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## TECHNICAL WORKSHOPS

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2010

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### GEOVET 2010

29<sup>th</sup> November – 3<sup>rd</sup> December 2011, Veterinary Science Conference Centre, The University of Sydney

The Farm Animal & Veterinary Public Health group hosted GEOVET at the Sydney Campus in November/December. The concept for this conference was born when discussions led by Michael Ward resulted in the idea of presenting a conference that focused on spatial analytical methods in animal health. Although previous meetings had been held, such as the GISVET series and the OIE



meeting on GIS in Animal Health, it was felt that a forum was needed to bring together like-minded people working in animal health, who have a passion for applying spatial methods.

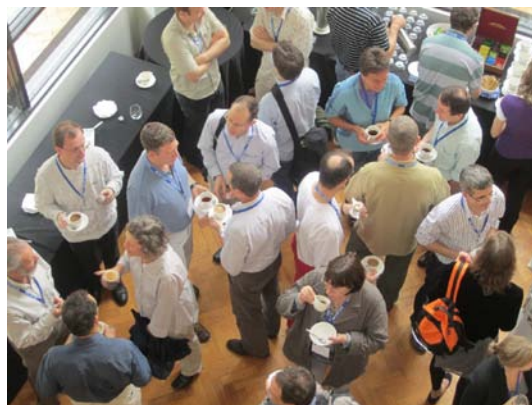
GEOVET consisted of two pre-conference short courses (Introduction to GIS Using Quantum GIS – Ben Madin and Jenny Hutchinson from Murdoch University and AusVet and Application of Molecular Methods in Spatial Analysis (Petra Müllner from Massey University and Andres Perez and Fernando Mardones from the University of California-Davis), a 3-day conference, and one post-conference short course (Introduction to Bayesian Disease Mapping, led by Andrew Lawson from the medical University of South Carolina).

A total of 75 colleagues attended the conference, and there were a total 57 registrations for the 3 short courses. Participants came from 18 countries, representing all continents.

The conference was opened by Andy Carroll, Australia's Chief Veterinary Officer. Dean, Professor Rosanne Taylor, welcomed conference delegates to our Faculty.

During the conference, 53 papers were presented. Our group was well represented in the scientific program: Brendan Cowled, Katherine Negus, Sharon Roche (2 presentations), Edwina Leslie, Richard Whittington and Tenzin presented regular papers, Simon Firestone presented a senior paper, and Michael Ward presented a keynote paper. Keynote and senior presentations will be published in two special issues in the journals *Spatial and Spatio-temporal Epidemiology* and *Preventive Veterinary Medicine*.

The social program commenced with an informal barbeque on Tuesday evening on the lawn adjacent to the Veterinary Science Conference Centre, a reception was held at the Nicholson Museum in the Quadrangle and the conference dinner took place at the Forum Restaurant. At the dinner, Ben Madin gave a very entertaining speech titled 'Up the Mekong Without GPS'. A future GEOVET is likely to be held at the University of California, Davis.



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**ABCRC and ACIAR Forum ‘Small landholders, commercial livestock producers & risks to Australian livestock’**

**24<sup>th</sup> – 25<sup>th</sup> November, 2010, Veterinary Science Conference Centre, the University of Sydney**

Dr Marta Hernandez and Dr Jenny-Ann Toribio hosted a forum on biosecurity risks posed by livestock producers in November. The forum reported on the findings of two substantial projects; *Livestock movement and managing disease in Eastern Indonesia and Eastern Australia* funded by the Australian Centre for International Agricultural Research (ACIAR), and *Assessment of the risks to animal biosecurity associated with small landholders*, funded by the Australian Biosecurity Cooperative Research Centre (ABCRC).



Jenny-Ann Toribio, leader of the ACIAR project, Marta Hernandez-Jover and Sharon Roche have been involved with both of these projects and organised the forum together with Tony Martin from the Department of Food and Agriculture Western Australia and leader of the ABCRC project. Nigel Perkins from ABCRC facilitated the forum. The main objective of the forum was to inform stakeholders of the key findings of a series of risk assessments covering specific hazards and hosts, comparing the risks to Australian livestock posed by small-scale (non-commercial) and commercial producers. Marta and Sharon presented two risk assessments on pig and poultry producers. The forum had 44 participants, including government and industry stakeholders and the research team. Project findings and biosecurity practices influencing disease risks were discussed among participants. The forum, which was considered a useful exercise, provided excellent discussions among stakeholders and the research team and identified future areas of research.

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**PATHOLOGY TRAINING COURSE FOR FIELD VETERINARIANS**

**28<sup>th</sup> – 30<sup>th</sup> September, 2010, The University of Sydney, Camden**

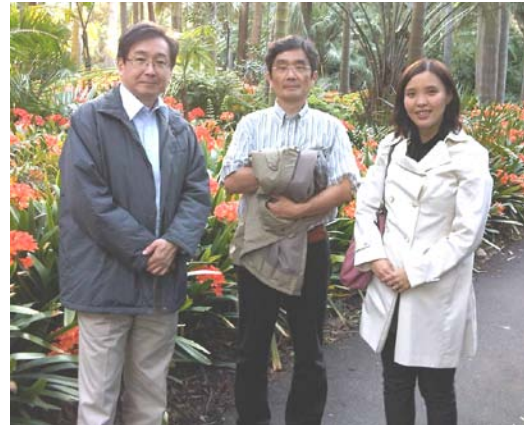
Following the great success of the 2009 course with 9 successful candidates, the 2010 course was possibly an even greater success, reducing the 6 by 2 day workshops in 2009 to 4 by 3 day workshops in 2010, held in Dubbo in July, Wagga in August, Camden in September and Yanco in November. Again the participants were effusive in their positive feedback on the benefits of this course that is supported financially by NSW I & I, and led by the collaborative knowledge of pathology from our group led by Dr Michelle Dennis and Professor Peter Windsor and from CSU by Associate Professors John Glastonbury and John Boulton, garnished with tremendous field experience of senior DV's including Bruce Watt (Bathurst), Tony Morton (Wagga), Dan Salmon (Deniliquin) and Keith Hart (Camden). The aim of the course is to enhance the skills of both new and experienced field vets involved in disease surveillance, particularly in necropsy techniques, lesion recognition and description, use of laboratories and mentoring of our 5<sup>th</sup> year veterinary students in their Rural Public Practice rotations. The graduating class and the course facilitators are pictured at Camden on September 30<sup>th</sup>.



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**JOHNE'S DISEASE WORKSHOP**  
**21<sup>st</sup> September, 2010, The University of Sydney, Camden**

From 20<sup>th</sup> – 22<sup>nd</sup> September the group hosted a visit from Dr Yasuyuki Mori, Dr Eiichi Momotani and Dr Satoko Kawaji of the National Institute of Animal Health in Japan (pictured – on a tour of the Botanic Gardens). A Workshop about Johne's Disease was organized around their visit and held on 21<sup>st</sup> September with 45 attendees including representatives from Animal Health Australia, Federal Government Department of Agriculture, Fisheries and Forestry, AusVet Animal Health Services, Cattle Council of Australia, Dairy Australia, Livestock Health & Pest Authority, NSW Department of Industry and Investment, Sheepmeat Council of Australia, and, WoolProducers Australia. The Workshop aimed to foster science-based collaboration on paratuberculosis between NIAH Japan and the Faculty of Veterinary Science at the University of Sydney and to provide an opportunity for informal discussion with leading paratuberculosis researchers from Japan.



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**WORKSHOP - DESIGN AND ANALYSIS OF FIELD TRIALS**  
**10<sup>th</sup> September, 2010, The University of Sydney, Camden**

Navneet Dhand facilitated a “Designing field trials and analysing data” workshop at Camden on 10<sup>th</sup> September in the General Teaching Building. The workshop was well-attended by Faculty staff as well as participants from NSW Industry and Investment. In the morning session, the participants discussed issues related to designing field trials such as selection of controls, randomisation, blinding and blocking. The participants also spent some time discussing ethical issues in designing trials and on presentation of results in journal articles. In the afternoon session, the participants tried their hands at analysing data from field trials.



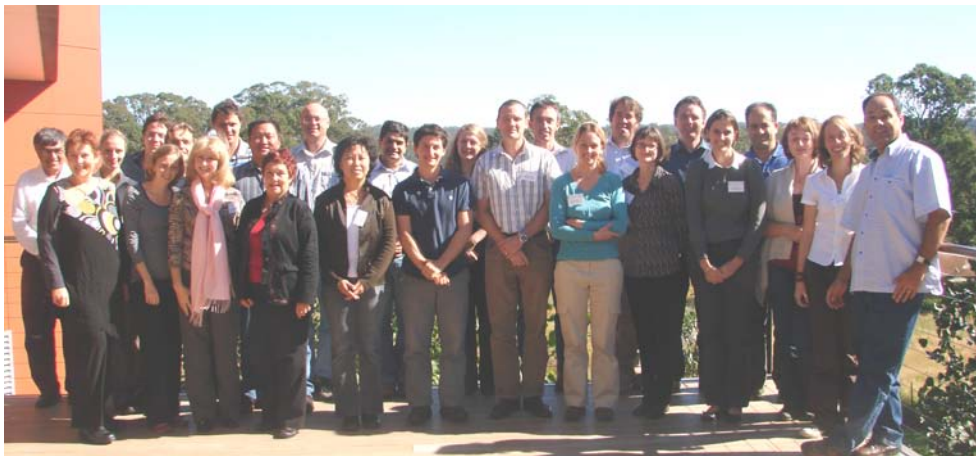
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**NETWORK ANALYSIS WORKSHOP**  
**28<sup>th</sup> – 30<sup>th</sup> April, 2010, The University of Sydney, Camden**

Professor Michael Ward and Dr Navneet Dhand organised the Workshop that was facilitated by Dr Rob Christley with 25 attendees from all over Australia and New Zealand.

Rob has wide interests in the determinants of health and disease. He is particularly interested in the application of network analysis to the evaluation of population behaviour, including inter-group (farm) contacts and social behaviour within animal groups, and its role in transmission of infectious diseases.

The course introduced the terminology, methods and some of the software available to analyse networks. The workshop was a combination of short lectures, discussions and hands-on analysis. At the end of the workshop participants were able to design and undertake studies appropriate for the collection of network data, and use such data to create network images, describe important features of the network and identify important individuals and subgroups within the network. In addition, and covered aspects of the statistical analysis of network data and the impact of networks on infectious disease dynamics.



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**2009**

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**AUSTRALIAN BIOSECURITY COOPERATIVE RESEARCH CENTRE FOR EMERGING INFECTIOUS DISEASE - RISK ASSESSMENT PROJECT + AVIAN INFLUENZA WORKSHOP**

**21<sup>st</sup> – 22<sup>nd</sup> October 2009, Veterinary Science Conference Centre, The University of Sydney**

An Avian Influenza expert consultation workshop was held at the Veterinary Science Conference Centre in Sydney. The forum, organized by Marta Hernandez-Jover and Jenny-Ann Toribio, was part of the ABCRC risk assessment project 'Assessment of the risks to animal biosecurity associated with small landholders'. Marta and Jenny-Ann had the support during the day from Tony Martin from the Department of Agriculture and Food Western Australia. The main objective of the workshop was to gain a better understanding of the potential animal biosecurity risks which are associated with non-commercial and commercial poultry operations in Australia and to obtain information on the pathways and likelihoods of introduction and spread of low and high pathogenic Avian Influenza. The forum was also a collaboration with Mark Burgman from the Australian Centre for Excellence for Risk Analysis and used the methodology for expert elicitation developed by Mark's team. The forum had 17 participants, including government, industry and academic stakeholders and it was considered a success by the organizers and participants.

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**ACIAR PROJECT – CONTROL OF NODAVIRAL DISEASE IN TROPICAL MARINE FINFISH HATCHERIES: ENHANCED BIOSECURITY THROUGH THE APPLICATION OF CONTEMPORARY BIOTECHNOLOGY, EPIDEMIOLOGY AND PATHOBIOLOGY**  
**5<sup>th</sup> – 12<sup>th</sup> September 2009, The University of Sydney, Camden**

Professor Richard Whittington, Dr John Humphrey and Dr Joy Becker hosted a contingent of four Indonesian laboratory personnel from 5<sup>th</sup> – 12<sup>th</sup> September to a workshop on VNN. Also vital in training that week were Dr Navneet Dhand, Mrs Alison Tweedie and Mr Paul Hick.

The workshop was a great success, largely due to the dedication and hard work of the participants. A very busy and challenging program was put together. It began with theory and practical aspects of disease diagnosis, and finished up with the latest molecular diagnostic techniques. Along the way they covered the theory of sample collection, and testing to prove freedom from VNN in batches of fish.

There were many practical sessions and hands-on training. This program was designed so that much of the information could be applied for diagnosis and control of many fish diseases. A range of examples was used during the workshop to illustrate principles. The group size was kept very low (4 participants), and there were six trainers involved. In this way it was hoped that each of the participants received the maximum possible advantage from attendance, and would return home to Indonesia to teach others.



The group were delighted to be able to assist in efforts to control VNN through the support received from the Australian Centre for International Agricultural Research.

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**ACIAR PIG MOVEMENT PROJECT STAKEHOLDER WORKSHOP**  
**3<sup>rd</sup> – 5<sup>th</sup> August 2009, Kupang, West Timor**

The Stakeholder Workshop brought together livestock health and quarantine personnel, pig raisers and interested commercial parties of Nusa Tenggara Timor (NTT) to discuss their pig industry. In NTT, unlike some of Indonesia, pigs are a valued source of income and protein and have a prominent role in cultural practices. Pork restaurants have become particularly popular in Kupang in recent years leading to a substantial increase in demand for pigs in this regional centre.

The workshop hosted by Livestock Services NTT was the official start of the pig movement component of ACIAR AH/2006/156 hosted by the University of Sydney under leadership of Jenny-Ann Toribio.

Since the workshop interviews in markets selling live pigs have started on three large islands in NTT. Edwina Leslie (USyd PhD student) is contributing to this market study under the supervision of Dr Maria Geong (Head of Animal Health & Vet Public Health, Livestock Services NTT).



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**AUSTRALIAN AID AGENCY (AusAid) AUSTRALIAN LEADERSHIP AWARDS FELLOWSHIPS (ALAF) PROGRAM**  
**22<sup>nd</sup> – 26<sup>th</sup> June, 2009, The University of Sydney, Camden**

Professor Michael Ward and Dr Jenny-Ann Toribio coordinated fourteen veterinarians from Indonesia who are learning how to track and stop the spread of animal borne diseases in a three-week training program hosted by the University of Sydney.

The program is part of the Australian Aid Agency (AusAid) Australian Leadership Awards Fellowships (ALAF) program and aims to equip Indonesian veterinary epidemiologists with important skills to improve surveillance, detection and monitoring of animal borne diseases.

Animal borne diseases that cause a high rate of death when humans are infected, such as bird flu and rabies, are an immediate problem in Indonesia. They are a real concern to animal owners posing a threat not only to their health but also to their livelihood, particularly for subsistence farmers. This Fellowship program aims to strengthen the capacity of government, non-government (NGO) and research institutions across Indonesia, including the national Disease Investigation Centre (DIC) network, by building capability and expertise in disease detection, risk assessment and surveillance. The Fellows include key senior staff and younger veterinarians from a diverse range of geographical regions in Indonesia who are all members of the newly established Indonesian Veterinary Epidemiology Association (IVEA).

While in Australia, they learnt about the use of Geographical Information Systems (GIS) in Camden before heading to Canberra to visit the Department of Agriculture Fisheries and Forestry. They then travelled to the Gold Coast for the Science Week conference of the Epidemiology Chapter of the Australian College of Veterinary Scientists and finally to Orange to be hosted by the NSW Department of Primary Industries and trained in risk management in animal health.



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**AUSTRALIAN BIOSECURITY COOPERATIVE RESEARCH CENTRE FOR EMERGING INFECTIOUS DISEASES – RISK ANALYSIS LEADERS WORKSHOP**  
**24<sup>th</sup> – 26<sup>th</sup> March 2009, The University of Sydney, Camden**

The second meeting of the risk analysis leaders of the ABCRC project assessing the biosecurity risks posed by small landholders, was held at Camden the last week of March. Marta Hernandez-Jover is the leader of this project for the University together with Tony Martin from the Department of Agriculture and Food Western Australia. Jenny-Ann Toribio, Nicole Schembri and Trish Holyoake are members of the research team and attended the meeting. We had the pleasure of hosting representatives from the Queensland DPI&F (Nina Kung, Sandy MacKenzie, David Pitt and Karen Skelton), NSW DPI (Trish) and DAFWA (Tony Martin, Danny Roberts and Bev Mason). There were three full days of discussions on small landholders and the risks they potentially pose to the livestock industry, which was very useful for the progress of the project.



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## INAUGURAL ANNUAL COURSE IN PRODUCTION ANIMAL PATHOLOGY FOR NSW FIELD VETERINARIANS

15<sup>th</sup> – 16<sup>th</sup> April 2009, The University of Sydney, Camden

A new course in 'Production Animal Pathology for NSW Field Veterinarians' was initiated this year by the Farm Animal and Veterinary Public Health group. The program aims to improve livestock health surveillance for the rural community plus provide improved supervision for final year BVSc students whilst performing necropsies with field veterinarians on extramural rotations. The Course is a substantial outreach program that will enhance the competency of field veterinarians performing diagnostic investigations, especially their capability to rapidly diagnose important disease outbreaks.

The program aims to enhance the number of supervised production animal necropsy cases that BVSc students conduct late in the curriculum. As part of the training program, field veterinarians will be encouraged to make greater efforts to provide final year interns with necropsy experiences on production animal cases with known clinical history and herd implications, particularly in the Rural Public Practice rotation (VETS5358). In addition the program will enrich the relationship with field veterinarians through diagnostic materials from production animal necropsies submitted to and investigated by interns on the Pathology section of the Rural Mixed Practice (VETS 5336) intramural rotation in the University Veterinary Teaching Hospital Camden.

The Course in Production Animal Pathology for NSW Field Veterinarians was developed by a joint committee, led by Professor Peter Windsor and Dr Michelle Dennis from the Camden campus, with representatives from the Livestock Health and Pest Authorities (LHPA), NSW Department of Primary Industries (DPI) and Charles Sturt University. Initial funding for the course was supported by Faculty teaching improvement funds and the course was modeled after the *Victorian DPI Certificate in Gross Pathology*. The NSW course focuses on livestock issues important to NSW and Australia, including international diseases with significant trade implications. The course is organized and instructed by specialist veterinary pathologists Dr Michelle Dennis and Professor Peter Windsor with support from Charles Sturt University – Dr John Glastonbury and Dr Shane Raidel and NSW DPI - Barbara Vanselow, with special contributions from experienced LHPA senior District Veterinarians.

The course comprises six 2-day workshops held around the state appropriate to the scheduled learning topics, including Camden, Yanco, and Wagga Wagga. Presently, nine students are enrolled, consisting of eight LHPA District Veterinarians, and a DPI Veterinary Officer. The expected outcomes are improved recognition and description of clinicopathological features of disease, enabling improvements in disease diagnosis through more targeted diagnostic investigations and more effective use of diagnostic laboratories and interpretation of laboratory findings. The first workshop was held in Camden and Menangle on 15<sup>th</sup> and 16<sup>th</sup> April 2009. Feedback from the participants has been very positive and suggests the likely continuation and expansion of the project in following years.



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2008

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**APPLICATION OF BAYESIAN METHODS IN ANIMAL HEALTH**  
**8<sup>th</sup> – 10<sup>th</sup> December 2008, The University of Sydney, Camden**

A three-day short course explored the application of Bayesian methods in animal health. This course was led by Professor Wes Johnson from the Department of Statistics, The University of California, Irvine. Professor Johnson is famous in the animal health community for his pioneering research in the field of Bayesian methods and diagnostic test evaluation. His main research interests are in developing Bayesian statistical methods for biostatistical and epidemiologic applications. He is currently involved with collaborative efforts to develop asymptotic posterior distribution theory for mixed models, Bayesian methods for assessing diagnostic test accuracy and for estimating prevalence when no gold standard is available. Professor Johnson was assisted by Dr Navneet Dhand and Associate Professor Peter Thomson from The University of Sydney Faculty of Veterinary Science. The course was presented as a combination of lecture, workshop and practical sessions.

Day 1, course participants were introduced to probability theory and Bayesian methods. On day 2, the application of Bayesian methods to diagnostic test evaluation was covered. During the final day, participants explored advanced methods, including demonstration of freedom from disease, and became comfortable using software programs (including WinBugs).



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**AUSTRALIAN CENTRE FOR INTERNATIONAL AGRICULTURAL RESEARCH**  
**“IMPROVING PRODUCTIVITY AND PROFITABILITY OF SMALLHOLDER SHRIMP**  
**AQUACULTURE AND RELATED AGRIBUSINESS IN INDONESIA”**  
**25<sup>th</sup>-26<sup>th</sup> November 2008, Veterinary Science Conference Centre, The University of Sydney**



The Farm Animal & Veterinary Public Health group hosted the 1<sup>st</sup> Annual Project Coordination meeting for the large ACIAR Project “Improving productivity and profitability of smallholder shrimp aquaculture and related agribusiness in Indonesia”. There were 25 attendees from ACIAR, CSIRO, James Cook University, University of NSW and Charles Sturt University. A large contingent of 15 Indonesians also attended from the Directorate General of Aquaculture (DGA), Agency for Marine and Fisheries Research, DG Fisheries Products Processing and Marketing, Provincial Fisheries and Marine Affairs as well as from the education sector, Gadjah Mada University, Diponegoro University and Hasanuddin University.

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## **SYDNEY UNIVERSITY BIOSECURITY GROUP**

**27<sup>th</sup> November 2008, Coogee Beach, Sydney**

Michael Ward led a Collaborative Forum, sponsored by the University of Sydney Biosecurity Programme (USBP), held on 27 November at the Crowne Plaza Hotel, Coogee Beach. A total of 23 participants attended this Forum, with expertise in veterinary public health, international politics, microbiology, psychology, law, political science, ethics, international science, and wildlife health.

The aims of this Forum were: 1. to develop a cross-disciplinary network of faculty to address current issues in biosecurity research; and 2. to foster team-building that might lead to cross-disciplinary proposals for externally-funded research in biosecurity.

The University of Sydney Biosecurity Program was initiated during 2006–2007, with a series of cross-disciplinary meetings of interested academics. It is formally funded for the period 2008–2010. The concept of *biosecurity* includes infectious disease threats that might have potentially severe political, economic and strategic impacts. One of the stated USBP objectives is to promote biosecurity-relevant



research. Biosecurity research demands collaboration between researchers from a wide range of disciplines. Thus, the challenge is to create teams of researchers from often widely disparate disciplines. Without a cross-disciplinary approach, it is unlikely that solutions to current biosecurity issues can be found.

A theme that emerged during discussions was compliance (by individuals, communities, and states in areas of disease response and control policies, laboratory safety and security protocols, and ethical norms) and its impact on biosecurity.

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## **SECOND INTERNATIONAL FOOTROT RESEARCH SYMPOSIUM**

13<sup>th</sup> – 14<sup>th</sup> November 2008, The University of Sydney, Camden

Participants came from Australia, NZ and the UK to attend this Footrot research symposium. The collaborative research program between the Faculty and the ARC Centre for Structural and Functional Microbial Genomics was showcased. This ambitious research program aims to determine the molecular basis for virulence in the causative bacterium and develop new generation recombinant vaccines. Meanwhile, results presented by Om Dhungyel illustrated the potential for “conventional” recombinant fimbrial vaccine to eradicate footrot in Australia. PhD student Vidya Bharwaj presented plans for her PhD immunology program which will determine why some sheep fail to respond to any vaccine. The third international conference will be held in New Zealand.

On the 11<sup>th</sup> and 12<sup>th</sup> November, prior to this symposium, the delegates attended the NSW Footrot Control Symposium – a celebratory conference for the NSW Footrot Strategic Plan organised by the NSW DPI and the University of Sydney. Many people involved in the 20 year disease control program participated. Emeritus Professor John Egerton, Richard Whittington, Herman Raadsma and Om Dhungyel were invited speakers from the Faculty.



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**IMPORT RISK ANALYSIS SHORT COURSE**  
**23<sup>rd</sup> – 25<sup>th</sup> September 2008, The University of Sydney, Camden**

The Farm Animal and Veterinary Public Health group at the Camden Campus, in partnership with Massey University, New Zealand, held a three day introductory course on import risk analysis for animal and animal products. Professor Michael Ward coordinated the presentation of the course. The lead instructor was Dr. Naomi Cogger, a lecturer in veterinary epidemiology from Massey University. Naomi has a close relationship with The University of Sydney and Camden: she completed a PhD in 2006 investigating the epidemiology of musculoskeletal injuries in Australian thoroughbred racehorses. Naomi was assisted by Dr. Marta Hernandez-Jover who is a Research Fellow working on an Australian Biosecurity CRC project evaluating the biosecurity risks posed by small landholders. Fifteen students attended this course. They came from Federal (Biosecurity Australia, Australian Quarantine and Inspection Service, Department of Agriculture, Forestry and Fisheries, and the Australian Pesticides and Veterinary Medicines Authority) and State (Victorian and Queensland DPIs) governments, Universities (Murdoch, Queensland and Sydney) and the Australian Biosecurity CRC, and private consultancy. Several University of Sydney Veterinary Public Health Management (VPHMgt) students attended the course.

Day one of the course focused on the policy and international conventions underpinning import risk analysis for animal products that are of interest to regulators and risk analysts alike. The remaining two days covered the technical aspects of import risk analysis. Students were taught probability theory and developed skills in quantitative risk assessment. Several cases studies were used, and the issue of equine influenza provoked animated discussions!



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**AUSTRALIAN ANIMAL PATHOLOGY STANDARDS PROGRAM TRAINING WORKSHOP**  
**1<sup>st</sup> – 2<sup>nd</sup> September 2008, The University of Sydney, Camden**

International expert Professor Stephen Weisbrode visited Australia in August and September 2008 to present a series of two day workshops on the pathology of bones and joints. Dr Weisbrode is based in the Department of Veterinary Biosciences, College of Veterinary Medicine, Ohio State University. The NSW *Bone Up on Bone Pathology Workshop* was held in the General Teaching Building with over 20 practicing veterinary pathologists from the private sector, government laboratories and academia attending, including former UVTHC pathologist Al Kessel who is now at Gribbles Pathology in Adelaide. The FAVPH group relocated a five head Olympus microscope to the GTB to enable interactive sessions with actual case material, including the sharing of the histology of bone lesions such as Acorn calves and Dexter chondrodysplasia from Farm Animal & Veterinary Public Health research projects.

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**ADOPTION FORUM - "SAFEGUARDING AUSTRALIA'S LIVESTOCK INDUSTRIES: IMPROVING BIOSECURITY IN PIG PRODUCTION SYSTEMS"**

**21<sup>st</sup> – 22<sup>nd</sup> August 2008, Veterinary Science Conference Centre, The University of Sydney**

The Adoption Forum was sponsored by the Australian Biosecurity CRC, Australian Pork Limited and the University of Sydney. Over 35 representatives from government including DAFF, AQIS, State Department of Primary Industries, RLPB, NSW Food Authority and Animal Health Australia, met with industry (Australian Pork Ltd, QAF Meat Industries, Meat & Livestock Australia, Victorian and NSW Farmers Federation, smallholder producers) to hear the findings of our University of Sydney ABCRC project "Peri-urban and regional surveillance for biosecurity for the pig industry in Eastern Australia". The specific aims of the forum were to inform livestock industry and government stakeholders of the key findings of the project related to on-farm biosecurity, swill feeding, disease surveillance, traceability and extension/communication among pig producers who trade at saleyards in Eastern Australia. We also sought to facilitate stakeholder identification of approaches to overcome identified gaps and deficiencies.

This forum was held to extend research findings to the relevant stakeholders. Our research team was not content to have the project end in a final report to sit gathering dust somewhere. It was pleasing to see such a positive outcome. We are currently preparing an application to fund further extension-based work to improve compliance among smallholder pig producers with legislation and industry requirements for biosecurity.

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**LOGISTIC REGRESSION MODEL BUILDING AS AN ANALYTIC TECHNIQUE FOR IDENTIFICATION OF RISK FACTORS FOR ANIMAL DISEASE**

**3<sup>rd</sup> – 5<sup>th</sup> June 2008, The University of Sydney, Camden**

The workshop was led by Dr. Ashley Hill, Assistant Professor (Epidemiology), College of Veterinary Medicine and Biomedical Sciences, Colorado State University, and coordinated by Professor Michael Ward, Chair, Veterinary Public Health and Food Safety. Dr. Hill's visit was sponsored by a University of Sydney International Visiting Research Fellowship. Dr. Hill is the current facilitator for our on-line Veterinary Public Health Management course VETS7005, Veterinary Epidemiology 2.



A total of 27 faculty and students attended the course that included University of Sydney participants from Farm Animal and Veterinary Public Health, Reproduction and Genetics, Parasitology and Livestock Services. In addition, five PhD students (University of Queensland, Murdoch University) from the Australian Biosecurity Cooperative Research Centre participated in the course. Students were greatly appreciative of Ashley's teaching. At the completion of the course, she was presented with some locally produced port. Ashley thought that teaching a 3-day logistic regression modelling course was reward in itself ... and the port was a bonus!



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2007

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**AUSTRALIAN ANIMAL PATHOLOGY STANDARDS PROGRAM WORKSHOP**  
10<sup>th</sup> – 11<sup>th</sup> May 2007, The University of Sydney, Camden

Dr Elizabeth Maudlin DVM, DACVP, DACD conducted a two-day training workshop on dermatopathology as part of the Australian Society for Veterinary Pathology/Australian Animal Pathology Standards Program (AAPSP). Dr Maudlin is a member of Faculty in the Laboratory of Pathobiology and Toxicology at the University of Pennsylvania School of Veterinary Medicine.

Attended by 20 practicing veterinary pathologists from the private sector, government laboratories and academia, the workshop provided intensive exposure to the latest developments in diagnosis of skin diseases. The Faculty temporarily relocated a new ten head Zeiss teaching microscope from the University Veterinary Clinic Camden to the new General Teaching Building, officially opened only a week earlier, to enable interactive sessions with actual case material.

This workshop is part of an annual series held in each State which ensures that veterinary pathologists throughout Australia are kept up to date with international best practice and approaches to diagnosis of animal disease. Animal Health Australia (AHA) manages the AAPSP.



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**VETERINARY PATHOLOGY WORKSHOP**  
**NATIONAL TRAINING NEEDS & MECHANISMS**  
8<sup>th</sup> – 9<sup>th</sup> February 2007, The University of Sydney, Camden

This workshop was convened by Professor Richard Whittington with the Commonwealth Government Department of Agriculture, Fisheries and Forestry and Animal Health Australia.



More than fifty people attended the workshop in the new General Teaching Building at Camden over two days with practicing veterinary pathologists from the private sector, government laboratories and academia attending along with representatives from government and livestock industries. Mr David Palmer, Managing Director, Meat & Livestock Australia along with Professor Dan Gould DVM PhD Diplomat ACVP, Department

of Microbiology, Immunology and Pathology, Colorado State Veterinary Diagnostic Laboratory, presented industry and academic perspectives about the future of veterinary pathology. Professor Reuben Rose was appointed to facilitate the workshop.

The Australian community expects the highest standards of animal health. The support of a diagnostic laboratory system able to detect new and emerging diseases, exotic diseases and changes in prevalence of endemic diseases is required. Diagnostic laboratories need to offer accurate and relevant scientific interpretation of laboratory results to animal health industries. There is a need to employ people in diagnostic laboratories with specialist knowledge relevant to livestock industries and provide those people with both ongoing livestock disease training and a career path. Pathologists, microbiologists and parasitologists are an aging demographic in veterinary laboratories, with many approaching retirement. It is important that those leaving the profession pass their knowledge on to the next generation and that those entering the system are adequately trained. However, the number of laboratory diagnosticians currently in training programs is low and those employed have limited opportunity for continuing diagnostic training. The critical shortage of veterinary specialists is occurring in laboratories, but similar shortages are present in non-veterinarian scientists and both groups should benefit from training initiatives. Recommendations from the workshop informed the National Animal Health Laboratory Strategy.

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