AVMA SUCCESS
CONGRATULATIONS TO THE FACULTY

The final American Veterinary Medical Association (AVMA) accreditation visit to our Faculty took place in April this year, and the outcome of all this hard work has never been far from our minds. I can now report officially the wonderful news that we were successful in our bid for international accreditation. The positive result was received on 25 October 2005 after the recommendation from the Division of Education and Research was approved by the AVMA Council on Education. This is a tremendous milestone for the Faculty as there are only 6 veterinary schools outside the USA and Canada (4 in Europe and 2 in Australasia) that have been accredited.

Preparations for the April visit of seven AVMA representatives were enormous and staff and students worked tirelessly to ensure the Faculty was presented in its best light. We also received considerable help from the University and its Facilities Management Office. More than $140,000 was allocated from our budget to complete the visit, which included all travel and other expenses of the AVMA team. The Faculty is confident the expenditure was worthwhile as the legacy of updated facilities is considerable.

What did the Evaluation Report say?

The accreditation process involves the critical evaluation of 11 specific Standards covering everything from Faculty organisational structure to outcomes assessment of the degree. We received commendations in all 11 standards except one, Finance. The team recognised our proactive efforts to supplement the Faculty budget from student fees, research income, clinical services and fundraising by the Veterinary Science Foundation, but strongly encouraged the University to review its funding formula to recognise the high cost of veterinary clinical teaching. The AVMA were highly complimentary of our students and the dedication of all our staff, and they were particularly impressed with the content and assessment of the new curriculum. What does this mean for the Faculty?

• The kudos of being benchmarked against some of the top 40 veterinary schools in the world. Quality assurance in tertiary education is of utmost importance and this means we are effectively benchmarked with the best in the world - North America through the AVMA, Europe through the Royal College of Veterinary Surgeons, and Australasia through the Australasian Veterinary Boards Council.

• Accreditation is an important confirmation that the rigorous and innovative planning of our new curriculum has been successful and that it is appropriately aligned to learning outcomes and graduate attributes. The AVMA were particularly impressed with the final year program and recognised our attempts to improve the transition of undergraduates to professional life in practice.

• Accreditation enhances our ability to attract international students to our program, especially from North America, as it means their Australian BVSc degree is more registrable when they return home.

• It also means that, along with the planned infrastructure improvements at both Sydney and Camden campuses and the progressive rise in our research profile, this result puts us in sight of the University’s vision for 1-5:40. What do we have to thank?

It is impossible to individually thank everyone who played a part in this success because the bid has been a Faculty team effort - thanks are due to all staff and students. A special tribute must go to the team leaders of the whole project, Jennie Hodgson (Chairman of the Learning and Teaching Committee) and Meg Vost for their Herculean efforts to ensure we were properly prepared for the April visit, and to Geraldine Hunt who managed an equally rigorous and successful initial visit in 2002. We thank them most sincerely for helping to put the Faculty of Veterinary Science where it needs to be in 2005 - in the limelight!
INTERNATIONAL ACREDITATION

WHAT IT MEANS TO THE FACULTY AND OUR GRADUATES

The Faculty of Veterinary Science has joined the small number of non-US-based veterinary schools worldwide to achieve accreditation by the American Veterinary Medical Association (AVMA). This is a significant and exciting achievement with important ramifications for the Faculty and its future graduates.

The American Veterinary Medical Association, through its Council on Education, is recognized by the US Department of Education as the accrediting agency for colleges of veterinary medicine in the United States and Canada. In recent years, the AVMA has also allowed accreditation of veterinary colleges outside the US and Canada including schools in Europe, Australia and New Zealand. Currently, Murdoch and Massey are the only two accredited schools in Australasia, there are three in the UK (London, Edinburgh and Glasgow) and Utrecht in The Netherlands. The Melbourne University veterinary school and a number of European schools have commenced the rigorous accreditation process (this Faculty first applied for accreditation in 2001, and hosted two site visits by the AVMA team).

AVMA accreditation is an important benchmark for the quality of our degree program as measured against other veterinary faculties around the world. At a time when there is increasing demand for international accreditation as the global market for veterinary education develops, this allows the Faculty to proactively market its degree in the US and Canada. For the first time, these international graduates can now return home to work without having to complete further training in their home countries.

For our Australian graduates, accreditation means our degree is now recognised within North America and it becomes easier for them to apply to work in these countries (note that, as for all graduates of US and Canadian veterinary schools, they must first pass National and State Board examinations to work as a veterinarian).

Gaining AVMA accreditation is a major achievement for the Faculty of Veterinary Science at the University of Sydney. It places us among the leading veterinary schools worldwide.

HELP US BUILD A NEW DOG CENTRE

Photo: Dr. Christine Clancy, associate professor of veterinary medicine and primary care medicine at the University of Sydney, and Dr. Barry Jeffcott, head of the Faculty of Veterinary Science, with the new dog centre.

We're well over halfway there! The Veterinary Science Foundation's fundraising campaign for a new world class Dog Centre is almost 79% achieved. The Dog Centre is the $2.2 million Stage 2 of the redevelopment of the Faculty's small animal teaching hospital, the University Veterinary Centre at Sydney.

The Foundation is enormously grateful to many donors who have contributed to the campaign so far. Gifts have been received from the University of Sydney, veterinary pharmaceuticals, private individuals and members of the veterinary profession – each donation, large or small, assists us to reach our objective of building a state-of-the-art Dog Centre to complement the new $12.5 million-plus Valentine Chariton Centre.

Remember – all donations to the Veterinary Science Foundation are tax deductible. For further information, please contact Jennie Churchill on (02) 9351 8024 or jenniecling@vetsci.usyd.edu.au.

SHOWCASING OUR POSTGRADUATES

The enormous diversity of research taking place in the Faculty was showcased at the 2005 Post Graduate Conference, with more than 50 postgraduate students presenting their projects over the October two-day event at Camden.

The 2005 conference was generously sponsored by the Dairy Research Foundation, Meat and Livestock Australia, the Pest Animal CRC and the Poultry CRC, with funds directed towards supporting the students through prizes for the best abstracts and research posters.

A major element of postgraduate research training is gaining first-hand experience in preparing and presenting talks to one's peers, and learning to communicate ideas and results to various audiences. The conference also enables our external stakeholders to learn about research in the Faculty and provides an opportunity for postgraduates who work in different geographic locations to come together.

BLESSED THE HENRY AND BANJO GARDEN

The Cats (and Dogs) on Campus Open Day featured a very special and moving ceremony – the blessing of the new Henry and Banjo Garden by celebrant Ms Vaune Morgan (see Vaune's dedication at Henry and Banjo Garden: http://www.vetsci.usyd.edu.au/Foundation/helps/lahn9). The Dean Professor Lee Jeffcott and Dr Chris Brown also spoke at the ceremony.

The beautiful sandstone garden, located next to the University Veterinary Centre Sydney, has been created to honour and cherish the memory of our animal friends. It is a unique place where solid cast metal bowls, engraved in memory of much loved pets, will be set on magnificent aged sandstone blocks.

The garden has been named in honour of Henry and Banjo, two black and white kittens adopted and much-loved by the staff and students of the University Veterinary Centre at Sydney in the 1980s. Henry and Banjo's special garden is already helping future generations of animal lovers to raise funds for the remembrance bowls are directly supporting the building campaign for the new teaching hospital (see Dog Centre), and we are pleased to announce that the first three bowls have been purchased and are now in place.

Gifts to the Veterinary Science Foundation are tax deductible and the donations for a bowl can be pledged over three to five years. They are 125mm diameter and available in three materials and prices: $2,000 (aluminium), $3,000 (brass) and $10,000 (bronze). For further information, please contact the Veterinary Science Foundation on (02) 9351 8024 or vsf@vetsci.usyd.edu.au.

THANK YOU TO OUR SPONSORS

PHILIPS MEDICAL SYSTEMS

Philips Medical Systems has generously facilitated the procurement of a state-of-the-art ultrasound machine for the University Veterinary Centre at Sydney (UVCS). CEO Mr Wayne Spittle was committed to supporting the Teaching Hospital from the first meeting, negotiating with Faculty and Veterinary Science Foundation staff to provide the best, most affordable outcome for the UVCS.

Imaging specialist Professor Graeme Allan says, "Our new ultrasound is cutting edge – an HDI 5000 that delivers high performance echocardiography, abdominal ultrasonography and small part sonography. It will be an invaluable diagnostic tool in small animal medicine and surgery, and we are enormously grateful to Philips for their dedication to animal care and world class veterinary education".

The machine is already in frequent use by UVCS specialist staff including the Faculty's imaging specialists Professor Allan and Dr Rob Nocilli, consulting Veterinary Sonologist Dr Karon Hoffman, and feline specialists Drs Julia Beatty and Vanessa Burr.

Another philanthropic company, Ulco Medical, has donated an Ulco Field Anaesthetic Unit to the Faculty team undertaking a major ARC Linkage grant research project into chlamydioidosis and cryptococcosis in koalas.

Team leader of the koala project Dr Mort Krockenberger, said he and his team were delighted to receive the equipment from Ulco Medical: "The anaesthetic machine was worth estimated in excess of $30,000 and it will be a tremendous resource for the project. Initially we will use it in both field and clinical situations for koala research, then the machine will continue to support work to health through the veterinary hospital of the Wildlife Health and Conservation Centre at Camden".

VSF ROUNDHOUSE November 2005
BEATING BARRAMUNDI NODAVIRUS

Production of farmed barramundi in the Northern Territory has increased by more than 120% since 2001 and national production is predicted to be more than 4,800 tonnes by the end of 2006. The popular white flesh fish is a rising threat to this rapidly growing industry and a collaborative national research team, led by the Faculty's Chair of Farm Animal Health Professor Richard Winthorpe, has won significant funding through an Australian Research Council (ARC) linkage grants, including funding for two Australian Post Graduate Student Awards (Industry).

The project's other partners are: Mr Glenn Schipp of the Darwin Aquaculture Centre, Drs John Humphrey and Lorna McVicar of the Darwin Freshwater Laboratory, and Marine Harvest (Australia). Darwin Aquaculture Centre plays a key role in the search and development of aquaculture in the Northern Territory (NT) and operates a commercial barramundi hatchery supplying NT barramundi farms. Barrina Veterinary Laboratory provides animal health diagnostic services to the NT barramundi industry. Marine Harvest, the Australian marine farming arm of the aquaculture firm Nutreco, brought industrial scale barramundi farming to the NT in 2001, setting up a sea cage farm at Bathurst Island.

The research project aims to control the nodavirus infection, develop new technologies that will specifically detect nodavirus using immunosassay and surface enhanced laser desorption ionisation mass spectroscopy (SELDI). This technology has not previously been developed against a fish/recreational pathogen – and, through epidemiological data and these new diagnostic tests, develop an integrated disease control strategy that is practical and able to be widely adopted.

While mortality events caused by nodavirus occur in larvae and juvenile fish, it is hypothesised that survivors and asymptomatic infected carps may be transferred to an outdoor rearing pond (Maryland Island). These fish may in turn infect growth fish in the hatchery. The infected growth fish are fed broodstock which are returned to the hatchery. The hatchery may also become infected from wild caught broodstock, or from wild fish via the water supply.

Specific components of the project include a longitudinal survey of barramundis, wild fish, feed and water to determine the source of infection and mode of transmission; the determination of infections dose and the influence of age, water temperature and immune response on infections; the effected, persistent carrier, or recovered host evaluation of methods to detect and remove nodavirus from water.

A further aim is to trial wider application of antibody assays for nodavirus control in a greater range of commercially significant finfish species including, with Fisheries Research and Development Corporation support, tilapia in the Kimberley region.

Professor Winthorpe said: "Our involvement in this project will also involve ongoing collaborations between the University of Sydney, Macquarie University, La Trobe University, Challenger Aquaculture, and the University of Southern Queensland Aquaculture Laboratory. These long-term collaborations will be founded in a regionally complex field of aquatic animal health where disease issues and challenges can arise suddenly – and ensuring aquatic animal health is essential for the sustainability and economic viability of aquaculture".

ARTIFICIALLY BREEDING ALPACAS

The raising of Alpacas is one of the fastest growing livestock industries in eastern Australia. These gentle, tractable animals are proving popular for both serious farmers and tree changers, due to their impressive ability to develop specialization expertise in the health and husbandry of these engaging members of the camelid family.

Dr Katherine Morton and Jorge Reyna are conducting research to investigate artificial insemination in alpacas. Katherine is a Sydney University Science (Agricultural) graduate with a PhD, and Jorge, a PhD student and graduate of La Molina National Agricultural University in Peru, has already completed a Masters at Sydney. Katherine has an added interest – she and her mother have bred alpacas for the past 15 years, and Katherine was the 2001 inaugural winner of the Australian Alpaca Association’s prize for Alpaca Studies.

Genetic improvement in alpacas is slow, as males puberty at one to three years, the females have a long gestation (11.5 months) and females produce a limited number of cria (offspring) over their reproductive life.

To facilitate the commercial application of AI in alpacas, Katherine and Jorge aim to produce cria after AI with fresh, liquid-stored and frozen-thawed sperm.

Current limitations of AI in alpacas include the lack of a reliable technique to collect sperm due to extended oestrus (over 15 minutes), the unique mucoid or jelly-like character of the sperm, low concentration and motility of the spermatozoa (alpaca semen shows marked variability in quality and quantity), and the lack of technology to store sperm in chilled or frozen form. Katherine and Jorge are working to establish protocols for the liquid-storage and cryopreservation of alpaca sperm – the mucoid character of the sperm in particular makes it problematic to chill and freeze.

One of the project’s other objectives was to test the current technique of collecting sperm in alpacas using a mueneco (dummy female) and artificial vagina. Five alpaca males from three different locations were trained to mate with a wooden mueneco covered with tanned alpaca skin and fitted with an alpaca artificial reproductive tract (AART). Training the male to mate with the mueneco was found to be a simple procedure, although animals that had not been used for natural mating for a while were keener on mueneco matings than males performing frequent natural matings. The latter needed audiovisual stimuli in the form of a real female being mated. Trials also indicated that, while the technique was reliable and ejaculates were obtained from all males, current design of the AART is essential to facilitate ease and comfort of mating. This in turn leads to a better quality ejaculate.

Katherine and Jorge’s project is supported by the Faculty’s Centre for Advanced Technologies in Animal Genetics and Reproduction (Repogen) and funded by the RRDC (Rural Industry Research and Development Corporation) and the Australian Alpaca Association. They are grateful for the enthusiasm and support their project is receiving from the Alpaca industry and RRDC.

MANAGING EPILEPSY IN DOGS

As many pet owners know too well, idiopathic epilepsy is one of the most commonly treated seizure disorders in dogs, and phenobarbitone the most common maintenance anti-epileptic drug used in veterinary medicine.

Postgraduate student Elissa Kluger (above) has returned to the Faculty from small animal practice for several reasons – she professes to love research and hopes to study for a PhD, and she is interested in investigating the long term use of phenobarbitone (PB) in dogs with idiopathic epilepsy and the drug’s potential side-effects. Her study will have a particular focus on fasting hyperglycaemia.

There are good reasons for the widespread use of PB. The drug has good tolerability, low cost and well documented success in prevention of seizures. One of its drawbacks is thought to be a potential to cause hyperglycaemia, or a high concentration of triglycerides in the bloodstream. This results from either an increase in chylomicron production or very low density lipoproteins production (or ineffective clearance of both), or defective enzymes hydrolysing triglycerides from lipoproteins.

Hyperlipidaemia in dogs, a broader condition that can result from an increase in triglycerides or cholesterol or both, can be primary or secondary in nature. Idiopathic hyperlipidaemia is the most common primary disorder and is seen as a heritable disease in breeds such as Miniature Schnauzers. Secondary hyperlipidaemia occurs more frequently and may be caused by diabetes mellitus, high fat diets, hypothyroidism, hyperadrenocorticism and as a side effect of certain drugs such as glucocorticoids. More specifically, hypertriglyceridaemia can cause acute pancreatitis, abdominal pain, vomiting, hepatopancreatitis, seizures, cutaneous xanthomata and peripheral nerve paralysis. Importantly, and relevant to this study, recurrent seizures have been documented in Miniature Schnauzers with hypertriglyceridaemia.

The chronic use of PB has already been documented to cause hypertriglyceridaemia in rabbits and guinea pigs; in human patients, triglyceride levels are normal to slightly higher on PB therapy; but in dogs, this potential side-effect has only been recorded anecdotally. In preliminary data analysis, 50% of dogs on chronic PB have moderate triglyceride elevations (personal communication from Dr David Snow, Mayne Vetronics). The mechanism behind PB raising triglyceride levels in dogs is currently unknown.

Elissa’s study has three aims: to determine the proportion of dogs on long term PB with fasting hypertriglyceridaemia and to explain the underlying mechanisms behind this phenomenon. Secondly, to investigate whether hypertriglyceridaemia worsens seizure activity in these dogs. The study’s final objective is to determine whether a low fat diet or the addition of polyunsaturated fatty acids will reduce fasting hypertriglyceridaemia in dogs on long term PB. The answers to these questions, if elucidated, may ultimately provide support for more effective and safer long term treatment of dogs with idiopathic epilepsy.
The tammar wallaby (Macropus eugenii), pictured right, is a model marsupial perfectly placed for the study of mammalian reproduction and genetics. At the time of European settlement, the tammar was found in southwestern and southern Australia and in ten island populations. Today there are few tammars left on the mainland, with most on the islands, in particular Kangaroo Island.

Hannah Siddle is a postgraduate researcher who, together with her supervisors Dr Kathy Below (Faculty) and Dr Janine Deakin (Australian National University), is working with this diminutive marsupial to develop an understanding of how the mammalian immune system has evolved. Hannah, a first year PhD student, has already received accolades for her project, winning the Mayo Award for the Best Student Talk at the 2005 Molecular Biology and Evolution and Genetics Society of Australia Meeting held in Auckland.

The key focus of Hannah's research project is the major histocompatibility complex (MHC). While MHC genes are found in all vertebrates and play a key role in antigen recognition, they are dynamic and have changed throughout vertebrate evolution, making the MHC an important tool for comparative genomics.

Intensive study of the MHC has occurred in seven eutherian mammals, including humans, chimpanzees and pigs, and non-mammals such as the chicken. These studies highlighted differences in gene content and organisation between the mammalian and non-mammalian MHC. Birds and mammals diverged 310 million years ago and have vastly different MHC organisation, while sequences in eutherian mammals are usually too close to be informative. As marsupial and eutherian mammals last shared a common ancestor more than 130 million years ago, the marsupial MHC provides an opportunity to 'fill the gap' in our knowledge of how the mammalian immune system has changed over time.

Hannah's project involves characterising the tammar wallaby MHC genes using a bacterial artificial chromosome (BAC) library. Sequencing of the genes will be undertaken by Dr Stephan Beck from the Sanger Centre in the UK in 2006. From the sequence, Hannah will be able to deduce the tammar MHC organisation and discover previously unidentified immune genes.

Despite the important phylogenetic position the tammar occupies, little is known about its MHC. Hannah's preliminary findings have shown the tammar wallaby MHC to be very different to other mammals in both gene sequence and organisation. These differences may reflect the particular selective pressures placed on marsupials by their environment.

In eutherian mammals such as humans the grouping of MHC genes into a single complex is thought to be important for the immune system to function efficiently. Hannah and her collaborators were surprised to find MHC genes outside the main MHC complex in the tammar, raising questions about the functional role of these unlinked genes and their effect on the tammar immune system.

The tammar wallaby project is funded by the Sydney Postdoctoral Fellowship scheme and uses resources provided by the ARC Centre for Kangaroo Genomics at the Australian National University.

Australian marsupials are fascinating and unique mammals that have adapted the way they live and reproduce to their environment, and sometimes harsh environment. The marsupial genome is also proving to be unique and is an important resource to understanding these adaptations.

A Faculty research team has joined Australian Wool Innovation in a search for potential alternatives to the contentious practice of mulesing in sheep. PhD student Michelle Leflard and Craig Macpherson, with Faculty staff Dr Katrina Boward, Professor Paul Canfield and Associate Professor Geraldine Haut, are undertaking a research project focused on exploring wound healing in sheep with specific reference to improving the mulesing operation.

Mulesing was introduced to the Australian sheep industry by J.H.W. Mules in 1931 as a measure for the prevention of blowfly strike in sheep, and in particular, the Merino. The wrinkliness and wooliness of the Merino sheep breed makes it highly susceptible to urine and faecal staining, leading to an equally high risk of blowfly strike. Mulesing involves the removal of skin from around the breech and tail to decrease wrinkles and increase the size of the bare area around the perineum. The result is a significant reduction in staining, with the area drier and less attractive to blowflies.

There is little argument that the mulesing operation is highly beneficial to sheep in the long term, essentially preventing debilitating illness and death due to blowfly strike. It is similarly acknowledged that sheep suffer short term stress and pain as the operation is performed without anaesthesia or analgesia.

The Australian sheep industry is trying to find equally successful, but more humane alternatives to this procedure and as part of a nationwide effort, the Faculty team is studying the conformation of the breech, examining the skin microscopically and molecularly, as well as assessing the best patterns for applying chemical or other alternatives to mulesing.

The two PhD students working on the project are Sydney graduates. Craig Macpherson is a specialist surgeon in the University Veterinary Centre at Sydney, and he will bring his specific skills to the mulesing project particularly with respect to the pattern utilised in the mulesing operation. Michelle Leflard is a veterinary pathologist with experience at the John Curtin School of Medical Research in Canberra. Her role is to look at the mulesing operation and wound healing in sheep from a pathological point of view, focusing on the microscopic, ultrastructural and molecular changes that occur during ovine wound healing.

A large part of the research project will focus on characterising features that are present in the normal breech skin of sheep and comparing how these features change with conventional wound healing (as occurs with the mulesing operation) or in healing that occurs with the use of chemicals or other mulesing alternatives.

The project, which is funded by Australian Wool Innovation, will study wound healing in depth, and also assess and compare the systemic inflammatory response initiated by surgical mulesing and its alternatives. This will be done by measuring a range of haematological and biochemical parameters.

Michelle, Craig and their fellow researchers hope these studies will create a bank of knowledge on wound healing and inflammation in sheep to enable future mulesing alternatives, or other procedures, to be assessed, compared and improved.

Biochemist, bioinformatics specialist with small business expertise, and now Faculty of Veterinary Science PhD student, Kao Castle has come a long way from her high school dream of being a vet. She is now on a pathway to running a horse genetics company, starting with postgraduate research.

Kao, with collaborators and supervisors from the Faculty, particularly the Centre for Advanced Technologies in Animal Genetics and Reproduction (RapGen), is focused on researching the genetic basis of osteochondrosis in horses.

Osteochondrosis (OC) is a disease that affects cartilage and bone growth in several domesticated animal species, including horses. Environmental factors have been shown to increase the rate of occurrence in affected species, and there is also strong evidence that some individuals have a genetic predisposition for developing the disease.

The disease manifests when sections of cartilage in the epiphyseal growth plates fail to undergo the ossification process that occurs with normal growth. Necrotic patches of cartilage develop in the crack or shear away during joint movement. This causes flaps of cartilage to protrude into the joint or to be blown free with resultant joint inflammation and debilitating lameness.

Some breeds of horse, cattle, pigs, dogs, and chickens are especially prone to developing OC - in thoroughbred horses OC is estimated to occur in more than 10% of the population and the lameness associated with the disease is a major cause of wastage in the racing industry.

Kao's project aims to find genetic markers associated with a predisposition to OC in thoroughbreds. The project is a two-pronged approach. First, extensive field analysis of data from thoroughbred studs will evaluate the rate of occurrence of osteochondrosis in the Australian thoroughbred population. Genetic differences between horses that develop OC and those that don't will be determined by sequencing the candidate gene found in samples from affected and disease-free horses. Samples of genomic DNA will be analysed for washout with the aim of discovering one or more genes that can be implicated in equine osteochondrosis.

The ultimate objective is to achieve an understanding of the genetic basis of OC in horses. This may lead to genetic testing of foals, in turn helping breeders minimise the exposure of affected individuals to caustive stimuli in their environment.

A second research team led by Professors David and Jennie Hodgson is analysing synovial fluid in OC-affected horses – collaboration between the two groups could lead to exciting findings.

EQUINE OSTEOCHONDROSIS
NATURE OR NURTURE?
Dr Mark Allison from Balgowie—The Crest Veterinary Hospital is the Faculty's first Crest Companion Animal Practitioner in Residence. He will spend 12 weeks at the University Veterinary Centre Sydney assisting in the delivery of clinical services and instruction in small animal medicine, surgery and anaesthesia. Mark will also participate in a series of tutorials on clinical education developed by educational consultant Professor Graham Feletti, and have the opportunity to prepare a review article for publication.

The Crest Companion Animal Practitioner in Residence Program was launched at the July 2005 Partners in Veterinary Education Conference with the aim of providing our Partners with opportunities for continuing education in companion animal clinical studies and veterinary undergraduate education. The program has been made possible with the generous support of principal sponsor Crest, and supporting sponsors the Veterinary Science Foundation and the Australian Small Animal Veterinary Association.

Mark regularly hosts veterinary students in his practice and is genuinely committed to student and continuing education. "I really enjoy teaching and passing on my experience to the students—it’s a real buzz"—and this program gives me an opportunity to improve my clinical skills after a number of years in practice. It’s also great to be able to give something back to the profession by preparing graduates for the common things they will see in practice."

The Faculty plans to offer the Practitioner in Residence Program annually—contact Dr John Baguley on 9326 9479 or email jbaguley@vetc.usyd.edu.au.

**COMMUNICATING THE SCIENCE OF ANIMAL WELFARE**

Senior Lecturer in Animal Behaviour and Animal Welfare Science, Dr Paul McGreevy has a passion for animal welfare that has led to pioneering research and prestigious international animal welfare awards. One of the ways he imparts this compassion and knowledge is through a requirement that every student submits an essay describing Animal Welfare Science developments that have been published as peer-reviewed articles in the previous twelve months.

Since 1998, students’ achievements have been celebrated with the Wally McGreevy Prize for Animal Welfare Science, given to the author of the highest marked essay.

Wally’s leadership has spawned a series of nine external benefactors sponsoring essay prizes: Elsevier (Exotic Animals); Meat and Livestock Australia (Sheep and Cattle); Cat Protection Society (Feliformes), RSPCA Australia (Pig and Poultry), The Veterinarian (written communication), Vets Best Reward (essays related to animal training), and the Association of Pet Dog Trainers (Canids).

With the help of the University Library, 93 of the best essays are now published on the Faculty’s Animal Welfare website within VENV: visit venv.library.usyd.edu.au/links/essays/index.html. This allows a wide range of internal and external readers, including high school students, to see what advances have been made in the welfare of various domestic and captive species. Many of the essays have been reproduced by The Veterinarian.

**BLACKSHAW BOVINE RESIDENCY**

2002 graduate Brad Smith (right) has been appointed the Faculty’s Blackshaw Resident in Ruminant Health and Production. The Residency is a new three-year postgraduate program providing clinical and research training in farm animal health and production with particular emphasis on the cattle industry.

Brant is based at the University Veterinary Centre at Camden (UVC) under the supervision of Associate Professor John House, the Director of the Faculty’s Bovine Clinical Service. He will be working towards Membership of the Australian College of Veterinary Scientists (cattle specialist) and a Master of Veterinary Clinical Studies, and his key research project is expected to focus on the diagnosis and prevention of calf scours, predominately in a beef herd scenario.

In addition to research, Brant’s role encompasses teaching of undergraduate vet students and participation in the UVC cattle clinical services, including beef and dairy herd health and routine work such as pregnancy testing and obstetrics.

Brant says that while he was raised in the city, he has always wanted to work with cattle. Following graduation he spent time in mixed practice in both Victoria and the NSW south coast before returning to the Faculty.

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FACULTY STAFF NEWS

The University has awarded Dr Brian Farrow (above) the honor of Professor Emeritus, an important recognition of Bilat's many contributions to the Faculty, the University and the profession. Emeritus Professor Farrow remains involved with the Faculty and will teach the Neurology course in first semester 2006 and student tutorials. Brian has also accepted the Faculty's invitation to present the 2005 Graduation Address in the Great Hall on 16 December.

The University Senate has approved an Adjunct Professorship for Chris Bellenger, Principal of Macquarie University's Robert Menzies College. Professor Bellenger will assist with teaching and research in the University Veterinary Centre at Sydney, contributing academic leadership in small animal surgery.

Drs Sue Hemsley, Mark Krookkenberger, Jacqui Norris, Paul Sheeby and Imke Tammem have been promoted to Senior Lecturer. Ms Hannah Forsyth has been promoted to Sub-Dean for Postgraduate Coursework, and Ms Meg Vost is Learner Support Coordinator, Veterinary Public Health Management.

Staff successfully passing the July 2005 Australian College of Veterinary Scientists examination: Dr Lucy Blake (Small Animal Medicine), Dr Keiren Maddern (Anesthesiology), Dr Robert Pottie (Anesthesiology).

New academic staff include: Senior Lecturer in Poutry Health Dr Peter Graves, Associate Lecturer Dr Jaime Gongora, Lecturer in Small Animal Clinical Practice Dr Christine Hawkins, Lecturer in Ruminant Production and Health Dr Pietro Celli, Research Associate Dr Fortune Sihlohe and Matthew Landaas, Research Fellows Drs Mary Lam and Dr Dhanunjay. Post Doctoral Fellows Drs Katherine Morton and Mahar Khatar, Bonnie Intern Dr Kate Maen, and Intern Dr Cathy Chan.

Gerard Marcus, Educational Developer with Faculty of Science's Thynne Reid Teaching Innovations Unit, has won the Higher Education Research and Development Society of Australasia Edith Cowan University Authentic Learning Award with colleagues, Faculty of Education Lecturer, Louise Sutherland, and Web Developer, Andrew Jessop.

Senior Lecturer Dr Paul Sheeby participated in the prestigious Australian Academy of Science 2005 High Flyers Think Tank on Biotechnology and the Future of Australian Agriculture, held in Canberra in July.

PhD student, Richard Shepard, was one of sixteen finalists from across Australia for Fresh Innovations 2005, a competition that promotes the achievements of early career innovators. Richard is developing a new web-based disease diagnosis tool that will help farmers manage their cattle herd and collect important data about livestock diseases.

FOSTERING A PASSION FOR PUBLIC HEALTH

Vets across Australia and internationally are identifying new career potential through postgraduate study in Veterinary Public Health Management (VPHMgt). Embarking on postgraduate study, with no loss of income or career progression, presents a unique opportunity.

Acknowledging the role and responsibility of vets in preventing the spread of disease, there is an increasing global demand for professionals qualified to prevent and control major disease outbreaks.

The Faculty has taken firm steps to equip veterinarians and animal scientists with the requisite veterinary public health skills - and VPHMgt students are highly positive about the outcome. The program's distance education units with interactive online classes make it accessible to students and expert facilitators anywhere in the world, and students also interact at the 3-5 day residential sessions held in Sydney. This combination of technical material in veterinary public health with units in leadership, project management, economics and policy development, ensures VPHMgt graduates are well positioned to be leaders in the field.

Dr Iain McLaren, regionally-based District Veterinary Officer with the Victorian Department of Primary Industries and a VPHMgt student, says, "We interact with vets worldwide, including in New Zealand, USA and China and some at the coal face in Asia working with the HSNI strain of the avian influenza virus. This is great for up-to-the-minute information and differing view points."

Since the commencement of the VPHMgt program in 2003, the 64 enrolments have included recent graduates working in private practices, more experienced veterinarians developing consultancies, government staff and those working in biotechnology and pharmaceutical organisations.

International and local offshore students are located in countries such as New Zealand, China, French Polynesia, Hong Kong, Swaziland, Thailand and the United States. Many local students are based regionally, including at Orange, Katherine, Moe, Border town, Broome, Bendigo, Goulburn, Benalla and Scone.

Applications for the 2006 VPHMgt program are now open - places are limited. Enquiries are welcome: vsphmt@vetsci.usyd.edu.au or call +61 2 9386 6364. Website: http://www.vetsci.usyd.edu.au/publichealth_management/index.php.

HONOUR FOR SMALL ANIMAL INFECTIOUS DISEASE EXPERT

Dr Richard Malik, internationally-renowned feline specialist, has been awarded the degree of Doctor in Veterinary Science. This is a great honour - the DVC is the highest veterinary degree awarded by the University of Sydney. Richard received the award for his thesis "Diagnosis, prevention and treatment of diseases in companion animals, with special reference to inherited diseases and infections caused by the Cryptococcus neoformans complex, non tuberculous mycobacteria and environmental saprophytic organisms."

Richard is currently the Valentine Charlton Specialist with the Post Graduate Foundation in Veterinary Science. He remains closely involved with the Faculty, participating with Faculty staff in a wide variety of research projects. He is associate supervisor of a number of postgraduate students, and gives invited lectures and tutorials to undergraduates.

What are your current roles?
As Pro-Dean of the Faculty of Veterinary Science, I provide policy advice and support to the Dean, and as Associate Dean, Staff and Students, I have responsibility for all personnel and student support - we have 216 staff, including 73 full-time academics. I am Professor of Animal Reproduction and teach reproduction and animal husbandry in both the Veterinary Science and Animal and Veterinary Biosciences degrees, and currently supervise 7 PhD and 3 honours students.

What qualifications do you hold?
Bachelor of Agricultural Science (1974) and a PhD (1979), University of Sydney.

How did your career begin?
I was raised a seventh generation woolgrower on the NSW Southern Tablelands. After my PhD, I conducted research on sheep artificial insemination in the UK, worked as private consultant to artificial breeding company in NSW, became research scientist in sheep breeding and reproduction with the WA Department of Agriculture, then in 1986, became Principal Officer Sheep and Wool with responsibility for all South Australian Agricultural sheep industry research, policy and regulation.

How did this lead to the Faculty of Veterinary Science?
I have always worked closely with veterinarians and enjoyed teaching, so I returned to Sydney University as an academic in 1991. I have never regretted this career move and I am strongly committed to the Faculty and its future. After another year as Pro-Dean, I am looking forward to devoting more time to research.

Research is obviously an important part of your work
Yes – my research interests include artificial insemination, embryo transfer and manipulation in sheep, goats and pigs. Current research involves sex pre-selection by separation of X and Y chromosome-bearing spermatozoa and preservation of mammalian semen. My research colleague Garen Evans and I attract over $600,000 in research funding and publish approximately 8 refereed articles in international journals each year.

What are your current key projects?
My main focus is assisting the Dean in the implementation of the Faculty's strategic plan, to achieve financial support for clinical teaching and financial sustainability for the Faculty. Other key areas are the new degree in animal and veterinary biosciences, a Faculty leadership succession plan, redevelopment of the Camden Campus, international BVSc accreditation and, through the Veterinary Science Foundation board, fundraising and promotion.

What are your most rewarding current projects?
I gain most satisfaction from mentoring and developing staff, teaching, interactions with postgraduate students, and it's always rewarding to see research outcomes adopted by industry.

What are your career highlights?
• The privilege and pleasure of teaching high quality students and working with the best group of staff in the best veterinary Faculty in the world
• Implementation of successful staff development and change management processes, particularly the Faculty-In-house staff leadership program
• Being part of the team, in South Australia, that established a national genetic improvement program for wool sheep
• With my colleague Garen Evans, developing in the early 1980s the system used internationally for artificial insemination of sheep.

What do you do in your spare time?
My wife and two teenage children have first priority in my life. I also run Coromandel sheep on a 1,000 acre property in south-west NSW - important for keeping my teaching relevant and engaging for students. Other interests are family and church and, when time, military history, music, gardening and rural organisations.

Who or what inspires you and why?
I am particularly inspired by those who are motivated by selflessness and service, such as the generations that defended Australia during the two world wars. My father served with the 2nd AIF 9th Infantry Division, surviving campaigns in the Middle East, New Guinea and Borneo. Our war veterans' self-sacrifice is difficult to follow in a modern culture that encourages self-promotion and career success on an individual rather than a team basis. "There is no limit to what a man can do or where he can go if he doesn't mind who gets the credit." (Emerson).

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In Memoriam

Emeritus Professor Cliff Gallagher
1925 – 7 May 2005

At the unprecedented age of 73, Emeritus Professor Cliff Gallagher received the highest University honour for research, Doctor of Veterinary Science. This typified his exceptional academic career and brilliant research record. A former Dean of the University of Sydney Faculty of Veterinary Science, Emeritus Professor Gallagher passed away on 7 May 2005.

From his appointment in 1966 to the prestigious Hugh Hughes Chair of Veterinary Pathology and Bacteriology until his retirement in 1990, he had a tremendous impact on the Faculty. He was a pioneer for veterinary biochemical pathology and was the first to encourage and achieve animal industry support for research programs into animal disease. He also moved into areas of medical research - including UV-induced skin cancer, research that continues today within the Faculty - and gained international recognition for the University.

A 1952 graduate, Emeritus Professor Gallagher completed his PhD in 1955 on the biochemical basis of disease at the University College Hospital in London. This was followed by an outstanding period of biochemical research at the McMaster Laboratory of the CSIRO Division of Animal Health.

Professor Paul Cantfield, who worked closely with Professor Gallagher, said, “Cliff brought to the Faculty great stature, enormous talent and leadership. He formed a strong team and partnerships and led outstanding, and at times brilliant, research. I believe he was successful because of his capacity to lead, and to motivate and develop young researchers and academics – he had great influence on the direction of our careers”.

Dr Fabian Fay
10 February 1947 – 24 September 2005

In the eyes of his friends and family, Dr Fabian (Fabs) Fay held many roles: veterinary surgeon, Sea World CEO, horse whisperer, inspirational speaker, whale savior, rugby fanatic, champion for Parkinson’s Disease, and true family man. Fabian graduated from this Faculty in 1972, establishing one of the first veterinary practices on the Gold Coast. A lifelong passion for marine mammals was sparked in the early 1980s when he was called to treat a sick dolphin at Sea World.

He became Sea World’s Manager of the Marine Mammal Department and veterinary consultant, establishing the Marine Education program. From 1989, as General Manager, he guided Sea World and its 750 employees to the position of Major Tourist Attraction for both Queensland and Australia, for three successive years - Sea World hosted one million visitors pa, 36% international. He became a sought-after motivational and management speaker and consultant for theme parks, hotel resorts and zoos throughout the world.

Fabian received an “outstanding achiever” award at the 1990 National Australia Day Awards for his work for veterinary science, and in 1998, the Meritorious Service Award from the AWA – two of many honors that reflected his tremendous contribution to the community. He held numerous leadership and board positions including Deputy Chairman National Australia Day Council, Board member National AWA and President Australian Equine Veterinary Association.

Behind the public successes, few knew Fabian was battling rapid onset of Parkinson’s Disease, a condition with which he struggled for almost 20 years. In the past decade, he became a well known advocate for Parkinson’s research, building public awareness domestically and internationally. His ability to motivate Parkinson’s patients and their care givers was invaluable – all around him say Fabian enriched their lives and taught them about love, courage, hope and patience.

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