ROUNDHOUSE

Newsletter of the
Veterinary Science Foundation
of the University of Sydney

Issue 14 May 2006

VSF
because
animals
matter

ROUNDHOUSE

KRISTEN CLARKE

Dr Trish Holyoake is the Faculty's Senior Lecturer in Intensive Animal Industries and its key pig specialist. Her expertise is currently assisting small holder pig farmers in Vietnam to develop more sustainable farming and production methods. Agreeing to be featured on the front cover, Trish said, "The photo is pretty much a reflection of who I am - a bit daggy and messy but I do love pigs!" (See article on page 4).

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All images by Kristen Clarke unless otherwise noted.

STUDENTS RANK FACULTY AS **ONE OF THE BEST**

Delivering good news at the start of a new year is always a pleasure, so I am delighted to announce student survey results that place the Faculty among the best in the University.

We have always been proud of the quality of our undergraduate and postgraduate students, but we can now quantify the equally high quality of their student experience. The Faculty has recently received the 2005 University survey statistics that rank both undergraduate and postgraduate student experiences: the Student Coursework Experience Questionnaire (SCEQ) and the Student Research Experience Questionnaire (SREQ). We are pleased to report the following results:

• 2005 SCEQ (undergraduate) gave the Faculty above average University scores for % agreement for Good Teaching scale (second highest score of any Faculty), Clear Goals and Standards scale (second highest), Generic Skills scale (second highest), Learning Community, and Overall Satisfaction (highest score of any Faculty). The % agreement for Good Teaching, Clear Goals and Standards, Generic Skills and Overall Satisfaction has steadily increased from 1999 to 2005.

• 2005 SREQ results for our postgraduate students were outstanding, and the Faculty ranked first across the University in Generic Skills, Research Climate and Quality of Infrastructure, and second in Overall Satisfaction. Thanks to the hard work over the past three years of all staff involved in postgraduate education, all categories assessed showed dramatic improvement since 2002 and put us in top position in the College of Sciences and Technology.

• The SCEQ results for the Masters in Public Health (Veterinary Public Health Management postgraduate degree) were also excellent, with scores for Good Teaching, Appropriate Assessment, Generic Skills and Learning Community well above University average. The Overall Satisfaction was 96% with 100% satisfaction with the Faculty student administration. These excellent results were the highest of any Faculty across the University and are testament to the dedication of our teaching and administrative staff.

KRISTEN CLARKE

Professor Leo Jeffcott, Dean, Faculty of Veterinary Science.

While we are endeavouring to graduate veterinarians with the best possible attributes for a smooth transition to practice, or the capabilities to move into research and other fields of veterinary science, we also recognise the enormous role played by our Partners in Veterinary Education - the Partner Practitioners who take our students for their final year rotations and electives.

Visiting these veterinarians is one of our priorities and, with Faculty staff involved in the program, I have recently had the pleasure of meeting practitioners from the Shoalhaven and Canberra. I was very impressed by all those I met, the friendly clinical atmospheres and excellent facilities, and by the generous support given to our student interns.

Another important part of the program is the opportunity to invite practitioners to the Faculty for our annual Partners in Veterinary Education Conference. This year the conference will be held on Thursday 6 and Friday 7 July, and Provet have again generously agreed to be the major sponsor of the event. The 2006 presentations will showcase Faculty staff knowledge and research, and we will also include interactive and breakout sessions as in previous years to enable practitioners to provide input. I am confident it will be another very successful meeting and we warmly invite all our Partner Practitioners to attend.

VSF

because animals matter

The Veterinary Science Foundation of the University of Sydney is the promotional and fundraising arm of the Faculty of Veterinary Science.

KRISTEN CLARKE

Dr Jennie Churchill, Director, Veterinary Science Foundation.

contact us

Roundhouse is produced by the Veterinary Science Foundation of the University of Sydney.
For further information, contact Jennie Churchill, Director of the Foundation, on:
Phone (02) 9351 8024
Fax (02) 9351 8025
email vsf@vetsci.usyd.edu.au
www.vetsci.usyd.edu.au/Foundation

ANIMALIA 2006

Australian Youth Orchestra

One of Australia's greatest jazz icons, James Morrison (above), will perform with the Australian Youth Orchestra, singer Emma Pask and, back by popular demand, our 2005 musical director and renowned harpist, Marshall McGuire, in the Veterinary Science Foundation's third annual fundraising concert. James and Emma will join the ranks of animal-loving musicians and singers who have helped the VSF raise funds for animal health and welfare.

Animalia 2006 will be performed on one night only – **Friday 3 November** in the Conservatorium of Music, Sydney. Contact us on (02) 9351 8026 or vsf@vetsci.usyd.edu.au to receive an invitation or information about our sponsorship packages. For corporates, Animalia 2006 will be a fabulous way to entertain clients in the lead up to the festive season!

JENNIE CHURCHILL

Following a successful 2004 fundraising trek to Nepal, the Veterinary Science Foundation again joined World Expeditions to offer a 2006 'odyssey' to Antarctica. Fifteen veterinarians, friends and donors of the Foundation set off in January for Antarctica via Buenos Aires.

Departing from Ushuaia in Tierra del Fuego, the group joined 35 other travelers on the Russian ice-strengthened vessel, the Polar Pioneer. Aurora Expedition's 12 day voyage to the Antarctic Peninsular and Weddell Sea was magnificent, providing a minimum two landings a day, with maximum opportunities for close encounters with wildlife, including huge penguin colonies, seals, albatross and other seabirds.

The Veterinary Science Foundation is grateful for the tremendous generosity of our group members and World Expeditions – the company facilitated a significant donation for the Foundation following the Antarctic Adventure.

BIRGIT BUHLEIER

J D STEWART ADDRESS

Antarctic researcher and ecologist Dr Tracey Rogers (left) will deliver the 2006 J D Stewart Address.

Dr Tracey Rogers, Senior Adjunct Lecturer and Director of the Australian Marine Mammal Research Centre (AMMRC) at Taronga Zoo, will deliver the Faculty's 2006 J D Stewart Address on Thursday 6 July.

AMMRC is a joint initiative of the Zoological Parks Board of NSW and the Faculty of Veterinary Science, and Tracey, an ecologist with a PhD from the Faculty, supervises a number of our PhD students working with seals and whales in Antarctica. She recently won a 2005 Young Tall Poppy Award, created by the Australian Institute of Political Science to recognise outstanding young scientists.

Tracey will speak on the Antarctic, the health status of its marine mammals, and how they can be a barometer for climate change.

TARONGA ZOO

WORLD FIRST GENOME RESEARCH

KRISTEN CLARKE

Postdoctoral Fellow Dr Kathy Belov is leading an international team of researchers unearthing, for the very first time, the genetic sequence of marsupials and monotremes.

In early 2006, the genetic code of marsupials was documented for the first time. The chosen genome was that of the South American marsupial *Monodelphis domestica*, the grey short tailed opossum, and sequencing was undertaken at the Broad Institute in the US. This world first research could ultimately reveal unparalleled insights into mammalian evolution.

Leading an international research team in the analysis of the marsupial immunome (that is, immune genes within the genome), is Faculty of Veterinary Science Postdoctoral Fellow Dr Kathy Belov. In January 2006 Kathy's team published the first paper, in the highly regarded journal PLoS Biology, describing the analysis of a portion of this genome and an important cluster of immune genes known as the MHC.

The opossum research involved international collaboration between the Faculty of Veterinary Science, the Australian National University, The Walter and Eliza Hall Institute of Medical Research, the University of New Mexico, Texas A&M, the University of Pittsburg, and the Southwest Foundation for Biomedical Research.

These newly discovered gene sequences point towards the existence of an ancestral "immune supercomplex" which contains various immune genes in a single region of the genome. As Dr Belov says, "Mapping the opossum MHC allowed us to deduce what the MHC of ancestral mammals looked like. We think it contained several different types of immune genes in a single complex. These genes are no longer found in a single complex in any living animal but are scattered over various chromosomes".

Dr Belov and her laboratory, the Australasian Wildlife Genomics Group, are using genetic data from marsupials and monotremes to understand how our own intricate immune system evolved from the relatively simple one of lower vertebrates such as birds and fish. In collaboration with renowned scientist Dr Stephan Beck of the Sanger Centre in the UK, and Dr Mark Eldridge from Macquarie University, Dr Belov recently won a prestigious ARC Discovery grant to fully characterise the MHC of the Tammar wallaby. Kathy's PhD students, Hannah Siddle and Claire Sanderson, are an integral part of this cutting edge team.

The Tammar wallaby project is Australia's first large-scale genome project and sequencing is being carried out at the Australian Genome Research Facility in Australia and the Baylor Centre in the US. The group is also working closely with Drs Janine Deakin and Jenny Graves of the ANU-based ARC Centre for Kangaroo Genomics, analysing the Tammar wallaby genome sequence as it becomes available.

Now, Kathy and her collaborators are cracking the genetic code of the platypus. The platypus genome is being sequenced at Washington University in the US and the Australasian Wildlife Genomics Group is focusing on understanding both the immune and venom genes of these enigmatic creatures.

In May 2006, Kathy departs on a TJ Robinson travelling fellowship to meet with researchers at Washington University working on the platypus genome, and the Broad Institute involved with the opossum genome. Following her breakthrough research, Kathy is in demand as a speaker and will present new data in Cold Spring Harbour at the Biology of Genomes meeting, and in Cambridge University in the UK. As she says, "This is an incredibly exciting time for me and the Faculty to be involved with genomics, and it's particularly special to be able to use Australia's unique fauna to unearth clues about the evolution of our own immune systems".

BOOSTING BIOSECURITY

CARINA BATES

(L-R) Dr Paul Arthur (Director Elizabeth Macarthur Agricultural Institute), Professor Les Copeland (Dean Faculty of Agriculture, Food and Natural Resources), Mr Geoff Corrigan (Member for Camden), Professor Beryl Hesketh (Pro-Vice-Chancellor), The Hon Ian MacDonald MLC (Minister for Natural Resources, Primary Industries and Mineral Resources), Professor Leo Jeffcott (Dean Faculty of Veterinary Science), and Mr Barry Buffier (Director General Department of Primary Industries).

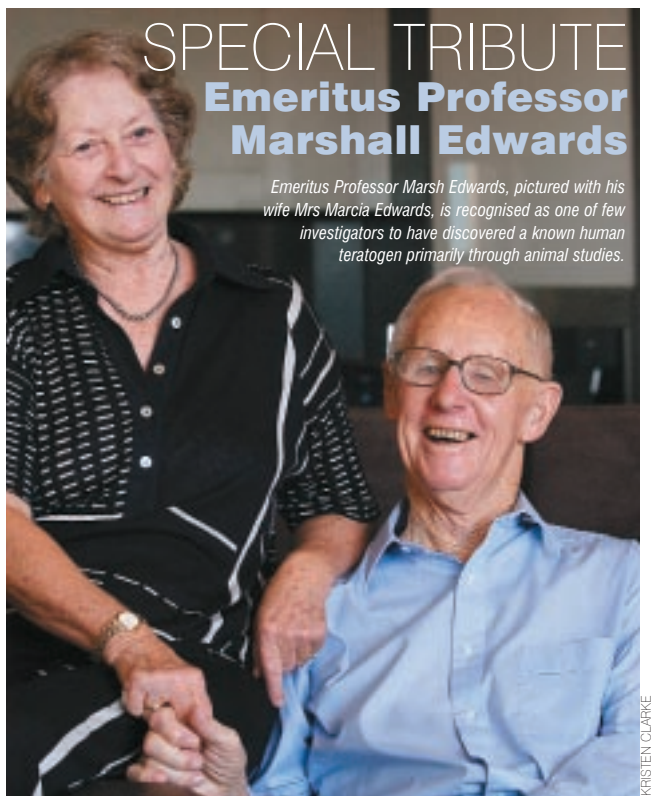
Leading scientists in the fields of animal and plant biosecurity have joined forces to boost protection measures through a new alliance between the NSW Government's Elizabeth Macarthur Agricultural Institute (EMAI), and the University of Sydney's Faculty of Veterinary Science Camden campus and Plant Breeding Institute at Cobbitty.

The NSW Centre for Animal and Plant Biosecurity, announced on 24 March by the Minister for Primary Industries Ian Macdonald, will lead to 400 veterinary and agriculture researchers developing and applying new technologies for diagnosis, surveillance, prevention and control of serious pests and diseases that could threaten Australia's agricultural industries.

The new Centre will work across the three facilities in Camden and Cobbitty linked by high-speed broadband to the Greater Sydney IT network, ensuring speedy access to the specialised supercomputing, genomics and proteomics services critical to advanced biotechnology.

Key research areas for the Centre include research and rapid diagnosis technologies for diseases such as Avian Influenza, West Nile Virus, and Newcastle Disease; projects on food-borne pathogens such as E. coli and Salmonella; the development of new vaccines and diagnostic tests to help control viral diseases in pigs and other livestock; further research into QX disease in Sydney rock oysters and Nodavirus in Australian Bass and Barramundi; and research to help minimise incursions of exotic pests and diseases in horticulture and cereal crops, such as fire blight in apples and pears, the papaya fruit fly, citrus canker, black sigatoka in bananas and wheat rust.

SPECIAL TRIBUTE
Emeritus Professor Marshall Edwards



KRISTEN CLARKE

Emeritus Professor Marsh Edwards, pictured with his wife Mrs Marcia Edwards, is recognised as one of few investigators to have discovered a known human teratogen primarily through animal studies.

Former Dean of the Faculty of Veterinary Science Emeritus Professor Marshall Edwards AO has been recognised as the discoverer of maternal hyperthermia as a human teratogen with a special tribute and review in the Birth Defects Research (Part A), Volume 73, Issue 11 (November 2005).

During a research career spanning 40 years, Professor Edwards investigated the hypothesis that maternal hyperthermia during gestation can be teratogenic to the developing foetus. He is one of few investigators to have discovered a known human teratogen primarily through animal studies.

Graduating from the University of Sydney in 1949, Marsh spent time in private practice at Lismore, and Bunbury in Western Australia. He completed a Masters at the University of Liverpool in England before returning to the Faculty as a lecturer.

In 1970 Marsh gained his PhD on hyperthermia as a cause of congenital malformation, and in 1979 was awarded the highest veterinary honour, a Doctor of Veterinary Science, on the basis of *Published Work on Hyperthermia as a cause of Disorders of Pregnancy and Prenatal Development in Animals*.

His interest in this field of research began when he observed the occurrence of a number of abortions in a guinea pig colony during a heat wave. The mothers that had not aborted later gave birth to offspring with arthrogryposis, talipes, microphthalmia, and other defects.

Following his initial doctoral studies, Marsh went on to prove the significant range of hyperthermia-induced malformations that can occur in animals, particularly in the central nervous system but also in other parts of the body, including craniofacial anomalies, heart defects, cataracts and renal anomalies. Through a series of carefully planned and executed experiments, he was able to demonstrate the relationship of the defect to the timing of the hyperthermic insult, and to analyse the underlying pathogenic mechanisms such as cell death, membrane disruption, vascular disruption, and placental infarction. He found that higher temperatures and/or longer durations cause abortions, whereas lower elevations of temperature cause embryonic death and resorption, or abnormalities of foetal development.

Marsh published extensively during his career, and increasingly these papers were in medical journals as veterinary journals were less interested in causes for birth defects. It was a 1972 response letter to the British medical journal Lancet that first attracted international attention. In the letter, he suggested that the published association between central nervous system malformations and outbreaks of Asian influenza might be due to hyperthermia rather than to the virus itself. His hypothesis was dismissed as unlikely but, by the mid-1970s, Marsh began to receive letters from clinicians and research workers around the world. He became involved with relevant medical research groups, and researchers began to look for similar teratogenic effects in humans.

The comprehensive review in the November 2005 Birth Defects Research journal recognises, and celebrates, the culmination of an extraordinary body of work.

OUR SPONSORS AND SUPPORTERS

The Waratah National Cat Alliance first came to the attention of the VSF when its volunteer team staged an unforgettable cat show as part of our October 2005 Cats on Campus event. The organisation is now helping to raise funds to support feline research within the Faculty, specifically the work of Senior Lecturer in Veterinary Microbiology Dr Jacqueline Norris on feline coronaviruses in Australian catteries, including the fatal immune mediated Feline Infectious Peritonitis (FIP). Visit the Waratah website to read about Jacqui's research: www.wnca.com.au/

Bayer Australia Animal Health is generously continuing to sponsor Roundhouse.

Mr Colin Dunlop of Advanced Anaesthesia Supplies has again assisted the Faculty by partially donating pulsoximeters for the University Veterinary Centre at Sydney (UVCS).

Individual donors are some of our most generous supporters and the UVCS has become the recipient of funding that will support important research into canine brachycephalic airway disease (long soft palate and laryngeal disease). The funding was provided by the owners of Cavalier King Charles Spaniels, the second most common breed suffering from these potentially fatal problems.

Please contact the Veterinary Science Foundation if you are interested in supporting the work of the Foundation and Faculty: vsf@vetsci.usyd.edu.au or (02) 9351 8026.

KRISTEN CLARKE

Brian and Bambi Edwards of the Waratah National Cat Alliance, pictured here with one of their felines Georgia, and Dr Jacqui Norris.

SUSTAINING PIG PRODUCTION IN VIETNAM

Dr Trish Holyoake is the Faculty's Senior Lecturer in Intensive Animal Industries and its key pig specialist. Trish's expertise is currently assisting small holder pig farmers in Vietnam to develop more sustainable farming and production methods.

Trish is undertaking the project in collaboration with Drs Darren Trott and Ian Wilkie from the University of Queensland, Dr Colin Cargill from the University of Adelaide, Dr Tony Fahy from the Victorian Department of Primary Industries and the following Vietnamese organisations: National Institutions of Animal Husbandry and Veterinary Research at Hanoi, Faculty of Animal Sciences at Hue University of Agriculture and Forestry, Department of Agricultural and Rural Development of Quang Tri Province and the Hue Vietnamese Farmer Association Thua Thien.

More than 80% of Vietnamese obtain their livelihood from the land. Pig meat, both nutritionally and culturally, is the most important protein source in the Vietnamese diet, accounting for about 70% of total meat consumed. Not surprisingly, Vietnam is currently the 8th largest producer of pigs in the world.

In Central Vietnam, small holder farmers predominantly raise pig breeds such as Mong Cai, Mini pig, and SocHighland. These breeds are well adapted to local conditions, but have limited performance and economic efficiency.

This project aims to improve the genetics of local breeds by introducing high performance Mong Cai lines for pure breeding and through exotic breeding programs. By aligning these breeding programs with an integrated farrow-to-finish management plan (focusing on health, husbandry, housing and nutrition) that will improve production parameters and limit health problems, the project will provide significant benefits for small holder farmers. Through a "train the trainers approach", this holistic, continuous improvement plan will ultimately reach veterinary extension workers, commercial piggery managers and selected small scale pig farmers to ensure a successful uptake of knowledge and skills.

KRISTEN CLARKE

Members of the Vietnamese piggery project, left to right: Senior Lecturer Dr Trish Holyoake, Dr Nguyen Que Coi (National Institution of Animal Husbandry, Hanoi), Dr Cu Huu Phu (National Institute of Veterinary Research, Hanoi), Nobel Toribio (University piggery), and Mr Nguyen Van Hieu (Department of Agricultural and Rural Development, Quang Tri province).

The Vietnamese Central Coast has been devastated in the past by war, drought, deforestation, inappropriate farming methodologies and flooding. Environmental management techniques will be an important aspect of training programs, delivering positive environmental impacts due to improved management practices - particularly in relation to indiscriminate antibiotic use and effluent created per kilogram of pork produced.

The three-year project, a joint initiative of the Australian and Vietnamese Governments, is funded through the federal AusAid Collaboration for Agriculture and Rural Development (CARD) scheme with support from the Australian Agency for International Development.

LEE MILES

CROCODILE GENETICS

Quantitative trait loci (QTL) studies aimed at improving the genetic makeup of breeding animals are being conducted in most livestock industries, and the commercial crocodile business is no different to traditional farming industries.

PhD student Lee Miles, with supervisors Professor Chris Moran and ex-Faculty postgraduate and now industry collaborator, Dr Sally Isberg of Crocodile Farms of the Northern Territory in Darwin, is undertaking linkage mapping and QT analysis in saltwater crocodiles (*Crocodylus porosus*). His research objectives are to identify quantitative trait loci for traits of economic importance in the saltwater crocodile and incorporate these into the already established crocodile genetic improvement program (CrocPLAN, funded by the Rural Industries Research and Development Corporation).

Because genotyping an animal – in this case crocodiles - can be achieved almost from the day of hatching, the selection of animals based on genotype (as opposed to phenotype, or observed physical characteristics) has several advantages. Favourable alleles for economically important traits can be introduced into a commercial population from exotic stock using marker-assisted introgression or repeated backcrossing; selection accuracy can be improved by identifying markers linked to QTL and incorporating this information into the estimation of breeding values; and selection intensity may be increased.

More specifically the project aims to deliver the first high resolution genetic marker map for the saltwater crocodile. It will also produce chromosome and map locations for QTL of economic importance, provide the ability to more accurately estimate crocodile breeding values and critically, to decrease the generation interval, currently estimated to be 13 years.

Lee is collaborating with Dr Travis Glenn of the Savannah River Ecology Laboratory at the University of Georgia, South Carolina, USA, an expert in the application of molecular genetics in reptiles. In late 2005, he worked for several months in Dr Glenn's laboratory developing a large number of DNA fingerprint genetic markers necessary for making the genetic maps. In conjunction with Dr Glenn, Lee has also developed resources for anchoring the linkage maps onto specific chromosomes using fluorescent in situ hybridisation.

During his visit, Lee participated in Dr Glenn's work on the American Alligator (*Alligator mississipiensis*), part of an ongoing genetic population study aimed at

PhD student Lee Miles with a young American alligator during his study trip to the Savannah River Ecology Laboratory at South Carolina in the USA.

Left: American alligator (Alligator mississipiensis)

solving problems contributing to the decline and extinction of small native animal populations.

By increasing the accuracy of estimating breeding values for the selection of breeding animals, Lee's research in Australia will enable producers to select future breeding crocodiles based on the animal's genotype (in addition to phenotypic observations made on the individual and its relatives) and, by decreasing the generation interval, enable faster genetic improvement across the industry.

Lee's research will also provide an important store of knowledge and resources for future conservation work on *C. porosus* and other species of crocodile.

KRISTEN CLARKE

(Left to right) Professor David Fraser, Ms Angelika Trube, Honorary Associate Professor Heather Greenfield, and PhD student Foo Leng Huat.

BONE HEALTH OF CHILDREN IN CHINA

Faculty of Veterinary Science staff have long contributed significantly to research in human health. Professor David Fraser, Professor of Animal Science and Fellow of the Nutrition Society of Australia, has a special interest in the relationship between human disease and nutrition. His research has included studies of osteoporosis, rickets in Mongolia and Bangladesh, and a 1998 to 2001 research project aimed at improving the health of Chinese children.

This project's objective was to demonstrate improved bone health of Chinese school-age children through implementation of a two-year calcium and vitamin D trial, based on milk, with prepubertal school girls.

Chief Investigator of the project, scientist and public health specialist Honorary Associate Professor Heather Greenfield, has particular research experience in the effect of dairy products in human nutrition, and bone growth and development. Other members of the team were Postdoctoral Fellow Dr Xueqin Du, Research Officer Dr Kathy Zhu, Senior Scientific Officer Angelika Trube and PhD students Foo Leng Huat and Zhang Qian. Collaborating institutions included the University of New South Wales and the Institute of Nutrition and Food Safety (Chinese Centre for Disease Control and Prevention, Beijing).

The project involved comparisons of both supplemented and unsupplemented subjects, with specific objectives including achieving normal vitamin D plasma levels in supplemented subjects after 6 to 9 months, achieving significantly higher bone mineral content and/or significantly greater bone width in these groups, investigating the effect of vitamin D fortified milk on bone metabolism, and investigating bone metabolism of milk supplemented and unsupplemented subjects by means of bone biomarkers.

The project team also introduced Australian food products and technology to the participants and established links between Australian companies and related Chinese authorities and industries.

The project, which was funded by Murray Goulburn Cooperative Ltd and the Dairy R & D Corporation, demonstrated that supplemented girls grew 0.8cm taller and accrued over 30g additional bone mineral compared to unsupplemented girls. Vitamin D insufficiency was completely abolished in the subjects that received the vitamin D fortified milk.

Critically, a follow-up study undertaken 2002 to 2005, funded by the Nestlé Foundation and with the collaboration of Associate Professor Chris Cowell of Westmead Children's Hospital, found that virtually all these benefits were lost after the cessation of milk supplementation.

The results are being studied by the authorities responsible for the emerging Chinese School Milk Program, and will also inform policy-makers in China about children's needs for calcium and vitamin D during growth. It is hoped to follow up the subjects again when they reach 18 years of age and have completed their growth.

ADAPTING AUSTRALIAN CATTLE FOR CHINA

A Faculty team led by Associate Professor Peter Wynn has won a major tender from the Commonwealth Department of Agriculture, Fisheries and Forestry to help the Chinese dairy industry improve productivity of Australian Holstein-Friesian dairy cows imported into China. Other team members are the Faculty's Director of Bovine Clinical Practice Associate Professor John House and Associate Lecturer in Animal Nutrition Dr Russell Bush, Dr Kun Zhu, Research Officer in the Department of Endocrinology and Diabetes at Sir Charles Gairdner Hospital, Western Australia, and leading Dairy Nutrition Consultant Dr Bruce Hamilton.

The project aims to improve the animal welfare and husbandry capacities of Chinese dairy livestock managers with a particular focus on nutrition and feeding regimes. Funded through the International Agricultural Cooperation Live Animal Trade, it includes assessment of dairy farms in three or four key dairying regions in China, the development of educational material, and delivery of training workshops.

Over the past 3 years China has emerged as the largest market for Australian live dairy cattle - since 2003, China has received about 125,000 cattle valued at A$222 million or 73% of total dairy cattle exports, figures in line with the increased demand for fresh dairy products in the Chinese community. Following concerns of the Chinese Ministry of Agriculture regarding the quality and post-arrival performance of dairy cattle imported for breeding purposes, the two countries agreed on a strategy whereby Australian heifers would be subjected to tougher protocols before being accepted and, at the same time, Australia would provide a program of technical assistance to improve animal welfare outcomes for the exported heifers.

Key issues to be investigated in China include cow nutrition, both pasture-based and concentrates, and cow health. Diseases common to dairy cows worldwide also occur in Chinese herds, and susceptibility to these can be exacerbated by major changes in nutritional status and climatic conditions – for example, subjecting Australian heifers to the unfamiliar harsh winter conditions of Northern China. Housing of the exported heifers on farm will be investigated to ensure it maximises cow comfort by decreasing exposure to climatic extremes and minimises the exposure of animals to potential pathogens.

Associate Professor Wynn has had significant experience working in China and other parts of Asia, and he believes this mission will be most important in consolidating Australia's burgeoning live dairy cattle export industry to China. As he says, "The Faculty of Veterinary Science is well placed to assist with this process through our major contribution to the genetic selection programs being developed by the Co-operative Research Centre for Innovative Dairy Products".

KRISTEN CLARKE

Associate Professor Peter Wynn and Dr Russell Bush are working with the Chinese dairying industry to improve productivity of Australian dairy cows after importation into China.

CAT FLEAS

MORE THAN MERE IRRITATION

The entire small animal medicine team at the University Veterinary Centre Sydney is contributing to this project. Left to right: postgraduate Veterinary Interns Drs Tina Knight, Lucy Downs and Amy Khoo, Senior Lecturer Dr Julia Beatty, Small Animal Resident Dr Lan Tran, Senior Registrar Dr Aitor Arteaga, Senior Lecturer and project leader Dr Vanessa Barrs, and Feline Medicine Resident Dr Amy Lingard. Inset: Feline infectious disease expert Professor Michael Lappin from Colorado State University in the USA is collaborating with the Faculty team on the cat flea project.

Feline medicine specialist and Senior Lecturer in Small Animal Medicine Dr Vanessa Barrs, together with Professor Michael Lappin of Colorado State University in the USA, is leading an Australian research project designed to investigate the prevalence of haemoparasites in Australian cats and their fleas. Professor Lappin is one of the world's foremost feline infectious disease experts.

The common cat flea, *Ctenocephalides felis*, doesn't just cause allergic skin problems. It is known to harbor a surprising number of blood-borne infectious agents, some of which it transfers between cats, and some of which – for example, *Bartonella* species - may transfer between cats and people. In one of the very few studies completed in the United States, DNA of the haemoplasmas or *Bartonella* species were amplified from 60.9% and 65.2% of cats and their fleas, respectively, demonstrating that both feline and human pathogens are common in fleas and cats.

The Australian project involves the collection and storage of fleas taken from cats by veterinarians in Melbourne, Sydney, and Brisbane, and the collection of a small amount of blood from the host pets. DNA will be amplified from the blood and serum of the cats, and their fleas, to identify specific infectious agents including *Bartonella, Ehrlichia, Anaplasma, Neorickettsia, Mycoplasma* and *Rickettsia*.

Based on the US study results, it is expected that approximately 60% of the Australian cats and their fleas tested will be positive for DNA of one or more of the relevant infectious agents.

Flea infestation is common in the cats of Australia but public awareness of the diseases fleas can carry is low. Establishing the prevalence rates of these potential pathogens is an important step in educating pet owners, including understanding about the need for flea control.

GLENN SHEA

Left: A new species of skink from the genus Sphenomorphus, discovered on Sudest Island in the Louisiade Archipelago.

SKINK BIODIVERSITY

Senior Lecturer in Anatomy Dr Glenn Shea is one of Australia's most renowned herpetologists and the world's foremost expert on bluetongue lizards. In addition to his busy teaching and research supervisory roles, Glenn is an Honorary Research Associate of the Australian Museum with extensive biological fieldwork experience surveying and collecting reptiles and amphibians throughout Australia, and in New Guinea, Fiji and New Caledonia.

In collaboration with Dr Allen Greer of the Australian Museum, Glenn has been researching the systematics of a large genus of skinks, *Sphenomorphus*, from New Guinea and the Solomon Islands since 1997. Although there are already over 40 named species from the region, many are unnamed and the named species often poorly defined.

Due to the perceived complexity of the taxonomy problems involved, there has been no revision of the genus since 1915. This hasn't prevented the accumulation in museum collections world-wide, over the past half-century, of over 10,000 specimens of this genus and, in the past decade, additional collections in remote and poorly-studied areas of New Guinea by research teams from the South Australian Museum and the Bishop Museum in Honolulu. These collections have facilitated studies of patterns of geographic variation of these skinks throughout New Guinea.

Glenn's research has taken him to New Guinea skink collections across the USA and Europe. He worked with the Bishop Museum team in the Milne Bay Province in New Guinea, collecting more skink samples from the Louisiade Archipelago, a remote chain of islands last visited by herpetologists in the 1950s. A 2004 expedition to Sudest and Rossel islands, at the eastern end of the chain, discovered an estimated 30-plus new species of lizards, snakes and frogs.

KRISTEN CLARKE

Dr Glenn Shea, Senior Lecturer and herpetologist, is undertaking research on skinks from the genus Sphenomorphus in New Guinea and other islands in the Pacific.

In addition to defining the diversity of species in *Sphenomorphus*, which promises to be the most biodiverse lizard genus in New Guinea, Glenn's work is contributing to a study by Bishop Museum researchers on vertebrate biodiversity "hotspots" and the distribution of collecting effort in New Guinea. This will be a first step in developing a strategic plan for future biological research work and conservation management for the island.

HORSES GET BAD BACKS TOO

PROF DAVID HODGSON

The team researching back disorders in horses, left to right: physiotherapist and PhD student Narelle Stubbs, Dr Chris Riggs, Head of Veterinary Clinical Services at the Hong Kong Jockey Club, Dr Cathy McGowan, Senior Lecturer at the University of Queensland, and Faculty Dean Professor Leo Jeffcott. Absent: Professor David Hodgson.

A collaboration between The Hong Kong Jockey Club and the Universities of Sydney and Queensland is seeking to gain a greater understanding of the nature, incidence and significance of back disorders in horses. These problems are considered relatively common in performance horses, yet are only partially understood and, as bad backs are commonly seen in race horses in Hong Kong, the city has become the location for this particular research project.

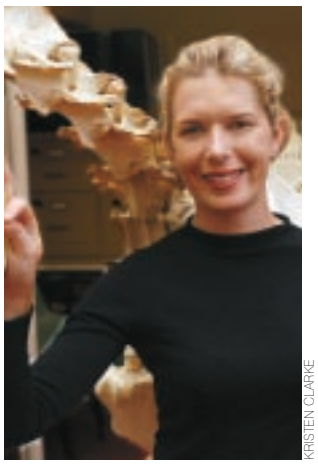
Project staff from this Faculty – Dean Professor Leo Jeffcott, a leading expert in equine health and Official Veterinarian to the Beijing Olympic Games (his seventh Games in this role) and equine specialist Professor David Hodgson – are collaborating with Hong Kong Jockey Club veterinarians Dr Chris Riggs and Dr Brian Stewart, and Queensland University's Dr Cathy McGowan and PhD student and Master of Animal Physiotherapy Narelle Stubbs. Senior staff from the University of Liverpool will also assist in analysis of data derived from the studies.

The research will first assess – in horses known to suffer from back pain - the correlation between the clinical signs of back pain, diagnosis through highly specific lameness examinations and manual assessment techniques, diagnosis through ultrasonography examination, and the presence of pathology in the thoracic and lumbosacral regions of the spine and pelvis. This includes spondylosis, ankylosis, evidence of degenerative joint or intervertebral disc changes, and other vertebral abnormalities.

These results will be compared with pathology of the same regions of the spine and pelvis of similar-aged horses assessed to be free from back pain.

The study, funded by RIRDC (Rural Industries Research and Development Corporation), aims to determine the prevalence of back disorders in racehorses. Armed with this information, veterinarians and equine physiotherapists will be better equipped to diagnose and manage these potentially debilitating and at times career-ending musculoskeletal disorders of race horses worldwide.

CLOSE UP



KRISTEN CLARKE

STUDENT PROFILE
KAO CASTLE

What are your qualifications?

In the last year of high school I decided that I wanted to be a vet. Unfortunately, I just missed out on getting into the course. I studied biochemistry instead, and enjoyed that so much that I decided not to transfer into vet science and ended up specialising in computational chemistry and bioinformatics.

Tell us about your pathway to Veterinary Science.

When I finished my Honours degree I began work with a small bioinformatics company, eventually starting my own contract business servicing small biotechnology companies.

Work in the commercial world was great, and I learnt (amongst many other things) that the day-to-day work of running a business can be very rewarding. Right from the start though, I always thought I'd like to run a horse genetics company. I figured this would be a great way of combining work with animals, laboratory science, and the skills I'd acquired in bioinformatics. And going to the races could be called work!

It took a few years, but I finally realised that there was nothing stopping me from running a horse genetics company. First, I would need to make a lot of contacts in the horse industry, and I'd also need to really understand the process of developing a genetic test. There's nothing to beat first-hand experience, so I decided to do a PhD project where I would attempt to develop a genetic test for an inherited problem in Thoroughbred racehorses - I'm now in the Faculty working on equine osteochondrosis.

Why study at The University of Sydney?

Back when I worked in bioinformatics, I was lucky enough to meet some of the staff here in the Faculty of Veterinary Science. Having good supervisors is a vital part of doing a good PhD, and I jumped at the opportunity to work with these delightful people who produce so much world-class research.

Where to after graduation?

With luck, I'll move on to commercialising any positive results from my research, and searching for other tests that I can license from researchers and Universities around the world. It will be a slow process, but I hope to build a pathology business that provides testing services for many different animal species. I'll focus on horses first, because providing tests for a small number of high-value individuals is a very different business proposition to the bulk requirements of testing for sheep, cattle or pigs.

What do you do in your spare time?

At the moment (Easter) I'd say I spend my spare time eating and drinking too much! Really, I spread my spare time between many different interests - I love my motorcycles, my boxer dog, gardening, cooking, and going to classic car races with my boyfriend.

Who inspires you and why?

I have a lot of friends who have achieved huge things in their various fields. Catching up with these people reminds me that with hard work I can probably do just about anything

ADVANCING REPRODUCTIVE TECHNOLOGIES

An increasing demand by artificial breeding companies for veterinary graduates with specialist knowledge has led to an elective Year 5 unit of study created to train students for work in artificial breeding industries and/or mixed practice with a significant amount of breeding work. It also aims to foster an interest in research.

Advanced Reproductive Technologies (ART) integrates the disciplines of quantitative and molecular genetics, animal health, nutrition, and reproduction, including advanced reproductive technologies as applied to managed breeding and assisted reproduction programs. Participating students gain practical skills in artificial insemination, embryo transfer, gamete preservation and banking, pregnancy diagnosis, molecular genetics (proof of parentage, marker assisted selection), selection of breeding stock, and management of breeding programs. Proficiency is developed in legal, ethical and animal welfare aspects of artificial breeding program management.

While the major species of practical focus are sheep and cattle, students complete the course with knowledge of species such as pigs, companion animals, and wildlife.

Head of the Unit of Study and Associate Dean for Research Professor Gareth Evans says, "The elective is proving to be a great success, with 12 to 15 students each year benefiting from small group teaching, the combination of practical experience and theory, and the greater depth of specialist knowledge the unit delivers".

Two companies play an important and generous role in facilitating ART: Bioniche (Australasia) Pty Ltd supplies hormones and other materials for the course, and Dr Shane Ashworth of Total Livestock Genetics volunteers his tuition services each year and accommodates students in extramural rotations.

KRISTEN CLARKE

Final year students undertaking the ART elective, left to right: Alan Marcus, Katherine Wykes and, from Cornell University in the US, Gillian Ferguson.

NEW UVCS STAFF

Dr Aitor Arteaga (right) has joined the University Veterinary Centre Sydney (UVCS) as Senior Registrar in Small Animal Medicine. His special field of research interest is hyperadrenocorticism and the acute phase response of inflammation in dogs.

A 1997 veterinary graduate from Zaragoza University in Spain, Aitor gained a Certificate in Small Animal Medicine from the Royal College of Veterinary Surgeons (RCVS), London, in 2004. Following graduation, he spent time in private practice in Spain and the United Kingdom, including a specialist referral practice where he completed an internship under the supervision of RCVS and European-recognised veterinary specialists.

Between 2002 and 2006, Aitor undertook the role of Hill's Senior Clinical Training Scholar (Resident) in Small Animal Medicine at the University of Glasgow Veterinary School in Scotland. He brings to the Faculty experience with the supervision and clinical instruction of undergraduate students at the referral Hospital of Glasgow Veterinary School, including final year veterinary students on rotation through the Peoples Dispensary for Sick Animals (PDSA) charity clinic in central Glasgow.

Aitor says he made the move to Sydney as he wants to be part of what he sees as the UVCS developing into an important point of reference for Australian and international small animal teaching hospitals.

KRISTEN CLARKE

Dr Aitor Arteaga has joined the Faculty as Senior Registrar in Small Animal Internal Medicine.

ONCOLOGY SPECIALIST JOINS FACULTY

Acknowledging the critical importance and growing need for the treatment of animals suffering from cancer, the Faculty has appointed internationally-renowned veterinary oncologist Dr Tony Moore an Adjunct Professor.

Veterinary oncologist Dr Tony Moore, pictured here with his Jack Russell terrier Harvey, has joined the Faculty as an Adjunct Professor.

Tony is an alumnus of the Sydney Faculty of Veterinary Science, receiving his veterinary degree in 1981 and a master's degree in feline hematology in 1986. Five years in veterinary practice in Sydney led to an increasing interest in cancer therapy, and Dr Moore says he found immense satisfaction in helping to improve the life of pets with terminal diseases. He moved to the USA, and after completing a residency in veterinary oncology at the University of California, Davis, in 1988 he joined the faculty at Tufts University. During his 15 years at Tufts, he established and directed the Harrington Oncology Program, achieved the rank of full professor, and trained seven residents to careers in veterinary oncology many of whom now direct oncology programs at veterinary schools across the USA.

After leaving Tufts in 2003 to return to Australia, he partnered with Dr Angela Frimberger (also an adjunct lecturer at the University of Sydney) to establish Veterinary Oncology Consultants (http://www.vetoncologyconsults.com), a web-based consulting company that supports the highest possible quality of life for pets with cancer through providing advice and educational materials for veterinarians and pet owners.

Tony is a Diplomate of the American College of Veterinary Internal Medicine (Oncology). He is the author of more than 75 articles in the veterinary literature and has coauthored three books on veterinary oncology with Dr Gregory Ogilvie. Dr Moore has received awards for creativity in teaching and clinical research and is particularly interested in the epidemiology of cancer in companion animals.

undergraduate activities

VET STUDENT'S HISTORIC WINTER OLYMPICS

JAMES WILKINSON

Astrid Loch-Wilkinson and bobsleigh team mate Kylie Reed (rear) in the lead up to the 2006 Winter Olympic Games.

Year 5 veterinary student Astrid Loch-Wilkinson made history as the pilot of Australia's first women's bobsleigh team to qualify for a Winter Olympic Games. Astrid and team mate Kylie Reed finished 14 out of 15 of the world's top bobsleigh teams at the February 2006 Winter Olympic Games in Torino, Italy. They largely financed their own Games bid and competed against northern hemisphere teams with million-dollar budgets.

MEAT JUDGING STUDENTS COMPETE IN US

Fiona Sparke, Year 4 Bachelor of Animal and Veterinary Bioscience (since graduated), was one of six Australian students to qualify for the 16th Annual Intercollegiate Meat Judging scholarship tour of the US in January 2006. Sponsored by Meat and Livestock Australia, the initial 70 competing students assessed beef, lamb and pork carcasses according to cut and quality. The scholarship tour provides an understanding of the USDA grading system and processing regimes with further competition held against US students at the National Western Stock Show in Denver.

CORNELL LEADERSHIP PROGRAM

Three final year students will attend the prestigious Cornell Leadership Program for Veterinary Students in 2006: Bronwyn Clayton, Louise Fitzgerald and Lynda Shaw. This makes a total of 49 Sydney students who have won places in the program since the first group was accepted in 1992 – one of the highest acceptance rates of any veterinary school world wide.

FACULTY STAFF NEWS

KRISTEN CLARKE

Dr Jacqui Norris and **Associate Professor Jennie Hodgson** are the first recipients of a new student-nominated Outstanding Teaching Award. Overwhelming support saw almost ninety students write endorsements of the team's teaching style. Jennie and Jacqui, who teach microbiology and animal disease, received a standing ovation at the annual prize-giving ceremony.

Professor David Fraser was elected a Fellow of the Nutrition Society of Australia at its Annual Scientific Meeting – the Society's highest award. Professor Fraser specialises in Animal Science, undertaking research in the Dairy and Poultry Research Foundations. His areas of research have included rickets in Mongolia and Bangladesh, evolutionary biology and intestinal absorption.

Feline specialist **Dr Richard Malik** and veterinary oncologist **Dr Tony Moore** have been appointed Adjunct Professors, marking an important contribution to teaching and learning and research within the Faculty.

Dr Paul McGreevy, Senior Lecturer in Animal Behaviour and Welfare Science, has been awarded the Australian College of Educators Quality Teaching Award. The award recognises accomplished teaching practice through a rigorous process including referees reports, professional learning portfolios, workplace visits and an assessment of the candidate's professional knowledge, understanding, skills and values.

Parasitologist **Associate Professor Nick Sangster** has been promoted to Professor; **Dr Peter Thomson** (veterinary biometry and statistical genetics) has been appointed an Associate Professor; and the following staff are promoted to Senior Lecturer: **Dr Sue Hemsley** (veterinary anatomy and pathology), **Dr Mark Krockenberger** (veterinary pathology), **Dr Jacqui Norris** (veterinary microbiology and animal disease), **Dr Paul Sheehy** (cell biology) and **Dr Imke Tammen** (animal biotechnology).

Initiated in 1989 as part of a bequest, the Grace Mary Mitchell Awards are presented each year to staff nominated by other Faculty members for their outstanding contribution over the year. 2005 recipients are: **Ms Lisa Ashley**, **Mr Federico Costa**, **Ms Tess La-Lande**, **Ms Sally Pope**, **Professor Herman Raadsma** and **Dr Paul Sheehy**.

KRISTEN CLARKE

Erina Young (left) and Kristen Sutton with one of the Faculty's herd of horses used for practical handling experience.

Year 5 students Kristen Sutton and Erin Young handle a sheep at the Faculty's sheep unit.

KRISTEN CLARKE

LEARNING TO HANDLE LARGE ANIMALS

The ability to handle a wide range of animal species with confidence and safety is a key attribute of all veterinary graduates. It's also a tough call for students who haven't had the opportunity to become familiar with farm animals or horses.

The Faculty's sheep and horse units, located on the Camden campus, are an integral part of practical teaching classes within the veterinary science and animal and veterinary bioscience degrees, and for agricultural students undertaking the animal husbandry stream. The units are part of a property running from the Nepean River to Cobbitty that was purchased by the University in the early 1980s.

The sheep unit, which now also includes alpacas, has several hundred sheep of diverse breeds including British, Merino and Dorper. The property is destocked and restocked according to need. Year 1 students undertake basic handling procedures (both with individual animals and on a flock basis) such as drenching, lamb marking, shearing, throwing a fleece, and other basic animal husbandry. The sheep flock is also important in the teaching of the Year 5 elective rotation, Advanced Reproductive Technologies (see page 6).

The horse unit boasts 45 horses. Individual animals are usually donated by people within the equine industry, but regardless of the source, the paramount requirement is good temperament. Horses spend their first year living on the property, the second they run up with the herd on teaching days, and it is only in the third year – when they have proven excellent dispositions – that horses are included in practical classes. Four to five foals are born each year, enabling students to see the reproductive process in action. Students also learn a wide range of horse handling skills, from simply approaching a horse correctly through to dentistry.

Both sheep and horse unit animals play a role in research. The alpacas are currently involved in research focused on semen collection and handling, and the horses in a variety of non-invasive clinical research, such as trialling anthelmintics.

PUBLIC HEALTH A GROWING PRIORITY

The already solid reputation of the Faculty's Veterinary Public Health Management postgraduate degree (VPHMgt) received another major boost with the publication of the 2005 Student Research Experience Questionnaire (SREQ), University survey statistics that rank the postgraduate student experience.

The results gave VPHMgt the highest scores, on all but one scale, in any Faculty across the University. Scores for Good Teaching, Appropriate Assessment, Generic Skills and Learning Community well above University average, with Overall Satisfaction rated at 96% and a score of 100% for satisfaction with Faculty student administration.

The success of VPHMgt has led to the development of new linked postgraduate coursework programs. One of these, due to commence in 2007, is Veterinary Public Health (VPH), a fully online course co-taught with the School of Public Health. In addition, a new online program combining animal genetics and breeding with leadership and management is being modeled on VPHMgt and will share some units of study. A flexible program in Veterinary Studies will also enable students to select the units that will best suit their career goals.

More than sixty students are now enrolled in the VPHMgt course, which started in 2003 with eighteen, and fifteen have already graduated. Applications are now being accepted for the July 2006 intake.

ZARA GOSSON

VPHMgt students Dr Marianne Ash, Director of biosecurity and emergency programs, Indiana State Board of Animal Health in the United States, and Dr Jim Kerr, veterinarian with the Hunter Valley Rural Lands Protection Board. Dr Kerr won the 2005 award for Outstanding Academic Performance.

The VPHMgt team can be contacted on vphmgt@vetsci.usyd.edu.au or call + 61 2 9036 6364. Website: www.vetsci.usyd.edu.au/publichealth_management

EILEEN AND POD A DEVOTED TEAM

MACARTHUR CHRONICLE / BRETT McGILVARY

Eileen Risby, Faculty technical officer, in action with her prize-winning three-legged kelpie Pod.

Camden campus technical officer Eileen Risby is fast becoming a celebrity on the obedience dog circuit with her devoted three-legged (tripod) red kelpie "Showoffpod". The team not only won a gold medal for Novice Dog at the 2005 NSW State Obedience trials, Pod won a second gold for achieving the highest scores over two days.

Eileen, who works with senior veterinary students as part of her role, has been training dogs since the 1960s and was head trainer for nine years at the Wollondilly All Breeds Kennel Club. She says Pod has been her most successful dog to date, despite having his leg amputated at only two days of age after his mother's licking created serious ulceration.

Eileen and Pod's efforts were rewarded in another sphere when Eileen received the 2006 Australia Day Wollondilly Senior Sportsperson of the Year award.

CLOSE UP

KRISTEN CLARKE

STAFF PROFILE CRAIG KRISTO

What are your qualifications and current position in the Faculty?

I have an Associate Diploma in Biology from the University of Central Queensland. I am a senior technical officer based at Camden in the J L Shute building and have now been with the Faculty for twenty-six years.

What does your role encompass?

I offer technical support for a number of veterinary practical classes and also field and laboratory support for a variety of research projects. In 2003, I was invited to assist in the coordination of a $1 million-plus renovation to the Shute Building. This involved the relocation of all operations (teaching and research) from the building for the duration of the works, and made a challenging but satisfying project that I undertook in addition to my usual role.

How did your career begin?

I started as a field/laboratory assistant on an industry-funded research project examining the efficacy of a number of prototype vaccines. This involved wide ranging field trials throughout NSW and Victoria as well as qualitative laboratory analysis of field isolates and assessment of vaccine responses.

Tell us about changes during your time at the University?

Apart from the advances in techniques and analytical equipment and the infrastructure upgrades, the most marked change has been the government's continual reduction in funding for education. I was lucky enough to graduate from Central Queensland University in the 1970s when tertiary education was fully funded. Since starting with this university I have seen the introduction of HECS as well as research and education funding being dramatically reduced. I fear that knowledge and the rate of scientific advances will pay the price.

What are your career highlights?

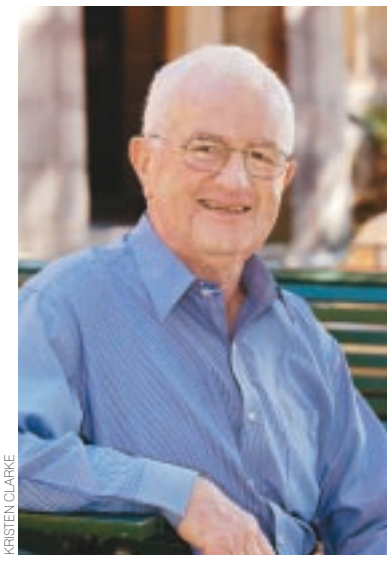
Easily the most rewarding experience in my time with the university was being part of the team led by Professor John Egerton, which was responsible for the control of footrot in Nepal. For many years the virulent form of this disease ran essentially unchecked by conventional control methods in that country. John Egerton, a former Dean of the Faculty of Veterinary Science, pioneered a nationwide vaccination program that utilised a vaccine that we produced using only the specific serotypes isolated from extensive field sampling from local Nepalese flocks. As a result of this work, footrot in Nepal today is limited to only benign strains in very few areas.

What do you look forward to in the future?

The Camden campus is currently enjoying an upgrade in facilities. Later this year a new wildlife teaching facility and further teaching spaces will be completed. Immediately after this a new, larger lecture theatre will be built, which all together will offer greater flexibility and the opportunity to improve the way we operate.

Who or what inspires you and why?

I count myself lucky to be able to work with many talented researchers, academics, students and support staff whose primary goal is to improve animal welfare in an increasingly profit-driven world.



KRISTEN CLARKE

Associate Professor BOB RATCLIFFE

A long and productive relationship between the Faculty of Veterinary Science and Associate Professor Bob Ratcliffe (left) is concluding. Bob has tried to retire before, but in such high regard is he held across the Faculty, he has continued to undertake significant roles that demand sensitive and experienced guidance.

Bob graduated from the University of Sydney in 1962, spending the next twenty years in small animal/equine practice at Gladesville. He returned to the Faculty in 1983 as a Resident in the Department of Veterinary Clinical Studies. He became Registrar in 1984, gained membership of the Australian College of Veterinary Scientists (ACVS) in 1985, and became Superintendent of the University Veterinary Centre Sydney in 1986. From 1989 to 2000, Bob was Director of Laboratory Animal Services at the University.

During his career Bob held teaching positions, was an examiner for the ACVS and contributed to numerous University and professional Committees, including as Deputy Chair of the Animal Care and Ethics Committee and the Post Graduate Foundation in Veterinary Science. He held roles in the NSW Board of Veterinary Surgeons and the Australian Veterinary Association.

Bob was invited back to the Faculty in 2001 after his first "retirement" to become Business Development Advisor and more recently he has been an integral contributor to the Partner Practice program.

This latter role has seen Bob as one of the critical interfaces between the Faculty, students, and the profession, in particular with practitioners hosting final year rotations. Bob initiated and organised the now-annual Partner Practitioner Conference, and most recently he has undertaken an in-depth analysis of Faculty staffing.

Bob's attention to detail, clinical acumen, work ethic and sage advice has been highly valued and we hope he will reflect with pride on his many achievements as he and Lorraine (finally) spend more leisure time at their Kiama beach retreat.

On behalf of the Faculty Bob, we'll miss you.

Professor David Hodgson, Drs John Baguley and Jennie Churchill

In Memoriam

Dr Robert (Bob) Taylor

1917 – 2006

Described as a "giant of the profession", Dr Bob Taylor died at age 88 on 6 March 2006. His dedication to veterinary science was formally recognised in 1969 with the NSW Australian Veterinary Association (AVA) Seddon Memorial Prize for meritorious clinical contribution to veterinary science and in 1994, with Life Fellowship of the AVA.

A New Zealander, Dr Taylor was accepted into the Faculty of Veterinary Science when his family moved to Sydney in 1935.

Ignoring pleas by his father and Professor Gunn (you'll fail and "go broke") Bob followed his dream and in 1940 established clinical practice in the then, large country town of Wollongong, becoming the only private practitioner outside the metropolitan area between Sydney, Melbourne and west to Perth.

Dr Taylor provided clinical services throughout the South Coast, Southern Highlands and Camden, including servicing dairies, working horses at 32 collieries, and brucellosis and tuberculosis eradication. In 1950, he built Australia's first purpose-built veterinary hospital at Keira Street, Wollongong, providing modern facilities for hospitalised animals. When he "retired" to Harden in 1968, the Illawarra Veterinary Hospital employed seven veterinarians.

The Taylor family purchased 'Weirview', a property at Harden on the NSW Southwest Slopes. Many requests for veterinary expertise led, in 1969, to establishing the Harden Veterinary Hospital. He remained actively involved until his late 80s and his two sons Grahame and John continue to run the practice.

Throughout sixty-seven years of AVA membership, Bob was devoted to the veterinary family. A major achievement was the 1974 establishment of the AVA Benevolent Fund to support members of the profession and their families in difficult circumstances. He was foundation President of the Australian Veterinary History Society.

Dr Taylor was external examiner in Veterinary Medicine at Sydney and Queensland Universities, and examiner for the registration of foreign veterinary graduates. He was a foundation Fellow and Councillor of the Australian College of Veterinary Scientists.

Bob and his late wife Leila raised three sons, Robert, Grahame and John. The latter two, and a grandson Bill, are all practising veterinarians along with Bill's wife Alison – a remarkable legacy alongside his distinguished service to the profession.