



because
animals
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© Michael Leunig

*Carnival of the Animals
... because animals matter*





© Michael Leunig

Renowned cartoonist and social commentator, Michael Leunig, created this image for the Veterinary Science Foundation's special benefit concert, Saint Saëns' Carnival of the Animals. This beautiful piece of music will be performed by the Australian Chamber Orchestra on Friday 17 December at the Sydney Conservatorium of Music, with narration and illustration by Mr Leunig. See below under VSF to find out how you can attend the concert.

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All images by Kristen Clarke unless otherwise noted.

NEW DEAN TO LEAD FACULTY

Professor Leo Jeffcott, one of the world's leading experts in equine health, is the new Dean of Veterinary Science at the University of Sydney.

He brings to Sydney significant academic, leadership and management skills, particularly following his 13 years as Dean of the Veterinary School at Cambridge University. During this time, in addition to his academic, research and administrative responsibilities, Professor Jeffcott raised more than £25 million to support a range of major projects and building campaigns for the Cambridge veterinary school.

Welcoming his appointment, Professor Jeffcott said: "I am very pleased to have been appointed Dean of the Faculty of Veterinary Science. I have worked in University Veterinary Schools for over 23 years, but this role is a new and exciting challenge. The Sydney Vet School has made considerable strides over the past few years and I am confident that with the support of the excellent team already in place we will be able to continue this progress and achieve the Faculty's mission."

Professor Jeffcott also comes to the Faculty fresh from his role as Official Veterinarian to the Athens 2004 Olympic Games. His association with the Olympic Games movement has been longstanding: the Sydney 2000 Games, where he served as President of the Veterinary Commission, was his fifth Olympic Games. He has, as a member of the Lausanne-based Federation Equestre Internationale, officiated at all four Equestrian World Games, in Stockholm, Hague, Rome and Jerez.

A graduate of the Royal Veterinary College, London in 1967, Professor Jeffcott began his career at the Newmarket Animal Health Trust's Equine Research Station. Here he completed a PhD on the mechanisms of passive transfer of immunity from mares to foals. His interest in orthopaedic problems in horses developed during his time as Head of the



Professor Leo Jeffcott, Dean, Faculty of Veterinary Science

Animal Health Trust's Clinical Department.

Professor Jeffcott is not a newcomer to Australia and he and his family have dual Australian and British citizenship. Following a period as Professor of Clinical Radiology at the Swedish University of Agricultural Sciences in Uppsala in the early 1980s, he was Professor of Veterinary Clinical Sciences and Head of the Equine Unit at the University of Melbourne Faculty of Veterinary Science for nine years, before moving back to the UK for his appointment at Cambridge.

With more than 300 scientific publications including contributions to a number of major equine texts, Professor Jeffcott is a highly regarded, internationally-renowned academic, clinician, researcher and equine specialist. A Fellow of the Royal College of Veterinary Scientists, a Professorial Fellow of Pembroke College, Cambridge

from 1993, and an Australian Veterinary Specialist in Equine Medicine, he was granted a prestigious Doctor of Veterinary Science while at Melbourne for a thesis of collected publications on equine lameness and poor performance. His current research interests include developmental conditions and back problems in horses, climatic stress relating to the equine sport of eventing, and diagnostic imaging.

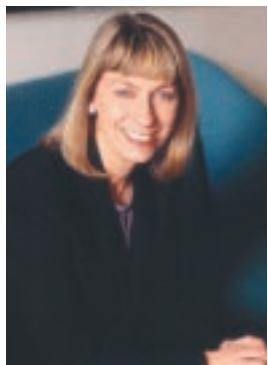
Professor Jeffcott is the recipient of several awards and prizes for scientific achievement, including the Dalrymple Champneys Award in 2001. This is the premier award from the British Veterinary Association, presented for outstanding services to veterinary science.

Professor Jeffcott replaces former Dean, Professor Reuben Rose, who is now General Manager of Livestock Production Innovation at Meat and Livestock Australia.



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



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**

DON'T MISS THIS GREAT EVENT! VSF PRESIDENT



CARNIVAL OF THE ANIMALS

Join the Veterinary Science Foundation and ABC Radio 702 broadcaster Sally Loane on Friday 17 December at our 2004 fundraising event – a special benefit concert at the Sydney Conservatorium of Music featuring Richard Tognetti's iconic Australian Chamber Orchestra (ACO) with narration and illustration from another Australian treasure, cartoonist and philosopher, Michael Leunig.

Don't miss this memorable occasion! Tickets \$150 each, including: cocktails and canapés, a beautiful first half performance by the ACO, and the excitement and fun of Saint Saëns Carnival of the Animals. Thanks to our sponsors Qantas and Accor Hotels and Resorts, our raffle features a trip to Shanghai for two with four nights' accommodation. Contact us for more information – (02) 9351 8026 or vsf@vetsci.usyd.edu.au.

UK BEQUEST

The VSF has become the first University of Sydney Foundation to receive a bequest through the new Friends of the University of Sydney Trust in the UK. The UK Trust means that, for the first time, donations from the UK can be processed through a registered UK charity. Through the generosity of a VSF board member and his UK-based family, the Foundation has recently received £50,000. The bequest will go towards an endowment fund to help the VSF achieve long-term financial stability.



President of the Veterinary Science Foundation, Ms Deborah Smithers (left), leads a group of dedicated and hard-working volunteers who make up the Foundation's Executive Committee (advisory Board).

Deborah is National Head of Board Advisory Services at KPMG and leads a team of advisers who work with individuals and boards from some of Australia's most prestigious and well-known

organisations. In previous roles Deborah has been a lawyer, including as partner in two national law firms. She has a strong commercial and legal background encompassing an extensive knowledge of commercial practice and business structures and an appreciation for finance, marketing and human resource issues. She has also spent time on a voluntary basis with the St James Ethics Centre.

Deborah has been involved with the VSF for a number of years, both as Chair of the Events Committee and then as Board member. She says despite other not-for-profit opportunities she decided to focus her energies on the VSF: "I am passionate about the health and welfare of animals, and I also value the Foundation's connection with youth and education through the University of Sydney".

Visit our website for information about all VSF Board members and the Foundation's governance: www.vetsci.usyd.edu.au/Foundation.



Dr Jacqui Norris, Lecturer in Veterinary Microbiology and Animal Disease, with her own cat Peggy.

SUPPORTING FELINE RESEARCH

The VSF has provided some financial support for the research of Dr Jacqui Norris, Lecturer in Veterinary Microbiology and Animal Disease. Over the past 2 years Jacqui has led important studies into feline infectious peritonitis (FIP), a progressive and invariably fatal immune-mediated viral disease of (predominantly) young cats.

Her research so far has looked at characterising the disease as it occurs in Australia, the prevalence of the virus, and the design of diagnostic tests suitable for clinical practice.

The studies found certain popular breeds of cats in Australia – such as Burmese, British shorthair, Australian Mist and Cornish Rex - have an increased likelihood of succumbing to this disease. Further research hopes to use the samples from naturally occurring clinical cases of FIP to look at differences in the type of immune response developed by cats to the FIP virus, and to determine why some succumb to this disease.

Other support for Jacqui's research has come from cat lovers and the Australian Companion Animal Health Foundation.

VALENTINE CHARLTON CAT CENTRE OPEN FOR BUSINESS



Feline specialist and Senior Lecturer Dr Vanessa Barrs. Vanessa has already established a dedicated feline medicine referral service through the Valentine Charlton Cat Centre.

In September, more than 70 donors and supporters of the fundraising campaign to redevelop the University Veterinary Centre at Sydney (UVCS) joined Vice-Chancellor Professor Gavin Brown, campaign chair Mr Rob Ferguson and Director of the UVCS, Associate Professor Geraldine Hunt, to celebrate the completion of the \$3.5 million Stage 1 – the Valentine Charlton Cat Centre. Presentations about the new Centre were followed by a performance of Rossini's cat duet by opera singers (and cat lovers) Linda Barcan and Jane Parkin, with pianist Andrew Basile (right).

Architects Gordon and Valich have created a contemporary and exciting building.



ACCREDITATION VISIT

The Veterinary Schools Accreditation Advisory Committee (VSAAC) visited the Faculty during October with the aim of reviewing progress with the new curriculum for Years 3 to 5, to review the various developments that have taken place within the Faculty, including the Valentine Charlton Cat Centre, and to ensure the recommendations from their last visit in September 2001 have been completed.

VSAAC is the accreditation body for all Australasian veterinary schools and the committee's accreditation is essential for our graduates to be registered and to practice.

While the official report has not yet been received, the committee members, led by Chairman Dr John Craven, were impressed with the current curriculum developments, the staff and our students. They referred favourably to the openness and clear motivation of all the staff and students they interviewed. The committee concluded their visit with a meeting with the Vice-Chancellor, Professor Gavin Brown.

The Faculty is now looking forward to the visit of the American Veterinary Medical Association accreditation team, scheduled for April 2005.

CAT CENTRE GAINS MORE FELINE EXPERTISE

Feline medicine specialist, Dr Julia Beatty, has been appointed Senior Lecturer and the Faculty's head of Small Animal Medicine. She joins fellow feline specialist Dr Vanessa Barrs in providing an impressive focus on feline medicine to complement the new Valentine Charlton Cat Centre facilities.

Following graduation from the Royal Veterinary College in London, Julia worked in small animal practice in the UK and Hong Kong before completing a PhD and postdoctoral fellowship at the University of

Glasgow. Her studies focused on the immune response to feline immunodeficiency virus (FIV) and the role of FIV in lymphoma development.

Julia joined the University Veterinary Centre at Sydney as a Visiting Clinical Fellow in Feline Medicine in 1998 (after winning a Wellcome Research Career Development Fellowship), before returning to the UK as a Research Fellow in the Department of Pathology and Infectious Diseases, Royal Veterinary College. Now a

permanent resident in Australia, she is a Fellow of the Australian College of Veterinary Scientists in feline medicine, a registered Specialist in Feline Medicine, and has been consulting in a specialist referral practice in Sydney.

Julia has extensively published in a range of international scientific journals and is also experienced in undergraduate teaching. With Vanessa, she will be providing both academic and clinical leadership at the Valentine Charlton Cat Centre.



Dr Julia Beatty, the latest feline specialist to join the staff of the Valentine Charlton Cat Centre, University Veterinary Centre Sydney.

FIRSTS IN FELINE RESEARCH



Dr Jody Braddock, Lecturer in Small Animal Medicine, with George, her 5 year-old Burmese. Through a naturally occurring feline infectious anaemia infection, George played an important role in world-first research.

Lecturer in Small Animal Medicine and clinical researcher Dr Jody Braddock, is another staff member contributing to the skills-base of the Valentine Charlton Cat Centre.

Jody, with Dr Richard Malik and PhD student Séverine Tasker (University of Bristol), undertook research into feline infectious anaemia (FIA), a potentially fatal disease of cats caused by two feline haemoplasma organisms. Her research focused on the species causing the most severe haemolytic anaemia, Mycoplasma haemofelis.

Jody's team has achieved a number of firsts. They were the first group in Australia to use PCR testing for FIA (this means polymerase chain reaction, or testing to detect strands of DNA, in this case, bacterial DNA); they

identified the pathogenic strain for the first time in this country, coincidentally in Jody's 5 year-old cat George; then became the first research group world-wide to use real time PCR to monitor a cat's recovery (again, George). The results proved that not all FIA cats become chronic carriers of disease.

Not only is George completely cured, he has his own place in science – this research changed the previously accepted paradigm that cats with FIA remain subclinically infected for the rest of their lives.

HELPING US

BUILD A NEW SMALL ANIMAL TEACHING HOSPITAL

The Valentine Charlton Cat Centre could not have been constructed without the generosity of individual donors and corporations. This was Stage 1 of the redevelopment of the University Veterinary Centre at Sydney into a state-of-the-art small animal Teaching Hospital, clinic and referral centre. The continuing support of donors will be critical to enabling the commencement of the Stage 2 Dog Centre in the near future.

One such donor is Mathilde Kearny-Kibble, who made a donation in memory of her late husband, Dr Bob Kibble, for the naming of the Bob Kibble Cat Reception. Mathilde said: "One of the reasons I gave this gift in Bob's memory is because he was always grateful to the university and the vet faculty for providing him with the means to pursue a profession he really loved. He felt that one way he could show his gratitude was through financial support for the improvement of faculty facilities."

Another generous contribution to the building campaign was received from the group of vets who coordinate, with the support of Provet NSW, the annual Vet Sailing Day on Sydney Harbour.

All gifts to the Veterinary Science Foundation are tax deductible - for further information about how you can donate to our campaign to build a world class teaching hospital, please contact Jennie Churchill on (02) 9351 8024 or jenniec@vetsci.usyd.edu.au.

FIREMEN TO THE RESCUE FOR FLASH

Even the toughest firefighters have soft hearts. Saving the life of three month-old black and white kitten Flash was a positive outcome for fireman Shane Stephens when he attended a Darlinghurst house fire in July.

Owned by University Veterinary Centre Sydney (UVCS) client Dr David Gallagher, Flash was spotted by Shane lying under debris after David's house was robbed then set alight. Shortly after Flash's rescuer placed an

oxygen mask over her face, the tiny kitten started to revive. She was taken to the UVCS suffering from smoke inhalation, placed in an oxygen chamber and kept under observation during her recovery.

David says, "I had no hesitation sending Flash straight to the Sydney University Veterinary Centre because I knew she would get immediate and caring attention. And the veterinary staff praised the officers from the

Castlereagh Street Fire Station – they said Flash would not have survived without their care".

The loss of his house was tragic for David, but even more so was the death in the fire of his precious 18 year-old cat Tinker. Flash's survival helped to alleviate some of the pain of losing Tinker, and David remains grateful to Shane and his fellow firefighters for their compassion and fast action on the scene of the fire.



Fireman Shane Stephens holding Flash, the tiny kitten he rescued from the remains of an apartment fire in Sydney.

POSTGRADUATE RESEARCH IN THE FACULTY OF VETERINARY SCIENCE

Through the commitment of the Faculty of Veterinary Science to the creation of new knowledge through research, attracting and supporting postgraduate students is a critical component of the Faculty's strategic plan.

There are currently 76 postgraduate research students attached to the Faculty. The following Abstracts, from just some of these students, provide a glimpse into the

extraordinary diversity of research that is taking place across the Faculty.

The Faculty, already a partner in the CRC for Innovative Dairy Products, the Australian Biosecurity CRC and the Pest Animal Control CRC, has achieved national and international recognition in a number of research areas and opportunities are currently available within a range of disciplines for veterinarians and other scientists

interested in completing a PhD or Masters. Specific projects include koala health and diseases, ovine Johne's Disease, and seizure control in small animals.

Some projects have a scholarship attached for the designated duration of a full-time higher degree, and there are also University and Faculty scholarships available (these are competitive and awarded on candidate merit).



Professor Frank Nicholas, Sub-Dean, Postgraduate Education and Research Training.

To find out more about available projects, study costs and scholarships, visit the Faculty website:

www.vetsci.usyd.edu.au/study/2005PgOpportunities.shtml

or contact Faculty Research and Student Administration Officer, Ms Shirley Ray on (02) 9351 6932.

The effect of sex-sorting and freezing diluent preparation on the quality of ram spermatozoa

Simon de Graaf

Research supported by XY Inc.



Simon de Graaf with the 'MoFlo SX'. This specialised equipment separates spermatozoa into X and Y chromosome-bearing populations, enabling accurate predetermination of the sex of offspring.

The fertility of sexed frozen-thawed ram spermatozoa at low AI doses remains below commercially acceptable levels. The study aims to characterise the effect of sex-sorting on ram sperm kinematics and acrosome integrity, while concurrently investigating the impact of freezing diluent preparation (namely egg yolk clarification – a process thought to improve levels of beneficial proteins) on these parameters in an effort to improve the quality of sexed semen. Results demonstrate decreased post-thaw velocity and progressiveness of sex-sorted spermatozoa suggesting that the sorting process affects sperm movement. This change may contribute to the decrease in fertility of sexed, frozen-thawed ram semen. Results also indicate that the in vitro quality of ram spermatozoa is not changed by the clarification of egg yolk cryodiluent, allowing either technique to be used during semen freezing.

Foraging ecology of Antarctic leopard seals

Sophie Hall-Aspland

Research supported by Australian Marine Mammal Research Centre, Zoological Parks Board of NSW and Faculty of Veterinary Science.



Sophie Hall-Aspland on location in the Antarctic

The study's goal was to identify dietary analysis techniques specific to the leopard seal, a top order predator in the Antarctic ecosystem. Knowledge of the leopard seal foraging ecology will increase our understanding of the Southern Ocean ecosystems. A combination of scat and stomach content analysis, stable isotopic analysis, electron microscopy and captive feeding trials were conducted. Stable isotope analysis of whiskers, for example, suggested leopard seals were feeding on different prey items throughout the year, from fish and krill during winter to penguins in summer. Each technique provided different information and contributed to a comprehensive picture of a leopard seal's diet throughout the year.

Development of an RNAi approach to studies of lactation in a murine model

Palaniappan Ramanathan

Research supported by ReproGen (Centre for Advanced Technologies in Animal Genetics and Reproduction, Faculty of Veterinary Science) and the CRC for Innovative Dairy Products.



The extensive use of mouse models for cell biology and mammary gland research has generated a wealth of information that may be directly related to lactation performance in the bovine system. Genomic tools are much more advanced for the mouse at this time, and the availability of full mouse genome sequence information facilitates use of these tools for detailed functional analysis of genes involved in lactation. The recent development of RNAi libraries for use in the mouse provides a valuable resource for investigation of gene function by transient or controlled gene knockdown. This will enable a system for assessment of candidate genes prior to bovine analysis.

Remote area syndrome surveillance systems for cattle

Richard Shephard

Research supported by Meat and Livestock Australia and Australian Biosecurity CRC.

Remote extensive cattle grazing regions of Australia are characterised by large herds, long distances between properties and communities, little requirement for veterinary input, sparse veterinary services and inadequate surveillance coverage. This project investigates the potential for syndromic disease information to be captured by lay observers using the disease diagnostic program BOVID, analysed to compare prevalence of symptoms across regions and time periods, and used to determine the relative likelihood of individual disease occurrence. Changes in relative frequencies result in a 'trigger', notifying local government veterinary authorities that a given disease syndrome has emerged or changed in frequency, potentially leading to targeted surveillance efforts being focused towards investigation of the syndrome.

Factors affecting longevity in veterinary practice

Susan Pell

Research supported by Teaching Improvement and Scholarship Index funds.



Previous studies have shown that veterinarians choose their careers at a young age, with most envisaging work in veterinary practice. Despite this initial commitment, up to 20% of vets have left veterinary work entirely after ten years, with a crucial time being shortly after graduation. Minimising this attrition is of interest to veterinary employers, educators and potential students alike. The aim of this research is to investigate the educational and other factors that affect veterinary graduates transition to practice. This project will gather important evidence about how well veterinary undergraduate training prepares graduates for veterinary work, and will identify risk factors for successful transition from student to practitioner.

Canine Snake envenomation in NSW – development of adjunctive diagnostic testing procedures

Jane Heller

Research supported by Canine Research and Veterinary Foundation of NSW.



Accurate diagnosis of species-specific snake envenomation in dogs is difficult. This study assessed the use of easily collected clinicopathological data to help diagnose Red Bellied Black snake (RBBS) envenomation in dogs presented to veterinary clinics in the Camden region. Clinical signs associated with this disease process can be slow in onset and ambiguous, and early diagnosis can provide reductions in severity, mortality and cost of treatment. Laboratory, historical and physical examination findings were analysed on 19 confirmed RBBS envenomation cases. Results indicated that elevations in Creatine Kinase (CK), Aspartate aminotransferase (AST) and Total Bilirubin (TBili) are highly specific indicators of RBBS envenomation and could be used to assist diagnosis.

A study of the biological and financial impact of OJD in affected sheep flocks in NSW

Russell Bush

Research supported by Meat and Livestock Australia.



Debate continues regarding the impact on infected farms of Ovine Johne's disease (OJD), a chronic enteric disease of sheep caused by the bacterium *Mycobacterium avium* subspecies *paratuberculosis*. Accurate estimation of annual mortality rates and the proportion attributable to OJD could provide an insight into the financial significance of this disease. The study quantified OJD mortalities in 12 flocks across four districts of south-eastern NSW, confirming considerable mortality rates (average 6.2%, range 2.1 to 17.5%) contributed to significant financial loss during the 12-month study period. Industry groups can now be provided with accurate figures on direct OJD losses within the endemic area of NSW. The data can be used to justify vaccination programs, and contribute to the development of cost effective strategies for future control and management.

Development of the innate immune system in marsupials

Kerry Daly

Research supported by ReproGen, School of Environmental and Life Sciences, Macquarie University, Department of Zoology, University of Melbourne, CRC for Innovative Dairy Products.



The marsupial neonate is born highly immature with an immune system that does not mature until the end of its time of suckling in the pouch. Yet from birth it is exposed to many potential pathogens. While immune protection of pouch young is mediated by secretion of milk immunoglobulins, little is known about the role of the innate immune system in marsupial pouch young survival. Isolation of an antimicrobial peptide from the pouch of Koalas and phagocytic cells in the milk of the Tammar and Quokka suggest a potential for innate defences in pouch young protection. The recognition of microbial non-self, a fundamental step in activation of the innate immune system, is a focus for this study, as is the role of antimicrobial peptides in adult and pouch young.

Genetic characterisation of two animal models for Neuronal Ceroid Lipofuscinosis (NCL): Australian Merino sheep and Devon cattle

Peter J Houweling

Research supported by ReproGen, Batten Disease Support and Research Association.

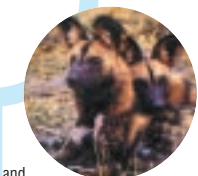


Neuronal Ceroid Lipofuscinoses (NCL) are incurable autosomal recessive neurodegenerative disorders characterised by brain and retinal atrophy found in several species, including humans, cattle and sheep. Eight different variants of NCL have been reported in humans. This study has identified the causative mutation for NCL in Devon cattle – the first large animal model for one of the eight human variants. A mutation identified in a different gene in merino sheep is now also under further investigation. It is hoped the investigation of animal variants of NCL will provide a greater understanding of these disorders and lead to the development of an appropriate cure in all species.

Ecological threat assessment and conservation management of the African Wild Dog in the Lower Zambezi National Park, Zambia

Kelly Leigh

Research supported by WWF, the University of Pretoria and private donors through African Wild Dog Conservation.



The African wild dog (*Lycan pictus*) is one of Africa's most endangered carnivores. A field study of the previously unstudied wild dog population in the Lower Zambezi National Park aims to identify the main threats to the survival of the Zambian population. Genetic samples were acquired non-invasively via opportunistic collection of faeces, and mitochondrial DNA control region sequences analysed to compare Zambian population genetic diversity to other geographic populations. The study is providing valuable insights into the social dynamics of small and declining African wild dog populations and information on remaining genetic diversity, relevant for both their in-situ conservation and for long-term management of international captive breeding and reintroduction programs.

Bone mass and physical development in Beijing pubertal girls three years after cessation of a milk supplementation trial

Qian Zhang

Research supported by Nestle Foundation, undertaken in cooperation with the Institute for Nutrition and Food Safety, Chinese Centre for Disease Control and Prevention, China.



A project involving two years of milk supplementation in approximately 700, 10-12 year old Beijing girls led to significantly greater bone mass accrual and physical development compared to a control group. To determine whether the benefits were maintained, 504 of these girls, now age 15, were re-recruited in 2004 to measure anthropometry, bone mass and body composition. By 2004, the effects of the milk supplementation on height, weight, total body and distal forearm bone mass acquisition had disappeared, while the significant increases in sitting-height and proximal forearm bone mass accretion were still apparent. Two years of milk supplementation during adolescent growth had been insufficient to impart permanent effects on the growth and development of bone, suggesting that milk should be consumed throughout the whole period of growth and development.

Epidemiology of chronic renal disease in Australian cats

Joanna White

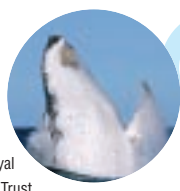
Research supported by the Post Graduate Foundation in Veterinary Science.

This study aims to describe the epidemiological features of feline chronic renal disease (CRD) in Sydney. A total of 99 female and 86 male cats with naturally occurring CRD fulfilled the inclusion criteria: the presence of increased serum creatinine and inadequately concentrated urine, necropsy findings, renal proteinuria or persistent azotaemia despite re-hydration (cats were excluded if a specific aetiology was identified). In this survey: breed does not appear to play a significant role in the development of CRD; male cats with CRD are significantly younger than female cats with CRD; younger cats are more likely to be diagnosed at an advanced stage of disease than older cats. Whether these differences reflect differences in the aetiology of CRD or in the rate of disease progression warrants further investigation.

Non-invasive hormone analysis in cetaceans

Carolyn Hogg

Research supported by Australian Marine Mammal Research Centre, Zoological Parks Board of NSW and Faculty of Veterinary Science, Pain Management Research Institute, Royal North Shore Hospital and the Koala and Endangered Species Trust.



Since whaling ceased, some whale populations worldwide appear to be recovering while, for unknown reasons, others have little to no reproductive rate. The International Whaling Commission (IWC) recommended the development of non-invasive techniques to measure internal physiological parameters in great whales. Current techniques assessing cetacean hormones use blood, faecal, urine or blubber samples, while saliva is used in humans, gorillas and monk seals. This study aims to determine whether hormones can be detected in exhaled air and, if so, whether the concentrations can indicate reproductive status. A method to determine testosterone and progesterone concentrations in captive bottlenose dolphin saliva and blow has been developed. Initial field tests with humpback whales have shown the technique has potential in great whales. The long-term goal of this study is to use this technique to assess hormone concentrations in great whales in Australian waters.

Study of the rejection of *Haemonchus contortus* from the abomasum of the sheep

Kate McMaster

Research supported by a joint venture of Meat and Livestock Australia and Australian Wool Innovation.



Haemonchus contortus is one of the most economically important parasites in the Australian sheep industry. In recent years resistance to parasitic drugs has forced both sheep producers and researchers to look for alternative means of control. A better understanding of the host parasite relationship is an essential step in discovering improved control measures. This study sampled sheep infected with *Haemonchus contortus* over a selected period of time to assess the development and mechanisms of immunity and resilience to infection. The trial will be followed by a detailed investigation of critical time points identified in this experiment.

Mother-pup in-air 'contact' calls in Weddell seals (*Leptonychotes weddellii*)

Kym Collins

Research supported by the Australian Marine Mammal Research Centre, Aurora Expeditions, PADI Aware Foundation, Ecological Society of Australia, Linnean Society of NSW.



In pinniped species that undergo temporary separations during lactation mothers must reunite with their pups, as misdirecting maternal care is energetically costly and may decrease the survival of their own pup. Females primarily use visual and olfactory cues to confirm pup identity at close range, but over larger distances, acoustic cues are the most efficient. This project aims to investigate the use of vocal recognition by Weddell seal mother-pup pairs. Vocal recognition requires the caller to produce individually distinct calls that require stereotypy within individuals and variability among them. Analysis to date has confirmed that mothers produce individually distinct calls, while only two thirds of pups sampled produced such calls. This suggests the production of distinct pup calls may be influenced by an additional factor, pup age.

Exposure of horses to total and respirable particle endotoxin concentrations generated by specific feed and bedding materials

Priscilla Spendlove

Research supported by The Waltham Foundation, UK.



Dust is ubiquitous in equine stables and is associated with endotoxin. Exposure to airborne dust and endotoxin is known to contribute to the aetiopathogenesis of neutrophilic Inflammatory Airway Disease (IAD) in horses. Two major contributors to aerosolised dust are feedstuffs and bedding materials. This study investigated total and respirable particles and particle endotoxin concentrations generated by four feed types (hay, chaff, oats and pellets) and four bedding materials (shavings, straw, sawdust, rice hulls). Average exposure to breathing zone total and respirable particles from rice hulls was significantly higher than other bedding types. Average exposure to breathing zone respirable endotoxin concentration from straw was significantly higher than produced by shavings and sawdust. There was no significant difference between total and respirable exposures generated by the four feed types.

In vitro survival of *Mycobacterium avium* subspecies paratuberculosis

Sanjeev Gumber

Research supported by University of Sydney International Postgraduate Research Scholarship.

Mycobacterium avium subspecies paratuberculosis causes Johne's disease, an economically significant problem in ruminants in most countries. This organism survives for long periods on pasture and soil, and as the infection is acquired by ingestion, control is difficult. This in-vitro study monitored the survival of the organism (sheep strain) following exposure to different time and temperature combinations. It showed that temperature flux has a more detrimental effect on the survival of M a paratuberculosis than peak temperature. Dormancy was also observed in these experiments. This knowledge informs our understanding about the survival of the organism in the environment and can be used to assist disease control through grazing management.

Individual variation of the pup attraction call and female attraction produced by female and pup Australian fur seals

Joy Tripovich

Research supported by the Project AWARE Foundation, The Australian Geographic Society, Syntec International, Arthur Ellis Pty Ltd, Australian Marine Mammal Research Centre.



Female Australian fur seals often leave their newly born pups alone on crowded islands to forage at sea for several days. On their return, they must find their pup among the several hundred pups in the colony. A swift reunion is crucial: to provide the totally dependent pup with nutrient supply and to prevent the mother accidentally suckling another pup. An important driving force in the reunion is said to be vocal recognition. This study, which recorded vocalisations of females and pups in the breeding seasons of December 2000 and 2001, concluded that there is sufficient stereotypy within individual calls, and sufficient variation between them, to enable vocal recognition in both female and Australian fur seal pups.

Australian bovine keratoconjunctivitis

Craig McConnel

Research supported by Schering-Plough

A bovine eye affected by infectious bovine keratoconjunctivitis or 'pink eye'.



Infectious bovine keratoconjunctivitis (IBK) is considered the most common ocular disease of cattle worldwide, both in terms of animal welfare and as a cause of lost production. Despite the susceptibility of the causative bacterium, *Moraxella bovis*, to a large number of antimicrobial compounds, the treatment of affected cattle has many disadvantages and prevention is preferable. Surface pili are antigenic and immunogenic and have been recommended as vaccine components. Efficacious application of pili-based IBK vaccines requires production of a polyvalent vaccine targeting specific regional isolates. This project surveyed M bovis strains found within Australia via pili serologic cross-reactivity.

A comparative study of the sensitivity of antigen capture ELISA and PCR to detect epizootic haematopoietic necrosis virus in spiked tissue homogenates of rainbow trout

Tho Nguyen Dang

Research supported by University of Sydney International Postgraduate Research Scholarship.

Epizootic haematopoietic necrosis virus (EHNV) can cause high mortality (100%) in reelin perch and mild morbidity and mortality in rainbow trout. The Fish Diseases Commission of the Office International des Epizooties (OIE) has recommended that an antigen capture ELISA be the standard diagnostic test for EHNV infection. As PCR is routine in many diagnostic laboratories, this study was initiated to determine whether PCR would be more sensitive than the ELISA, subsequently reducing false negative results in virus testing. The results showed that the PCR demonstrated increased sensitivity over the ELISA in detecting EHNV. The practical implications of these results will be discussed.

The significance of management practices on social behaviour of captive primates

Franziska Schuerch

Research supported by University of Sydney International Postgraduate Research Scholarship.



Non-human primates kept in captivity are regularly exposed to management practices that intervene with their daily routine. While extensive studies exist of social structure and behaviour in non-human primates, this study investigated the effect of commonly used management interventions on the social behaviour of hamadryas baboons (*Papio hamadryas*), and looked at methods that minimise the associated disruption. Management interventions include temporary removal of adult baboons from the group, permanent transition of infants into a nursery group and the effects of housing females with vasectomised males. A further study investigated the behavioural aspects of a proposed oral anaesthetic regime for non-human primates.

Studies of Porcine Myocarditis Syndrome

Deborah Finlaison

Research supported by Australian Pork Limited and NSW Department of Primary Industry.

This study arose from the June 2003 outbreak of sudden death in sucker pigs, elevated stillbirth percentages and to lesser extent an increased number of mummified piglets, on a property in NSW. Over time, the syndrome was recognised on a second site owned by the same company. The disease investigation excluded nutritional causes and known endemic and exotic agents suggesting the possibility of a novel agent. The high incidence of stillbirths suggests that in utero exposure is a significant factor in this disease syndrome. Histopathology, electron microscopy and epidemiological studies suggest an infectious agent, most likely viral, and studies are currently underway to characterise the agent.

Variations in the timing of reinforcement as a training technique for foals (*Equus caballus*)

Amanda Warren-Smith

Horses are used worldwide for a range of activities and their usefulness and welfare are strongly influenced by their trainability. This may be influenced by learning ability and, as with all training, efficacy is influenced by consistency and timing. This study, with 16 unweaned naive foals of warmblood or thoroughbred breeding, aimed to determine the optimum timing of reinforcement to facilitate learning. Pressure applied to a headcollar via a lead rope was used as the stimulus for each foal to walk forward, and the effects of releasing the pressure at three different times were evaluated. While learning occurred in all groups, the longer the delay of reinforcement, the significantly more correct responses were achieved. Colts were significantly more likely to perform correct responses than were fillies.

Synchronisation of ovulation in Merino ewes with GnRH in the breeding and non-breeding season

Jorge Reyna

Research supported by the Loxton Scholarship.

This project aimed to determine the effect of GnRH (gonadotropin release hormone) as an aid to synchronising the time of ovulation in Merino ewes during non-breeding and breeding seasons, as determined by transrectal ultrasound. Oestrus was synchronised during spring and autumn using FGA sponges and PMSG (Bioniche), before treatment with Gonadorelin (Intervet). During the non-breeding season ovulation in treated animals took place from 42 to 54 h (mean 48h) while in control animals from 42 to 60 h (mean 52h). In contrast, during the breeding season ovulation was delayed for both treated (mean 52h) and control animals (mean 57h). These results suggest that GnRH better synchronised the time of ovulation, but that ovulation was influenced by the season.

Energy balance and reproductive performance in average genetic merit cows fed to achieve 6000L and 9000L per lactation

Mariana Pedernera-Romano

Research supported by Consejo Nacional de Ciencia y Tecnología, Mexico.



During early lactation the dry matter intake of dairy cows does not increase at the same rate as milk yield, resulting in negative energy balance (NEB). Increasing evidence associates the degree of NEB with poorer reproductive performance. We hypothesise that feeding average genetic merit cows with a diet that allows them to achieve 9000L in a pasture-based system, will decrease the extent and degree of NEB. However the cows with higher milk yield may have a low reproductive performance due to "metabolic load". This study aims to quantify NEB and its relationship with reproductive performance of cows fed to achieve contrasting milk yields (6000L and 9000L/lactation). It will be followed by more detailed studies of cows managed under contrasting feeding systems.

Statistical modelling of the dairy cow lactation curve

Evelyn Hall

Research supported by CRC for Innovative Dairy Products.



Lactation is the process of milk production in the mammary gland and its subsequent release. The graph of milk production against time, the lactation curve, has been modeled using either a mathematical or biological basis. This study found the parameters of the most commonly used model, the Wood (1967) model, difficult to interpret biologically and closely correlated. Using data from 5009 cow lactations, the model was reparameterised with the new parameters defining the total volume of milk produced over the lactation, the maximum milk production achieved during lactation and the time at which this maximum production was reached.

Identification of risk factors for OJD infection-level in sheep flocks

Navneet Kumar Dhand

Research supported by University of Sydney International Postgraduate Research Scholarship and Meat and Livestock Australia.

This project is designed to identify risk factors for the expression of Ovine Johne's Disease (OJD) in infected flocks through a cross sectional study of 3-4 year old sheep. OJD prevalence estimates will be based on pooled faecal culture. Information about OJD flock history, flock management practices and management of the 3-4 year old cohort will be collected by personal interviews. In addition, soil samples will be collected from the properties for analysis. Statistically significant associations between potential risk factors and OJD infection-level will be identified. The study is particularly focused on identifying risk factors that can be manipulated to improve on-farm control of OJD.

Identification of novel bioactives in bovine colostrum: regulation of gut development and pituitary hormone secretion

Alison Morgan

Research supported by CRC for Innovative Dairy Products.

Colostrum is the first milk produced after birth and is a rich source of immunoglobulins, antimicrobial peptides, growth factors and other potential biologically active peptides. This project aims to identify novel bioactives in colostrum that regulate gut development and secretion of pituitary hormones by assessing fractionated in vitro and in vivo digested colostrum in specific bioassays for growth promotory activity. Positive samples will be further fractionated and re-assayed in order to isolate the bioactive peptide(s) responsible for this activity. The discovery of a peptide that positively affects the gut-brain axis will have applications in the pharmaceutical, nutraceutical, biomedical, and livestock industries.

It's a Guide Dog's life – reducing the fail rate and identifying suitable dogs from 6 months of age

Lara Batt

Research supported by Guide Dogs NSW/ACT.



A serious problem exists in the 'production' of guide dogs for the visually impaired with currently less than 50% of the puppies selected by Guide Dogs NSW/ACT graduating from their training program. Conservatively, each successful guide dog costs \$26,000 to recruit, maintain and train. The project aims to increase the success rate of guide dog pups by identifying unsuitable dogs from 6 months of age, rather than the current 14-16 months. It may also allow dogs to be selected for a future breeding program. The project is using temperament and lateralisation tests to identify problems such as anxiety and over-excitability; an early training program to determine the effects of socialisation; and a questionnaire to determine whether puppy raising families can provide useful information to aid trainers when assessing 'their' pup.

CLOSE UP



STUDENT PROFILE
NICHOLAS ROLLS

Tell us about your pathway to veterinary science.

I grew up on a farm and wanted to be a vet while at school. It always seemed a perfect way to be professionally involved in agriculture and the local community. I completed a Bachelor of Science majoring in Pharmacology, enrolled in Veterinary Science, then deferred for 12 months after first year to work at the Australian Wheat Board and the Royal Children's Hospital in Melbourne. By then, I was ready to continue studying towards a career where I could work in the country and outdoors.

Has the decision to study vet science been a good one?

Absolutely. I am glad I can say that with just three weeks left until graduation! I have had a lot of fun and found the course really interesting and challenging. In such a small faculty you get to know staff personally and make many strong friendships. There are also opportunities for amazing experiences outside class. I did my cattle prac on King Island, and couldn't complain about eating local brie and camembert after a day's work!

What are your thoughts on the new curriculum?

It is really good. Although you start clinical work slightly later, final year has been great for developing practical skills and choosing placements to suit your interests. Doing pure science subjects in the early years can be quite frustrating when you want to be hands-on, particularly for students with previous degrees, but many subjects now seem to be more clinically-focused.

What do you think the future may hold after graduation?

I am keen to work in the country in mixed practice. Production animal work attracted me initially but I have also really enjoyed equine and small animal practice. Mixed practice will allow me to experience all of these aspects of veterinary work and seems the perfect environment in which to consolidate a range of skills.

Tell us about your extra-curricular interests.

I have always enjoyed making the most of student life, with regular vet faculty social functions and interfaculty sport. While at Camden, I was President of the Camden Farms Student Society and enjoyed organising a range of activities including guest speaker nights and a volunteer reading program with Cobbitty Primary School.

What do you do in your spare time?

Until clinic placements took priority I worked on weekends at R M Williams in the city, and at the Royal Easter Show. This maintained a country connection, meeting vets and farmers in need of a new pair of boots or a shirt! I enjoy fly-fishing, sport, getting home to the farm and spending time with my girlfriend, friends and family. In between placements this year I have been involved with a charity called One Umbrella that prepares food for distribution through soup kitchens and welfare agencies.

Who inspires you and why?

My dad. Farmers just know so much about animals from a lifetime of experience. I am sure that I will be asking him questions for a few years yet.

FOCUS ON
FOOD SAFETY

More than 50 delegates from 25 organisations attended a Faculty workshop on food safety and farmed animals in August. The seminar was a tangible demonstration of the Faculty's commitment to producing graduates and researchers able to meet the needs of Australia's future production animal industries.

Speakers included Professor Will Hueston, Director, Centre for Animal Health and Food Safety, College of Veterinary Medicine, University of Minnesota, Professor Ian Gardner, Professor of Epidemiology, Department of Medicine and Epidemiology, University of California, Davis, and Dr Gardner Murray, Australian Chief Veterinary Officer, Department of

Agriculture, Fisheries and Forestry Australia, Canberra.

Workshop convenor Professor Richard Whittington, Chair of Farm Animal Health, says, "Australia's red meat industries alone could lose \$AUD billions per annum in the event of a crisis in consumer confidence, and in the last 10 years worldwide, we have witnessed human disease, sometimes in outbreak form, causing death due to exposure to animals or consumption of animal products. These include BSE or mad cow disease (bovine spongiform encephalopathy), Nipah virus in pigs, E. coli O157 in ground meat and hepatitis A virus in oysters".

Richard said the seminar gave the Faculty a clear message that it has a significant role to play in ensuring the well-being of the community through the role of veterinarians in food safety.

The workshop was sponsored by



Professor Richard Whittington, Chair of Farm Animal Health and Convenor of the Faculty's Food Safety and Farmed Animal Workshop.

the Australian Government Department of Agriculture, Fisheries and Forestry, Meat and Livestock Australia, Rabo Bank, Australian Meat Industry Council, Australian Biosecurity CRC and the Faculty's Veterinary Public Health Management Program.

UNIVERSITY
VETERINARY CENTRE
CAMDEN



EXPANDING
EQUINE EXPERTISE

The most recent addition to the Faculty's equine specialist team is Dr Tony Mogg (above): Diplomate of the American Colleges of Veterinary Internal Medicine and Veterinary Clinical Pharmacology, Fellow of the Australian College of Veterinary Scientists (Equine Medicine), Fellow of the American Academy of Veterinary Pharmacology and Therapeutics, and a registered specialist in Equine Medicine.

A Sydney graduate, Tony has a PhD in equine gastrointestinal pharmacology (University of Queensland) and has worked at the New Bolton Center, University of Pennsylvania, USA, initially as a Resident in Large Animal Medicine and then as a Lecturer in Large Animal Medicine. He then spent time at Massey University in New Zealand as Senior Lecturer in Equine Medicine before returning home to Australia.

His professional interests include large animal critical care and neonatology, equine clinical pharmacology, general equine internal medicine, clinical pathology and veterinary medical education. Specific clinical interests are therapeutic drug monitoring, equine metabolic and renal diseases, and medical diseases of miniature horses and ponies.

Tony is teaching equine medicine to Year 4 students, is involved in the clinical teaching of Year 5 student interns and has the role of Coordinator of the Rural Mixed Practice Rotation at the University Veterinary Centre at Camden.

PARALYMPIC GAMES
TRIUMPH

Gillian Rickard, Year 2 veterinary student and Head Coach of the Australian Paralympic Equestrian team, has returned from Athens thrilled with the team's performance. Rider Jan Pike and the team's top horse, Dr Doullittle, were the best chance for a medal and they didn't disappoint, returning home with silver and bronze. The team finished a very credible sixth in the team competition, behind Great Britain, Germany, The Netherlands, Sweden and Norway.



Medal-winning duo, Jan Pike and Dr Doullittle, with Head Coach Gillian Rickard (left) and team manager Sue Cusack.

Jan and Dr Doullittle won their silver medal on the very first day of competition. As Gillian says, "It made all our work 100% worthwhile. After that, everything was a bonus. And Jan and Dr Doullittle

had to go on an hour late and perform calmly after the collapse of the horse competing before them, which threw everyone into crisis mode. As Jan's cerebral palsy requires very careful management to enable her to ride well, it was a supreme effort".

The Faculty played a significant role in this success, through the long term care given to Dr Doullittle by the equine specialists at the University Veterinary Centre at Camden (UVCC). The veterinary expertise continued after the team departed, with long distance advice required to manage Dr Doullittle and the other horses through the anticipated travel sickness, which hit 20 hours into the long flight from Sydney to Athens.

Gillian says Dr Doullittle is proof of what good management and the right veterinary advice and treatment can do for an athlete: "All the team members are enormously grateful to the staff of the UVCC for their professional support. We also want to thank our other sponsors - Nature Vet, the Australian Feed Company, Bayer and Virbac. Their generosity made all the difference to Dr Doullittle's ability to compete successfully".

And the horses? They spent 5 weeks in quarantine in the UK enjoying a well-earned rest before heading home.



THE PETERVA MEDIA GROUP

Year 5 Interns have received significant regional media coverage during their rural rotations. Left to right: Alexandra Young, Graham Adam, Emma Warry and Mark Reeve at the Wagga Wagga saleyards during a Rural Public Practice rotation with the Rural Lands Protection Board and Department of Primary Industry in Wagga.

YEAR 5 INTERNS MAKE THEIR MARK

The Faculty of Veterinary Science new undergraduate curriculum has come to fruition: during 2004, students from years 1 to 5 participated in the new program.

During the lecture-free final year, Year 5 students are considered student veterinary interns, with limited registration by the Veterinary Surgeon's Board and approval to undertake restricted acts of veterinary science under the supervision of a registered veterinarian. Interns must complete four rotations in the University's Veterinary Teaching Hospitals (Sydney and Camden), and a month each in a Rural Public Practice such as a Rural Lands Protection Board, Australian or overseas agency servicing the livestock industries, extramural small animal and extramural rural mixed practice. Students then choose three rotations from a broad range of approved electives, including general or specialist practices, zoos, research laboratories, and industry placements.

A recent meeting of NSW District Veterinarians (DVs) indicated significant enthusiasm for the program and a willingness to continue hosting interns on Rural Public Practice rotations. Combined with positive feedback from participating interns about their rural experience, the DVs believed the new final year was creating more awareness of rural veterinary jobs and may ultimately help generate interest in serving in remote western areas of the state.

undergraduate activities

SYDNEY UNIVERSITY
WILDLIFE SOCIETY



Sydney University Wildlife Society committee members, from left to right, Rebecca Robey (Secretary), Pru Harvey (President) and Meghan Theman (Treasurer).



Attendees traveled from around Australia and as far away as Zambia for the second annual conference of the Sydney University Wildlife Society, held at the Faculty in October. The impressive range of speakers and topics included Claire Vaux Oelricks on rehabilitation of Orangutans in Borneo, Dr Rupert Wood of the Australian Wildlife Health Network on facial tumours in Tasmanian devils, Andrea Reiss spoke about saving the northern hairy-nosed wombat, and vet student and WSPA representative, Izidora Sladakovic, the welfare implications of modern whaling activities. Delegates included wildlife researchers and zoo professionals, and students from Queensland, Macquarie and Sydney Universities.

The Wildlife Society is a non-profit student-run organisation. For further information, email suwildlife@vetsci.usyd.edu.au.

FACULTY STAFF NEWS



Dr Paul Sheehy (above) will oversee the quality and use of on-line learning through the new position of Sub-Dean for Information and Communications Technology in teaching and learning.

Associate Professor Chris Moran achieved a 2004 College of Sciences and Technology Award for Excellence in Research Higher Degree Supervision. The award confirmed Chris' considerable reputation for high quality postgraduate supervision.

Faculty staff successfully passed Australian College of Veterinary Scientists exams. New Members are **Dr Tina Baxter** (Small Animal Medicine); **Dr Neil Horadogoda** (Veterinary Pathobiology); **Dr Mark Krockenberger** (Veterinary Pathobiology); **Dr Paul McGreevy** (Animal Welfare). Successful Fellowship exam candidates include: **Dr Jody Braddock** (Canine Medicine); **Dr Steven Fearnside** (Small Animal Surgery); **Dr Kris Hughes** (Equine Medicine); and **Dr Sarah Matthews** (Equine Surgery).

New Faculty appointments include: **Dr Craig Bailey**, Senior Clinical Registrar in Small Animal Surgery; Senior Lecturer **Dr Julia Beatty**; **Dr James Hart**, Registrar in Large Animal Medicine and Surgery; **Dr Graham Kelly**, Adjunct Professor; **Dr Nicholas Malikides**, Research Fellow; **Dr Tony Mogg**, Senior Lecturer in Equine Medicine; **Dr Anthony Rowe**, Postdoctoral Fellow. **Mr Kim McKean** is the new Farms Supervisor at Camden.

Sydney alumnus and internationally-renowned veterinary epidemiologist, **Professor Ian Gardner**, Professor of Epidemiology, University of California Davis, just completed a 3 month visit to the Faculty through a University of Sydney Residency Award for Expatriate Researchers. He worked with the Farm Animal Health team on collaborative research programs in Johnes' Disease epidemiology.

Drs Lindsay Gillan and Jaime Romero are the recipients of the 2004 T J Robinson Travelling Fellowship. The late Professor Robinson donated the funds to promote excellence in the traditional disciplines of animal husbandry, reproduction, genetics and nutrition, through support of outstanding young academics.

LIDA - www.vetsci.usyd.edu.au/lida

A comprehensive new veterinary website LIDA (Listing of Inherited Disorders in Animals) has been launched by staff from the Faculty of Veterinary Science.

Confronted by 500-plus inherited disorders in dogs and the problems of matching these to the 180 recognised dog breeds in Australia, Senior Lecturer Dr Paul McGreevy and internationally-renowned geneticist Professor Frank Nicholas have developed an on-line database designed to make the task of choosing a healthy pet easier.

"Our aim with LIDA was to offer jargon-free descriptions of inherited disorders and to classify the disorders by breed and organ system in a relational database", said Paul.

LIDA was developed in consultation with the Royal New South Wales Canine Council (RNSWCC), the Pet Industry Joint Advisory Council, the Royal Society for the Prevention of Cruelty to Animals (Australia) and the Animal Welfare League (NSW). It was funded by the Canine Research and Veterinary Foundation and supported by the RNSWCC.



Celebrity vet and alumnus Dr Katrina Warren, who launched LIDA in September, with the key creator's of the website, Dr Paul McGreevy and Professor Frank Nicholas.

More than 250 Australian small animal veterinary practices have agreed to report breed disorder incidences on an ongoing basis to allow the delivery of on-line real-time reports of trends in these disorders to the veterinary profession, dog breeders and potential puppy purchasers.

There are now plans for LIDA to include databases for other species including cats, horses and cattle.

TEACHING EXCELLENCE REWARDED

The Faculty of Veterinary Science is increasingly recognised for its innovative and cutting edge teaching programs – and its staff rewarded for their commitment with prestigious teaching awards.

YEAR 5 TEAM

Dr John Baguley and the Year 5 Extramural Support Team have received the inaugural Vice-Chancellor's Award for Support of the Student Experience. The Selection Panel were impressed with the project's innovation through the use of IT and the team nature of the project, with academic staff, general staff and veterinary practitioners all making a significant contribution.

The Year 5 program operates through a comprehensive on-line system designed to cope with the fact that final year students are now located in the field (and that can mean internationally). It promotes the development of a learning community beyond the usual constraints of time and location, and aims to prepare student interns for their transition to employment and lifelong learning in a professional setting.

OUTSTANDING TEACHING

Described by students as having "an infectious enthusiasm and passion for their subject and for teaching", Dr Jacqui Norris and Associate Professor Jennie Hodgson have received the 2004 Vice-Chancellor's Award for Outstanding Teaching. Jennie also received the AVA Excellence in Teaching Award, to be presented in 2005.



Dr Jacqui Norris (left) and Associate Professor Jennie Hodgson, recipients of the 2004 Vice-Chancellor's Award for Outstanding Teaching.

Jennie and Jacqui have developed innovative course work in Veterinary Microbiology focusing on realistic clinical scenarios and a practical knowledge of infectious diseases. Their team approach to teaching, an emphasis on the clinical application of microbiology to veterinary practice, and a friendly and caring learning environment has made their unit one of the most popular in the new veterinary curriculum.

INTERDISCIPLINARY NETWORK IN PUBLIC HEALTH

Academics from the Faculty of Veterinary Science and the School of Public Health in the Faculty of Medicine at the University of Sydney have commenced a new alliance to address public health issues from both veterinary and human disciplines.

The Interdisciplinary Network for Public Health (INPH) grew out of the realisation that both Faculties needed to build linkages between veterinary science and medicine, especially in the area of emerging infectious disease issues. The Faculty's Veterinary Public Health Management postgraduate program provided the initial impetus through a joint project with a medical Honours student to develop on-line zoonoses fact sheets appropriate for both

medical and veterinary practitioners.

Members of the INPH are now drawn from the Faculty of Veterinary Science; the School of Public Health; the National Centre for Immunisation Research; Westmead Hospital; Discipline of Medicine, Department of Infectious Disease; Northern Rivers University Department of Rural Health; and the Australian Centre for Agricultural Health and Safety.

The INPH is an evolving venture and represents an exciting step forward in the development of important and lasting partnerships between veterinary science, medicine and public health, disciplines that traditionally have remained separate.



Dr Nick Malikides, the Faculty's Australian Biosecurity Cooperative Research Centre's Research Fellow in Emerging Infectious Diseases and Veterinary Public Health, has responsibility for developing the new Interdisciplinary Network in Public Health.

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STAFF PROFILE DR DAMIEN HIGGINS

What are your current positions?

For the past year I've been combining my role as Associate Lecturer (clinical pathology) with completing PhD studies in the response of koalas to chlamydial infection.

What qualifications do you hold?

A Bachelor of Veterinary Science from the University of Queensland (1990). Master of Veterinary Studies (Wild Animal Medicine and Husbandry), University of Sydney (1998).

How did your career begin?

I started in mixed practice in Australia and the UK, and then moved into wildlife work at Currumbin Sanctuary and Taronga Zoo where I worked in medicine, surgery, quarantine and management of all types of vertebrates. There, I also began teaching zookeepers, and veterinary students and practitioners, and did my first research on the reproductive cycle of echidnas.

What are your current key projects?

Through my PhD studies I developed some techniques to study immune function and disease ecology of marsupials (particularly koalas). I am keen to continue that work and eventually expand it to study mechanisms of disease emergence in a range of species. I've also been drafting national standard protocols for the collection of samples from stranded whales and dolphins and have been involved in efforts to establish a national network to facilitate cetacean welfare and research.

What project is giving you the most satisfaction at the moment?

Seeing my PhD work come to fruition was very satisfying. Since then I've been really enjoying teaching and formulating ideas for future research.

What are your career highlights?

Working with wildlife is a great privilege and brings many highlights, from working on highly endangered, unique species like the northern hairy-nosed wombat in their last shred of habitat, to accommodating or discovering the fascinating aspects of lesser-known or less charismatic species. My periods working on seals in the Antarctic with the Australian Marine Mammal Research Centre and the Australian Antarctic Division, and on the South Australian coast with researchers from the University of California, Santa Cruz, provided some of the highest (and sometimes toughest) moments of my career in terms of the beauty and intensity of the environment, the great mix of people involved, the challenge and fascinating diversity of the work, and the animals themselves.

What do you do in your spare time?

Surf, see live music of virtually any genre, make random attempts at playing guitar and fiddle (should have chosen triangle and kazoo), eat and drink with friends, travel, dabble.

Who or what inspires you and why?

Good company, the outdoors, surfing and music are what keep me going. Physically, I love being out in the elements, and the diversity of the world and the way it all fits together fascinates me. I'm inspired equally by creative thinkers, who give us new insights to the world and ourselves through art or science; or who devise ways to live on the planet and still leave it intact to inspire people in the future.

VEIN
The Veterinary Education and Information Network is the leading information service for veterinarians and animal scientists in Australasia and increasingly, worldwide. Visit VEIN at <http://vein.library.usyd.edu.au>

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IN MEMORIAM

EMERITUS PROFESSOR TERRY ROBINSON AM

1919 – 2 September 2004

Professor Terry Robinson was appointed inaugural Professor of Animal Husbandry at the University of Sydney in 1956. On his retirement in 1984 he left a thriving animal husbandry department, but his most outstanding contribution was in the field of artificial reproductive technology. He gained an international reputation for his work on controlled breeding of sheep, in particular the development of a practicable method of synchronising oestrus in ewes. This work formed the basis of artificial insemination programs worldwide.

Professor Robinson graduated in Agricultural Science at the University of Western Australia (UWA). His research on clover disease in sheep led to a prestigious Hackett Scholarship in Cambridge, where he gained a PhD on controlled breeding of sheep.

As Professor of Animal Husbandry at Sydney, he set up the Dairy and Poultry Husbandry Research Foundations in 1959 to involve producers in directly supporting research and development in their own industries.

His was awarded a Doctor of Science degree at Cambridge (1973) and the Order of Australia. In a remarkable and distinguished research and teaching career, Professor Robinson demonstrated to a skeptical agricultural community that high quality science was an essential and exciting component of modern animal husbandry.



Professor Robinson at his farm in Bathurst.

DR ROBERT WILLIAM GEE AM

1927 – 9 May 2004

In the words of his great friend Dr John Auty, "the death of Bill Gee after a tenacious fight with cancer removes one more of the leaders from what must be considered a golden age of veterinary administration". The Faculty of Veterinary Science and the J D Stewart and Veterinary Science Foundations were among the many organisations that benefited significantly from Bill's wisdom and extraordinary dedication to his profession.

Bill graduated from the Sydney vet school in 1950. In 1966 he became Chief Veterinary Officer for the Northern Territory, beginning

an outstanding career as a senior government veterinarian until his retirement in 1986. He was founding Director of the Australian Bureau of Animal Health (ABAH); helped develop the Australian Animal Health Laboratory in Geelong; and was President of the Office Internationale des Epizooties, the coordinating body of world animal disease control.

Always passionate about animal welfare, Bill led the ABAH's first government service directed to animal welfare. He was President of the AVA, recipient of the Gilruth Prize and Kesteven Medal, a Fellow of the Australian College of Veterinary Scientists, and recipient of a Sydney University Doctor of Veterinary Science (honoris causa).

DR ELIZABETH KERNOHAN AM

1939 – 21 October 2004

Former Faculty staff member and MP for Camden, Dr Liz Kernohan died suddenly on 21 October. She was a long-time friend and supporter of the Faculty, particularly the Camden Campus and Dairy Research Foundation.

Dr Kernohan, who had a PhD in Agriculture,

was awarded an AM in the 2004 Queen's Birthday Honours list. Her award was received for "service to the NSW Parliament, to local government, and to the community of the Camden region". Staff members of the Faculty remember and acknowledge her dedicated academic career and the significant contribution she made to veterinary science over a 30-year period. In 1991 she was elected Member for Camden, remaining in that role until her retirement in 2003.

DR PETER CLARINGBOLD

August 2004

A 1951 Sydney graduate, Dr Peter Claringbold gained his PhD in endocrinology and became Senior Lecturer in the fledgling Department of Veterinary Physiology. His PhD thesis contained highly original contributions to the refinement of bioassay methods.

Peter became one of the early program writers for the University's first computer, SILLIAC, commissioned in the late 1950s.

His programs were regarded as extraordinarily sophisticated, demonstrating his mastery of matrix algebra and deep knowledge of biometry.

Peter joined the Division of Animal Genetics, CSIRO and his research moved further into computer programming, design and data-logging equipment. This led to Canberra, where he became Chief of the CSIRO Division of Computer Research. The results of his research are embedded in many of the large-scale, comprehensive, statistical programs in common use in analysis of biological, veterinary and medical data.

US Flea Guru Heads Down Under.

Mike Dryden, Professor of Veterinary Parasitology at Kansas State University makes a long awaited return to Australia in March 2005.

Dr Dryden also known as "Dr. Flea" is considered one of the world's foremost experts on flea biology and control, having given lecture tours in 20 countries. Next March he will be making his 3rd tour of Australia discussing advances in flea control and the shift globally towards Integrated Flea Control.

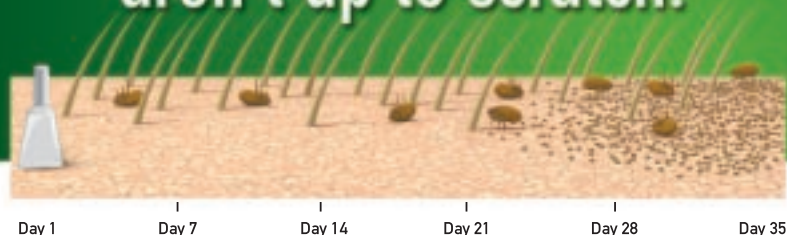
Professor Dryden will conduct lectures in the following City centres between 14th & 22nd March 2005

Sydney	Coffs Harbour
Brisbane	Wollongong
Terrigal	Gold Coast
Melbourne	Newcastle
Port Macquarie	Twin Waters

Invitations to the lectures will be sent out in January. For more information contact your Merial Account Manager.



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*Burton, G., Shipstone, M and Burrows, M., (2003) Veterinary Guidelines for the Control of Fleas in Dogs and Cats in Australia. Aust Vet Practit 33 (3) 117 – 124.2.

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