

DR GARDNER MURRAY DEPARTS DAFF

Joanna Hewitt (DAFF) and Stephen Prowse

Dr Gardner Murray will be leaving the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) in mid-July after 27 years of distinguished service in senior leadership positions in the Department. In his role as Chief Veterinary Officer in particular, Gardner has made a very strong contribution to the Department's policy development, program administration and corporate management. Gardner has much to be proud of in his achievements in the portfolio. His contribution to animal and plant health, quarantine, pest and disease control, food safety and international veterinary science has been recognised through awards such as the Public Service Medal, Centenary Medal and a Gold Medal award from the Office International des Epizooties (OIE).

Dr Murray has made an important contribution to the AB-CRC through his membership of the Board. In addition, he chairs the International Advisory Standing Committee. His knowledge, networks and insightful thinking will be missed by the AB-CRC.



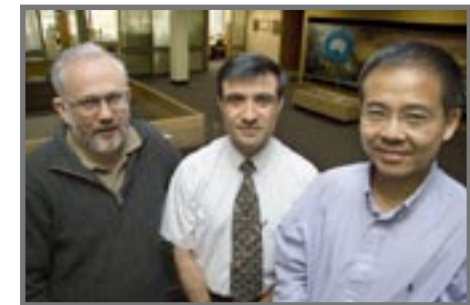
VISIT BY DR ALFONSO CLAVIJO

Dr Alfonso Clavijo is the Head of the Vascular Disease Unit at the National Center for Foreign Animal Diseases in the Canadian Science Center for Human and Animal Health; a Permanent Advisor to the United Nation's Food and Agriculture Organization Continental Plan of Classical Swine Fever eradication; member of the biosecurity committee of the Pan American Foot-and-Mouth Disease Centre; member of the advisory committee for emerging diseases of the Canadian Centre for Human and Animal Health; and designated expert in the designation of NCFAD at the Office International des Epizooties (OIE) reference laboratory for classical swine fever.

Dr Clavijo is a world expert in foot-and-mouth disease, and his group plays a major role in the investigation and control of exotic infectious animal diseases in Canada. He has extensive experience developing novel diagnostic tests for a number of viruses, including foot-and-mouth disease virus (FMDV), classical swine fever virus and bluetongue virus. Recently, his group has been involved in developing multiplex diagnostic assays using Luminex and microarray platforms, and they are a world leader in applying these new technologies to the diagnosis of FMDV.

Because he has access to a variety of disease agents that are not accessible in Australia but important in our ability to detect and control outbreaks should these agents enter Australia, either through natural transmission, trade, tourism or bioterrorism, Dr Clavijo visited Australia as an important step to building a partnership with Australian researchers, especially those based at the CSIRO's Australian Animal Health Laboratory in Geelong.

While in Australia, Dr Clavijo also visited the AB-CRC National Office in Brisbane. He gave a seminar - *New strategies for the differentiation of foot-and-mouth disease virus infected from vaccinated cattle* – at both Geelong and Brisbane, and open to all AB-CRC associated people at each site. Dr Clavijo's visit was coordinated by Dr Linfa Wang and Dr David Boyle (AAHL), and made possible by a 2006 CSIRO McMaster Visiting Fellowship.



David Boyle, Alfonso Clavijo and Linfa Wang at the CSIRO's Australian Animal Health Laboratory.

MURDOCH BIOSECURITY RESEARCH GROUP

The Biosecurity Research Group at Murdoch University was recently launched. The group has funding of more than \$2 million over the next 5 years from sources including the:

- AB-CRC;
- Australian Centre for International Agricultural Research;
- Environmental Biotechnology CRC; and the
- Food and Agriculture Organization of the United Nations.

The Department of Agriculture and Food Western Australia is also a key collaborator.

The Biosecurity Research Group's major focus is animal biosecurity. The group comprises five senior academics from the School of Veterinary and Biomedical Sciences - Professor John Edwards, Associate Professor Ian Robertson, Associate Professor Stan Fenwick, Dr Simon Reid and Dr Trevor Ellis – three postdoctoral fellows, and 20 PhD students.

The group is currently working on Project I.025RE *Development of tools to improve surveillance for surra* led by Simon Reid and Lee Skerratt (James Cook University). A second ACIAR project beginning in July will develop a risk-based surveillance system for foot-and-mouth disease, avian influenza and classical swine fever in Indonesia.

The project will be led by Ian Robertson, and will involve a group of international PhD students.



Left to right: Tum Sothyra (Cambodia), Pebi Purwo Suseno (Indonesia - back), Siti Zubaidah Ramanoon (Malaysia - front), Dr Simon Reid, Abby Bestall, Professor John Edwards, Dr Stephen Prowse, Kyaw Naing Oo (Myanmar), Shih Ping Chen (Taiwan), Associate Professor Ian Robertson

EXERCISE ELEUSIS '05

Professor Angela Merianos, Senior Research Fellow, Curtin University of Technology

The Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) has released the evaluation report of Australia's national simulation of avian influenza preparedness and response, *Exercise Eleusis '05*.

The objectives of the exercise, which was held from 29 November - 1 December 2005, were to test the effective integration of national emergency zoonosis arrangements between industry, agricultural agencies and health agencies at state/territory and national levels, public communication, and disease control policies and strategies. During the exercise, three states had a simulated outbreak of highly pathogenic avian influenza A/H5N1 infection in commercial chicken flocks that resulted in limited animal-to-human transmission, and a household cluster of two cases that raised the possibility of human-to-human transmission. All state/territory governments were required to undertake human health and animal disease control activities and participate in national decision making.

Approximately 1,000 people participated throughout Australia, from government agriculture and health agencies, emergency management organisations, food safety authorities, environmental agencies, the poultry meat and egg production industries, and many others. A number of international experts were invited to observe the exercise in Canberra and some of the state government response centres.

The simulation built on a series of smaller exercises held during 2005 that were developed to address shortcomings in national preparedness for emergency animal diseases identified during *Exercise Minotaur*, a simulated foot-and-mouth disease outbreak conducted in 2002. The precursor exercises tested public communications, rapid response teams, resource management, integration between agriculture and health, the National Disease Coordination Centre (Agriculture), and the National Management Group (NMG) and Consultative Committee for Emergency Animal Diseases (CCEAD).

The health sector played a bigger role in *Exercise Eleusis* than previously, and a number of national health committees were involved in the simulation, namely the Australian Health Disaster Management Policy Committee (AHDMP), the Communicable Diseases Network Australia (CDNA), the Public Health Laboratory Network (PHLN) and the National Influenza Pandemic Advisory Committee (NIPAC).

Since the 1980s, Australia has developed a set of guiding disease control strategies and procedures that are documented in the Australian Veterinary Emergency Plan

(AUSVETPLAN). These are designed to support the decision making process and operations at national, state/territory and local levels. The Australian Management Plan for Pandemic Influenza (AMPP) has been developed by communicable diseases experts to provide a detailed guide for the Australian response to a pandemic influenza threat, which may arise from an outbreak of avian influenza.

My involvement in the exercise was first as a member of the exercise Validation Team that was also responsible for writing the evaluation report. The team members, under the leadership of Dr Lyndy Scott, had expertise in agriculture, medicine, the poultry industry and emergency management, and validated the exercise at its concept and final draft stages to ensure it was designed to adequately test the exercise objectives. The Exercise Control Team was responsible for developing in excess of 500 exercise inputs (written and verbal) for injection at approximately 20 exercise locations around Australia at scheduled times over the three days.

I was based in Canberra during the exercise and moved between the Australian Government Department of Health and

Ageing (DoHA) and DAFF to observe the proceedings. Having a strong operational background in epidemic alert and response before joining Curtin University of Technology, it was fascinating to watch the process from scenario development to execution, in particular observing the decisions made by my former colleagues in state and national health authorities while considering what my responses would have been as a player. It was also very enlightening to observe the mechanisms in place to contain and control emergency animal diseases and to get a better understanding of the challenges faced by industries with nationally integrated chains of production, such as the poultry and egg industry, when faced with an emergency.

Overall, *Exercise Eleusis* demonstrated that Australia has highly developed mechanisms for epidemic alert and response for emergency animal and human diseases, highly trained staff, and good levels of integration between animal and human health services. In most jurisdictions the relationship between agriculture and industry was also highly developed. *Exercise Eleusis* reaffirmed the effectiveness of emergency animal disease arrangements in Australia while making a number of recommendations on further improving

preparedness and the capacity to respond to a more sustained emergency as would arise in pandemic influenza.

The exercise reasserted the need for:

- Collaboration between lead combat agencies for a successful response;
- Cross-sectoral and cross-disciplinary coordination regarding disease control procedures, policies and plans both before and during a response;
- National strategies for animal and human health, including surveillance and animal welfare;
- Good local management of outbreaks to contain local transmission and prevent spread to other jurisdictions;
- Industry engagement in the decision making processes and in implementing response plans; and
- Public communications that provide authoritative and unambiguous information to maintain public confidence.

The recommendations arising from the evaluation of *Exercise Eleusis* are already being put into place at local, state/territory and national levels. DoHA is preparing for a pandemic influenza exercise scheduled for late 2006.

The full report of *Exercise Eleusis '05* can be found on the DAFF website at www.daff.gov.au/index.cfm

INTERNATIONAL TRAINING COURSES ON EVALUATION OF SURVEILLANCE FOR DISEASE FREEDOM

Dr Tony Martin, DAFWA

Angus Cameron and I led two week-long training courses in Europe, aimed primarily at veterinary epidemiologists, and covering approaches to evaluation of surveillance systems, developed in the AB-CRC project *Quantification of confidence in disease freedom*.

These courses were organised and hosted by the Veterinary and Agrochemical Research Centre in Brussels (October 2005), and SAFOSO (Safe Food Solutions Inc.) in Bern (February 2006). Both courses were well attended, with 21 people from 8 countries attending the Brussels course, and 30 people from 14 countries attending the Bern course.

A one-day overview aimed at surveillance managers and decision-makers was incorporated into the Bern program. The methods presented enable the

incorporation of evidence from a wide variety of sources - including general and targeted, ongoing and temporally discrete surveillance activities - into estimates of the probability that a population is free from a particular disease. Participants brought their own approaches and examples to provide fuel for the weeks' activities, and while some Brussels participants were distracted by the arrival of H5N1 in Europe, in Bern there were no such distractions, and everyone stayed the course and returned home armed with new tools for analysing their surveillance data and assessing the relative values of different surveillance activities.



Angus Cameron leading a group of conscientious students.

**CRC ASSOCIATION ANNUAL
NATIONAL CONFERENCE 2006
BRISBANE
17-19 MAY 2006**

Corinna Lange & Stephen Prowse

The CRC Association (CRCA) holds an annual conference which is hosted in turn by each capital city that has enough CRC staff to organise and host a national conference. 2006 was Brisbane's turn, which has kept Stephen Prowse and I busy over the last 12 months as members of the conference organising committee.

This year's conference theme was *CRCs: Making an impact*. The conference aimed at highlighting the impact of CRC research from an end user perspective. Users of AB-CRC research from a range of sectors outlined the way in which CRC research outcomes had added value to their businesses. The highlights included improved mining productivity, safer drinking water and higher quality beef. An important session included seven end users giving their perspectives on the relationships with CRCs, which had some important messages for CRCs. One of the key messages was to get the relationships worked out up front and to keep the opportunity cost as low as

possible. The importance of communication, education and training in the adoption process was highlighted in two sessions.

Speakers reflected on topics including:

- the impact of CRC research on industrial growth;
- end user perspectives on the impact of CRCs on various industry sectors;
- maximising impact through communication; and
- the impact of education, training and technology transfer on commercial growth

The 2-day conference was very well attended by people involved in CRC management, partner organisations and industry representatives. The AB-CRC's contingent included Mal Nairn (Chair), Stephen Prowse (CEO), Hume Field (Program Manager – Ecology), Kris Trott (Business Manager) and Corinna Lange (Communication Officer). This is the first time Hume has attended a CRCA conference and he commented that it was a useful experience for gaining a broader understanding of the CRC Programme.

Two of the regular features of the CRCA conference are consistently considered conference highlights – *Showcasing CRC*

PhDs and the Awards for Excellence in Innovation. As the AB-CRC moves into our third full year of research we have a number of PhD students and research projects that are reaching a stage where they could apply for either of these sections at the 2007 conference. This is particularly important as we move to re-bid, as this conference attracts a lot of senior government people and these sections in particular attract media attention.

An additional highlight of this year's conference was *Not a drop to drink – Australia's future without water*, a hypothetical set in 2056, building on the current water crisis but looking 50 years into the future, with Australia's population predicted to balloon to 30 million, striking doubt in our capacity to meet increasing water demands. Aligned with the conference theme on impact, the hypothetical specifically focused on current CRC research happening now and how it might help us in the future. The panel consisted of:

- The Hon Malcolm Turnbull MP - Parliamentary Secretary to the Prime Minister with special responsibility for Water Policy
- Mr Wayne Cameron - President, Bulimba Creek Catchment Authority

- Professor Peter Cullen – Chair, Wentworth Group of Concerned Scientists
- Mr David Fahl – Partner, p&e Law
- Ms Ticky Fullerton – Reporter, ABC Four Corners
- Mr Ted Gardner – Government Water Researcher
- Professor Ian Lowe – President, Australian Conservation Foundation
- Professor John Marsden – Director, John Marsden Associates

This event, open to the public, was used to launch the conference, and as an opportunity to raise awareness of CRCs and demonstrate how their research can benefit the community. The topic and the high profile panel members ensured the room was filled to capacity (630 people), even at \$20 a ticket! If you're disappointed you missed out keep tuned to ABC Radio National who recorded the evening and will broadcast it later in the year. To tempt you to tune in, imagine Malcolm Turnbull as President of the Republic of Australia, the abolition of the states with local government boundaries redrawn to reflect catchments, and recycling your own grey water at home for drinking.



Panel (from left to right): David Fahl, Peter Cullen, Ted Gardner, John Marsden, Ticky Fullerton, Wayne Cameron, Ian Lowe and Malcolm Turnbull, with Bernie Hobbs facilitating.

Prior to the start of the main conference program was a day of workshops.

Chairs workshop – Professor Mal Nairn

The CRC Board Chairs started meeting as a group in 2004. I personally find these meetings very useful in a networking sense and for that reason would support a continuation of the practice. This year about 40 chairs attended a facilitated all day meeting that was organised by Sir Frank Moore who chairs the Sustainable Tourism CRC Board.

The topics covered included:

- The role of the chairs in the CRC Programme
- Revised guidelines: national interest vs commercial interest
- Finding balance between commercialisation and research
- Relationship between CRCs and universities

In addition we had addresses from Dr Peter Jonson the new chairman of the Independent CRC Advisory Committee and Kylie Emery from DEST.

A good feature of the meeting was that the facilitator gave everyone a chance to speak, which meant a wide range of views were expressed on each topic.

It is clear some CRCs are very concerned that universities may become less enthusiastic about participating in a re-bid as a result of the expected changes to the research funding that the Federal Government supplies to universities.

I was interested to hear a number of chairs express the view that they would like to have greater contact with the CRC Association and that chairs should become more involved in the lobbying process to ensure government support for national interest CRCs. Note the term 'public good' is being replaced by 'national interest'.

CEOs workshop – Dr Stephen Prowse

The CEOs workshop focussed on intellectual property, venture capital and valuation of the outcomes of CRC research. It was made clear that there have been significant changes to the way IP is valued and managed within companies, which may affect the ability to attract venture capital to CRC start-up companies. The process and criteria that need to be met to attract venture capital into CRC projects was discussed. It was made clear that there are funds available for good projects. The economic valuation of the outcomes of CRC R&D was discussed. The extension of the study by the Allen Consulting Group was foreshadowed to include a wider set of project outcomes. The need to value intangible assets was an important part of the valuation.

Research Managers Workshop – Dr Hume Field

This is the first time there has been a workshop for research program managers, and it attracted 36 participants from a spectrum of CRCs. Similarities and differences in the way different CRCs managed research were immediately evident. Due to time limitations we were limited to discussion on three topics: managing diverse stakeholders, managing without line management, and IP issues. Communication was seen as the key.

In managing diverse stakeholders, identified communication strategies included:

- Consulting with stakeholders at the outset of projects
- Use project review/industry steering groups
- Regular facilitated discussions to ensure ownership by researchers of stakeholder engagement processes
- Bring people together regularly (make use of 'clusters' if stakeholders too diverse)
- Make reporting more meaningful (e.g. report less frequently/appropriate to project timelines, avoid 'doubling up' and repetition)

- Package research outcomes to maximise their value and uptake (client-focused projects)

Management strategies included:

- Assist researchers to get other non-CRC grants
- Make good use of the control you do have as a research manager, e.g. allocate/withhold travel funds according to performance
- Ensure partners have the right skills to match the project requirements - may need to change as requirements vary

In managing without line management, the following strategies were identified:

Communication:

- Program managers and CRC research directors to facilitate cross-institutional collaboration
- Encourage industry stakeholders to offer regular feedback to researchers
- Ensure there is public scrutiny among stakeholders
- Contact industry people directly for input into quarterly reports
- Establish rapport and build personal relationships through face-to-face meetings
- Identify reasons for problems and

- provide support/solutions in cases where reporting is lacking
- Promote non-monetary benefits of CRC research (e.g. your research gets to users; cross-organisational teams which can endure beyond the life of the CRC)
- Educate stakeholders about the CRC, e.g. conduct a research users' forum annually, involving partners and potential users

Management strategies included:

- Pay program leaders to 'lead'
- Use financial incentives - pay in arrears for projects/after evidence of progress
- Lead by example and offer other incentives (e.g. awards) - or cut off money!
- Give research manager input into research provider performance reviews outside the CRC
- Ensure project agreements are signed off between the CRC secretariat and the research provider organisation
- Clearly identify targets and milestones
- Clearly allocate tasks to individuals
- Develop good reporting systems
- 'Embed' researchers in industry organisation
- Use good project management tools

- Use financial incentives
- Develop project-based key performance indicators
- Include early risk analysis as part of the project proposal

Strategies for IP management included:

- Clearly define IP and how the CRC captures it - distinguish from intellectual capital
- Offer comprehensive training in IP identification and management for researchers - don't assume people know
- Develop good systems and structures for capturing and defending IP, especially background IP (use models, software, data sets)
- Use 100% dedicated staff on issues likely to develop connected IP
- Don't debate all the models - there are too many opinions
- Get legal advice on student IP; they are not like ordinary researchers
- Only protect financially valuable IP (not worth the hassle otherwise)

It was widely agreed that a one-day workshop should be a regular feature of CRCA conferences. Suggestions for future discussions included career pathways for research managers, communication

strategies, quality assurance strategies, commercialisation agenda, and public good CRCs approach to the new guidelines.

Business Managers Workshop – Ms Kris Trott

Wendy Murphy of the Diagnostics CRC organised an excellent Business Manager Workshop which was attended by 81 participants from a diversity of CRCs. The workshop registration desk was capably managed by the AB-CRC's lovely Sue Campbell.

The key areas the workshop focused on were:

- The new accounting standards (International Financial Reporting Standards), presented by Matthew Gray, KPMG
- The Accidental Company Secretary (The role the Board secretary plays), presented by David Munro on behalf of Chartered Secretaries Australia
- Current trends affecting patenting worldwide, presented by Brendan Bourke, IP Australia
- Best corporate structures including taxation implications, presented by Craig Lawn, PWC
- Technology transfer, presented by Rob McInnes, Spruson & Ferguson
- Business/Commercialisation Plans – A-Z in 30 minutes, presented by

John Kapeleris, Australian Institute for Commercialisation

- Overcoming institutional barriers for commercial success, round table discussion

Overall the presentations were of a high calibre and it was a great one-day workshop. At dinner the evening before the gentle flow of wine assisted with the flow of discussion and networking.

Communication Managers Workshop – Ms Natalie Paul

I recently attended the CRCA Communications workshop in the city on 17 May 2006. The first impression I got was the sense of enthusiasm and anticipation from the attendees (including myself) and committee members alike to network, touch base with one another and share information. I found the workshop presentations dynamic, the topics focused and relevant, and the atmosphere supportive.

I particularly found the topics on communications strategy, update on DEST communications activities, priority in mass media, content and IT management, and delivery very useful for my work area. I

felt that I could very easily apply a set of principals I derived from those sessions to my own work at a greater level. It also strengthened my own work ethic that although you can never over communicate, you can be more precise in what you are saying and how you say it – communication when done well is worth its mint in gold!

From the workshop, I also recognised and appreciated much more how CRCs benefit most from a flat-based organisational set up rather than a hierarchical based system. This allows for individuals to excel in their areas of expertise and, as there are many professionals in various areas working in the CRCs, there are great opportunities for collaboration, progress and team support.

PROFESSIONAL DEVELOPMENT OPPORTUNITIES

QUEENSLAND – SMITHSONIAN FELLOWSHIP PROGRAM

Nominations close Friday 16 June 2006

The Queensland Government and the Smithsonian Institution in the USA offer three Fellowships for Queensland researchers to undertake up to 6-months research at a Smithsonian Institution. The Smithsonian is the largest museum complex and research organisation in

the world. It consists of 15 museums, including the National Zoo, with facilities in Washington D.C. and New York. The Smithsonian Institution also has research stations located in Arizona, Hawaii, Maryland, Massachusetts, Virginia, Belize, Panama and Kenya. To find out more about the Smithsonian Institution, please visit www.si.edu/

For more information visit www.premiers.qld.gov.au/Business_and_industry/grants/smithsonian/

INTERNATIONAL SCIENCE LINKAGES PROGRAMME – SCIENCE ACADEMIES PROGRAMME

The Australian Academy of Science is inviting applications from professional scientists to visit Europe, North America (USA, Canada & Mexico), and North-East Asia (China, Japan, Korea and Taiwan, between 1 July 2007 and 30 June 2008, to collaborate with researchers in those countries.

Proposals in any fields of natural science, basic and applied, including mathematics and engineering science, will be considered. Applicants must propose a collaborative research project, or a specific activity, which has been developed in consultation

with host scientists. Under this scheme, applicants can request travel support to access international leading-edge small-to-medium research facilities and equipment.

Information, deadlines and application forms are available at www.science.org.au/internat/index.htm

CRC LEADERSHIP AND INNOVATION COURSE

*14-18 August 2006
Melbourne*

The CRC Leadership and Innovation course (previously called CRC Leadership and Career Development) was established in 1997 for PhDs and postdoctoral students in Cooperative Research Centres (CRCs). The course helps early career researchers develop an understanding of the nature of leadership, how to work effectively with others, and the requirements for successful research and development (R&D).

Designed as a five-day program, the course has proved enormously successful, with about 30 outstanding PhD and postdoctoral students from CRCs all over the country attending each year. Recently, participants from industry and universities have joined the course, helping to provide a stimulating

environment conducive to exploring and evaluating new ideas.

The course covers knowledge and skills in leadership, motivation, communication and influence, and team processes. It also deals with career planning, the world of work, and understanding the requirements for successful R&D.

This year we will be incorporating a two-day 'AIC Commercialisation Bootcamp'. Run by the Australian Institute for Commercialisation, the Bootcamp is highly interactive and will provide participants with a practical introduction to the key principles and issues in commercialising publicly-funded research. Participants will be introduced to the various stages of the commercialisation process, from structuring a research program through to realising the potential of commercial outcomes in the market.

For more information visit www.mdhs.unimelb.edu.au/research/R-D/courses.html

COMMERCIALISATION BOOTCAMP

30-31 August 2006

Perth

EARLY BIRD DISCOUNT*:

Book online **before 28 July 2006** to receive a 20% Early Bird Discount
\$680 + GST = \$748

This two-day program is aimed at individuals in research organisations involved or likely to be involved in commercialisation activities.

The Bootcamp introduces participants to the various stages of the commercialisation process, from structuring a research program through to realising the potential of commercial outcomes in the market.

During the course of the Bootcamp participants periodically reflect on their own or their organisations' research to gain an understanding of how the principles taught might be applied.

To register visit www.ausicom.com/02_cal/details.asp?ID=181 or contact the AIC on (07) 3853 5271.

**Note: discount applies for online bookings ONLY. Offer ends Friday 28 July, 2006 5:00pm.*

EVALUATION OF SURVEILLANCE SYSTEMS: THE USE OF NON-SURVEY DATA TO DEMONSTRATE FREEDOM FROM DISEASE

*Monday 3 July - Friday 7 July 2006
Perth*

This course is open to staff and students from AB-CRC partner organisations only.

For more information and to register please contact Debra Gendle at debra.gendle@abcrc.org.au

FRESH SCIENCE 2006

Nominations close 5pm Wednesday 28 June 2006

Fresh Science assists the media to identify and publish accurate science stories, and demonstrates that science in Australia is exciting, vibrant and successful. Fresh Science encourages and provides recognition for Australia's best young scientists and engineers.

The selected researchers are likely to gain substantial media exposure. In previous years our Fresh Scientists have attracted national and international interest resulting in hundreds of media stories, including national television news. Details of previous

winners, their press releases, and media coverage can be seen at www.freshscience.org

Information about Fresh Science, including the nomination form, can be found at www.freshscience.org

GRANTS AND AWARDS

2006 Science and Innovation Awards for Young People in Agriculture, Fisheries and Forestry

Applications close Friday 30 June 2006

Turn a great idea into reality and apply for one of 20 science and innovation awards!

If you are aged between 18 and 35 years and employed or studying in an agricultural, fisheries, forestry, food or natural resource management related industry and you want to use science, technology and innovation to advance the future of that industry, then you may be eligible to apply.

Up to \$10,000 is available for each award winner to carry out an innovative project that will benefit rural industries.

To find out more visit www.daff.gov.au/scienceawards or contact ScienceAwards@brs.gov.au or (02) 6272 4197.

AWARDS FOR EXCELLENCE IN MENTORING

Nominations close Monday 31 July 2006

Two new awards launched by the journal *Nature*, each of AUS\$10,000, will recognise excellence in mentoring in Australasian science: one for lifetime achievement and the other for a scientist in mid-career.

While many science labs have leading individuals who have devoted thought and effort to nurturing young researchers, *Nature* believes that mentoring should not be taken for granted. The new awards are designed to recognise and reward good mentors.

Candidates may be from any natural sciences discipline and will be judged by a prestigious panel chaired by Professor Kurt Lambeck, president of the Australian Academy of Science. Winners will be announced by Dr Philip Campbell, Editor in Chief of *Nature*, at an awards ceremony in Australia in December 2006.

For full details and nomination forms please visit www.nature.com/nature/mentoringawards/australia or contact Carina Dennis at naturementor@gmail.com

ATSE EARLY CAREER SYMPOSIUM FELLOWSHIP 2006

Applications close Friday 25 August 2006

Australian Academy of Technological Sciences and Engineering (ATSE) Early Career Symposium Fellowships are awarded to early career scientists, technologists and engineers who would benefit from attending the ATSE Annual Symposium.

This year's ATSE Annual Symposium is titled *New Technology for Infrastructure – The World of Tomorrow*, and will be held in Sydney, 20-21 November 2006.

For more information contact the Academy office on (03) 9340 1202 or email michelled@atse.org.au

PERSONAL PROFILE

Sue Cambell, Finance Officer

I joined the AB-CRC in March 2004 in the position of Finance Officer. Prior to this, I worked in the legal industry for approximately 16 years. After extricating myself from the clutches of lawyers, I was contracted to the University of Queensland IT Department for 12 months. I was attempting to bring that contract to an end

when I took a Help Desk call from Kris Trott, the Business Manager with the AB-CRC. Somehow the call ended up with her sending me the position description for the Finance Officer position.

Until then I had never heard of a CRC let alone knew what they did. After a quick spot of research, I worked out what a cooperative research centre is all about, promptly sent my resume off to Kris and then, before you know it, was interviewed and offered the job.

A steep learning curve was soon to follow. Amongst the usual finance duties, one of my jobs is to collect the amount of time spent on in-kind work by participants (as I'm sure you will all know, this is the type of work that you do for the love of the CRC and not for payment) and the ensuing drama of trying to extract this information from researchers (who are usually in the field catching bats or trapping mozzies).

Things all started to make sense after attending a couple of National Workshops. The puzzle started to fit and I could see that the AB-CRC plays a very important role in predicting, protecting and controlling the human and animal population of Australia from emerging infectious disease.

I really enjoy working for the AB-CRC and it always makes for interesting dinner party conversations once I tell people where I work (that is after we get passed the initial hysteria and questions about whether or not we are all going to die from bird flu).

Apart from work, I'm kept busy with 3 kids, a dog, a cat and a husband. With what little time I have left over, I try and squash in some painting, knitting and sewing – needless to say I don't get much time for any of these hobbies.



PERSONAL PROFILE

*Professor John Mackenzie
Premier's Fellow and Professor of Tropical
Infectious Diseases
Curtin University of Technology
Perth, WA*

Courtesy of Debra Gendle

As a child growing up in the United Kingdom, John Mackenzie dreamed of a career as a conductor and a composer. However, a severe stutter in high school led him to think of a career in Geology. A temporary job for a year in the Bacteriology Department at the University of Edinburgh then redirected him towards a biological career. He graduated from Edinburgh University with a degree in animal genetics, but after spending a vacation working at the Common Cold Research Unit an interest in viruses developed, which would go on to become his life's work.

John was then offered several scholarships to do a PhD, and he accepted one that brought him to Australia to work with Frank Fenner and Robert Webster on the genetics of influenza.

After completing his PhD, he spent time working in America and England on influenza and foot-and-mouth disease (FMD), returning to Australia in 1973. After several years working on influenza, including avian influenza, he took over running the Arbovirus Surveillance Laboratory at the University of

Western Australia following the retirement of Prof Neville Stanley. Over the next 10 years he expanded the laboratory to include ecological and molecular studies of Australian arboviruses.

During this time, John also started up a newsletter for laboratories in the Asia-Pacific Region, the *Virus Information Exchange Newsletter*, which was circulated to over 1500 laboratories in South-East Asia and the Western Pacific. He is also a foundation member of the Asian Group for Rapid Virus Diagnosis and the Asian-Pacific Society for Medical Virology. In 1992 he became President of the Australian Society for Microbiology.

John's work on arboviruses continued when he moved to the University of Queensland to take up a Microbiology Professorship, and he was involved in research into emergence of the Japanese encephalitis virus in Australia. In more recent years he has been involved in and consulted on the emergence of many viruses, including the appearance of West Nile virus in America and Nipah virus in Malaysia.

It was also about this time that John became more heavily involved with the World Health Organization (WHO) after being a consultant since the early 1980s. John has been on the steering committee of the Global Outbreak Alert and Response Network (GOARN) ever since attending a meeting in 2000 with Aileen Plant to discuss its establishment. This role has taken him to China to investigate the outbreak of SARS (severe acute respiratory syndrome) and to Banda Aceh in Indonesia following the Boxing Day tsunami.

Due to the rapid emergence of many different diseases in the region, John called upon some old friends and collaborators, especially Aileen Plant, to assist him with developing a collaborative centre for emerging diseases. This would go on to become the AB-CRC as it stands today, although a great deal of help came from many others, particularly Lisa Adams and David Banks.

Over a long and distinguished career, John's interests have remained on emerging diseases in the region. He has been the recipient of many awards, the most recent being the Officer in the Order of Australia in 2002, and the ASM Scientific Excellence Award in Honour of Tun Dr Mahatir Mohamad Malaysia in 2005.

John moved back to Perth in 2004 to become the Premier's Fellow at Curtin University and to establish a new research laboratory. He is currently based in the AB-CRC Perth office in Shenton Park among old friends and not far from a good vineyard or two!



PERSONAL PROFILE

*Dr Cheryl Johansen,
University of Western Australia*

My interest in arbovirology developed after completing a summer scholarship in the arbovirus research group at The University of Western Australia (UWA) during my undergraduate studies - it seems eons ago. Like many before me, under the mentorship of dear friends and colleagues the likes of Prof. John Mackenzie and Prof. Charlie Calisher (University of Colorado), I was caught hook, line and sinker!

Having grown up in Western Australia, I obtained a BSc from UWA before commencing work in the Arbovirus Surveillance Laboratory in the Discipline of Microbiology at UWA, where I was involved in the surveillance of Ross River virus and other viruses in mosquitoes from the south-west of WA. During this time I commenced postgraduate studies, investigating the ecology and epidemiology of other arboviruses. When John Mackenzie left UWA in 1995 and invited me to join his research group at The University of Queensland (UQ), I felt immensely honoured and jumped at the opportunity.

During my time in Queensland and under

John's tutelage, I worked and commenced studies on Japanese encephalitis virus in Australia and Papua New Guinea. I took part in my fair share of mosquito collecting trips in dinky little airplanes in remote parts of PNG, the Torres Strait and north Queensland. This was mostly in collaboration with Dr Scott Ritchie and Andrew van den Hurk – another two of my favourite arbovirologists with whom I share some truly memorable experiences! Together, I'm sure we could write an entertaining novel on the trials and tribulations of mozzie hunting.

After being awarded a PhD from UQ, I returned to UWA. I now manage the Arbovirus Surveillance and Research Laboratory, a research group with its origins dating back to the 1970s under Prof. Neville Stanley. The surveillance program primarily involves monitoring arbovirus activity in mosquitoes from the south-west of WA, and in sentinel chickens at many locations throughout northern and remote WA, with the aim of providing forewarning to the public of increased arbovirus activity.

It is through my role in the Arbovirus laboratory, and my ongoing desire to enhance the surveillance program, that I have become involved with the AB-CRC. I am currently involved with postgraduate student projects, including the use of

remote sensing and GIS to model and predict arbovirus activity (Tim Chalke), and the potential for wildlife to be used for disease surveillance (Abbey Bestall), and I look forward to continued participation with the AB-CRC on other research initiatives.



Cheryl checks a mozzie trap.