

CSU Tails



CHARLES STURT
UNIVERSITY

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News from the CSU Veterinary Science program



IN THIS EDITION

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From the Director

This issue of Tails coincides with the beginning of 2007 and the third year of our veterinary program. It is going to be a big year and an exciting year! We plan to take in 58 students this year – the biggest intake yet and nearly up to our maximum planned intake of 60.

But it is the building program this year which is going to be truly exceptional. Plans for the Clinical Training Centre are now finalised and work will begin in May. This project will see the development of a complex with a number of critical centres and my expectation is that the resultant complex will develop into one of the region's key centres, providing support for local veterinarians, training undergraduate and post-graduate veterinary and equine science students and taking national leadership in professional further education and research.

Also in the wings is the development of the Small Animal Clinic and a Veterinary Diagnostic Laboratory. Early in 2007 I called for expressions of interest from one or more veterinary practitioners in forming a partnership with the University to develop and operate a small animal teaching hospital in Wagga. The aim is to provide our students with exposure to small animal practice, predominantly primary accession, in first-class facilities equal to those likely to be encountered by graduates in the best small animal practices of our country.

These three construction plans alone represent a commitment from the University of over \$17m over the next 18 months. This is an unambiguous demonstration by the University of its determination to make the CSU veterinary program outstanding, and of its dedication to strengthening and supporting regional Australia.

Please read more about our activities and plans in this issue of Tails, and watch for the developments of 2007 to take shape.



*Director of Veterinary Science,
Professor Kym Abbott.*

Contact us

CSU Tails is produced by Charles Sturt University. For further information contact the Charles Sturt Foundation on:

Phone: 02 6338 4680
Fax: 02 6338 4833
Email: aowens@csu.edu.au
Web: www.csu.edu.au/special/vetfoundation

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CSU Vet Science at the forefront of animal health



Charles Sturt University Chancellor Mr Lawrie Willett AO, Former Chief Veterinary Officer Dr Gardner Murray, Director of Veterinary Science Professor Kym Abbott and Executive Director of the Cattle Council of Australia Mr David Inall at the Charles Sturt Veterinary Science Foundation Dinner. Photo: Keith Wheeler

Executive Director of the Cattle Council of Australia, David Inall, and Former Chief Veterinary Officer, Dr Gardner Murray, recognised the excellence of Charles Sturt University's (CSU) Veterinary Science program at the recent Charles Sturt Veterinary Science Foundation Dinner.

The crucial role of Australia's veterinarians in maintaining the value of the country's export markets was emphasised by guest speaker, Mr David Inall, who reminded the audience that 65% of Australia's beef production is exported. "Australia must continue to maintain an educated veterinary profession to stay competitive on the global export stage. Graduates of CSU will be welcomed into the industry with open arms because of their strong dedication to rural Australia and ability to work to maintain and improve the region's export capabilities."

Dr Gardner Murray's presentation 'Animal Health – some general observations' emphasised the importance of effective veterinary practices in quarantine and disease prevention and control. "75% of new disease threats facing humans over the last decade have come from animals," said

Dr Murray. He praised CSU for training graduates with the necessary skills to form the forefront of animal disease surveillance and emergency disease response both locally and internationally.

The Dinner was held at CSU's Wagga Wagga Campus and was attended by close to 80 industry representatives, practitioners and livestock producers. It focused on the importance of animal health in relation to Australia's trade and biosecurity threats and was sponsored by Provet Riverina, Pfizer Animal Health, Troy Laboratories and Parnell Laboratories.

The Charles Sturt Veterinary Science Foundation was officially launched on the night, with the University's Chancellor Mr Lawrie Willett AO commending the Foundation for the work already underway to gain support for capital development projects and scholarships. For information on supporting the Charles Sturt Veterinary Science Foundation see page 9.

CSU providing unique diagnostic services to the livestock industries

Charles Sturt University (CSU) is providing much-needed diagnostic and quality-control services for male infertility problems in livestock and companion animals through the new Andrology (male reproduction) Laboratory located on the University's Wagga Wagga Campus.

The laboratory is the only facility of its kind in Australia. To date, the service has handled submissions from artificial breeding companies, referrals from veterinarians and directly from livestock production operations, and has examined specimens from a variety of species including cattle, pigs, dogs, horses and sheep.

The key piece of equipment in the Andrology Laboratory is a computerised semen analysis system – an item which is usually only available in high-level human medical facilities. This \$70,000 apparatus, provided by a University Infrastructure Grant, is complemented by high quality microscope and imaging systems which allow staff to undertake a comprehensive approach to diagnosis.

"These capabilities allow CSU to provide exceptional services to diagnose male infertility problems in livestock and companion animals, as well as to monitor the quality of semen used in artificial insemination programs," said Peter Chenoweth, Professor of Veterinary Reproduction at CSU. "They enable us to better identify and manage male-factor infertility, which represents a major source of loss for the livestock industries."

For further information, contact the School of Agriculture and Veterinary Science on (02) 6933 2760.



The Anatomy Laboratory in the recently opened Pre-Clinical Centre has outstanding digital teaching resources in addition to more conventional dissection and model-based instruction.

Photo: Keith Wheeler

CSU Professor leads international animal reproduction society



Professor of Veterinary Reproduction and President of the Society for Theriogenology, Peter Chenoweth. Photo: Keith Wheeler

Peter Chenoweth, Professor of Veterinary Reproduction at Charles Sturt University (CSU) has accepted presidency of the second-largest special interest group of veterinarians in the United States of America, The Society for Theriogenology (the study of animal reproduction).

Although based in the USA, the society draws members from around the world and promotes opportunities for students and professionals to enhance their knowledge and networks in the area of theriogenology.

Professor Chenoweth joined the CSU Veterinary Science program in 2005, bringing a strong international reputation and extensive experience in veterinary education. "I have reached a stage in my career where I can attempt to give back

to the profession that I love. Hopefully, my knowledge and research into animal reproduction can assist the society in promoting standards of excellence and in acting as a global resource," said Professor Chenoweth.

His passion for education and research into veterinary reproduction assisted in the development of innovative learning strategies within the curriculum of the Bachelor of Veterinary Science at CSU. Professor Chenoweth and the Director of Veterinary Science Professor Kym Abbott introduced Problem Based Learning (PBL) to CSU. This program is designed to develop students into lifelong learners and competent problem solvers and equip them with a substantial knowledge base. For more information on PBL turn to Page 5.

Real world experience a natural decision

A feature of the Charles Sturt University (CSU) veterinary program is student involvement in the activities of local veterinary practices on a one day per fortnight basis, commencing in the second semester of their first year. The program is intended to give students a context for their on-campus learning as well as exposing them to the many and varied aspects of rural veterinary practice. Dr Brian Munro of the Leeton Veterinary Hospital has supported the CSU veterinary science program since the inaugural class of 2005 through his participation in the early-experience program. CSU Tails asked Dr Munro why he decided to offer work placement opportunities to CSU Veterinary Science students.

"In 2003 the University hosted a dinner for veterinarians in the Riverina, when the staff from the then School of Agriculture explained the new concept for training veterinarians. I liked the idea that students would be exposed to the day-to-day experiences of veterinarians. It was a natural decision," said Dr Munro.

"CSU students, I believe, will be able to learn and study the complexities of modern veterinary science but still have the basic practical skills, for example, to look down the microscope for a coccidia oocyst, provide basic wound management and communicate effectively with a client."

In addition to CSU students, Dr Munro has hosted students from West Berlin, Zimbabwe and Belgium, as well as veterinary students from other Australian universities.

Of the benefits students bring to hosting practices, Dr Munro says, "students bring new ideas and concepts to a practice, so work experience time can be a two way exchange for the practice and the students. A really great side benefit is the increase in confidence that your support team of nurses and receptionists gain when they demonstrate their abilities in a

practice environment to our future veterinarians."

CSU Veterinary Science student, Sean McGrath, undertook work experience with the Leeton Veterinary Hospital in 2006 as part of the second year subject, Veterinary Practice.

"One of the most valuable parts of the work experience was learning the importance of communication between staff and clients. Another benefit is being able to use skills that we are taught on campus – for example, I was able to apply my suturing techniques in a real life situation," he said.

Dr Munro believes students need to be exposed to rural practice to appreciate the opportunities available to veterinarians.

"In the last decade there has been an acceleration of the trend for young veterinarians to take employment in our large metropolitan cities or within 100km of those cities. Increasingly, students have a need to stay within the confines of the cities for 'lifestyle benefits', access to referral centres and access to out-of-hours emergency centres. Exposure of students to well run rural practices with a wide range of facilities and interesting case loads should demonstrate that life in rural practice is not a penalty, but a bonus," he said.



Dr Brian Munro says offering work placement opportunities to CSU students was a natural decision.

CSU provides state-of-the-art facilities for vet science students



The Clinical Centre at CSU is designed for training in veterinary medicine, surgery, diagnostic imaging and animal reproduction.

To provide a high standard of training for veterinary science students, Charles Sturt University (CSU) has embarked on an extraordinary capital works program which will result in a series of first-class buildings and facilities on the Wagga Wagga campus.

The first of these facilities, the Pre-Clinical Centre, was officially opened in August 2006 by the Minister for Education and Training, the Honourable Julie Bishop, MP, during a ceremony attended by local practitioners, industry and government representatives.

“It is not only an historic event for the University, but also nationally”

The Pre-Clinical Centre is primarily designed for anatomy instruction. Teaching integrates dissection, live animal topographical examination, museum specimens and student-directed digitised image-databases displayed on high quality plasma screens in the laboratory. In addition, the building houses a clinical skills laboratory, tutorial rooms and a communication skills suite.

Professor Ian Goulter, CSU Vice-Chancellor, believes the facility provides CSU students with “one of the richest learning environments for veterinary science in Australia”.

The Honourable Julie Bishop MP described the Pre-Clinical Centre as a

landmark. “It is not only an historic event for the University, but also nationally” she said. The Minister also stated the importance of the CSU Veterinary School in providing a network of rural-based practitioners to combat biosecurity risks.

Planning for two new facilities is currently at an advanced stage.

The Clinical Training Centre, at a cost of approximately \$8 million, is designed for the training of undergraduate students and research in clinical veterinary medicine, surgery, diagnostic imaging

and reproduction. It will include a large animal surgery and hospital; small animal teaching surgery; diagnostic imaging for both large and small animals; reproduction laboratory and barn, as well as offices and tutorial spaces. The imaging facilities will include scintigraphy, computerised tomography, ultrasonography and digital radiography. As well as providing for the veterinary science program, the Clinical Training Centre will build on and extend pre-existing expertise at CSU in equine science and imaging.

The Veterinary Diagnostic Laboratory (VDL) will become a critical component of CSU’s plans to train veterinarians for the

needs of Australia’s livestock industries. This facility will provide a diagnostic service to the owners of livestock and pets through their veterinarians in the Wagga Wagga region – a service which has not been provided since the Department of Primary Industries’ Regional Veterinary Laboratory was closed 11 years ago.

This multi-million dollar complex will include high quality laboratories for diagnostic and research work, with a post-mortem room designed to accommodate large animals as well as sheep, pigs, poultry, fish and companion animals.

“These facilities have been designed to the highest standards expected of a modern veterinary diagnostic laboratory to meet a number of teaching, research and service objectives,” said Director of Veterinary Science Professor Kym Abbott. “Once these buildings are complete, we will have outstanding opportunities for undergraduate and postgraduate training in anatomical and clinical pathology, parasitology and microbiology, while providing valuable support to the region’s veterinarians, livestock producers and owners of companion animals.”

The Clinical Centre and VDL are expected to be completed and in use by the first quarter of 2008.



Professor Kym Abbott (R) and Member for the Riverina Kay Hull (L) with the Minister for Education and Training Julie Bishop at the opening of the University’s Pre-Clinical Centre.

CSU Opens Modern Cattle Yards

Members of the cattle industry joined local livestock producers and veterinarians at the official opening of the Charles Sturt University (CSU) Cattle Yards, which provide first-class teaching facilities for veterinary science students.

The Cattle Yards, which were officially opened on 28 October, feature electronic weighing, tag-reading and data download capabilities, hydraulic drafting gates operated by remote control or by electronic recognition of weight or ID, six offset crushes for procedures including pregnancy diagnosis, AI and clinical examination, and a teaching space including a hut for basic laboratory procedures.

"The University has been touched by the extraordinary generosity demonstrated by our communities and donors for the veterinary science program. Their help in establishing the CSU breeding herd has enabled us to provide the practical experience necessary to properly train veterinary students in livestock handling, clinical skills and herd management" said Director of Veterinary Science Professor Kym Abbott.



The new cattle yards offer outstanding opportunities for CSU students to develop strong cattle skills in a modern, safe and efficient environment.

CSU's veterinary science program passes muster

The veterinary profession's accrediting body, the Australasian Veterinary Boards Council (AVBC), has given its stamp of approval to the Charles Sturt University (CSU) veterinary course.

The Veterinary Schools Accreditation Advisory Committee, which visited the Wagga Wagga campus in April last year, recommended provisional accreditation for the University's Bachelor of Veterinary Science degree. This recommendation was approved by the AVBC in December last year, thus granting the program short-term accreditation – the normal procedure for managing accreditation in new veterinary programs.

Professor Kym Abbott, Director of Veterinary Science at CSU, said the accreditation committee particularly acknowledged the high quality of staff and facilities and the strong support given to the new program by the University.

CSU will be eligible for full accreditation in 2010 when the first veterinary science students are in the final year of the course.

David Inall addresses the Charles Sturt Veterinary Science Foundation

Executive Director of the Cattle Council of Australia David Inall used his address at the Charles Sturt University Veterinary Science Foundation Dinner in October last year as an opportunity to highlight the key issues facing rural Australia. Following is an excerpt from his speech.

"... (The Charles Sturt University Veterinary School has) broken the mould when it comes to the delivery of veterinary education in this country. The shortage of rural vets is a new problem, but it is a serious one. Many veterinary graduates are choosing to stay in or near larger cities, and a large proportion of these have chosen to specialise in companion animals. And this problem is not only confined to the veterinary profession - human doctors are also becoming scarce in rural and regional Australia. Some of you may have heard of a report titled 'The Review of Veterinary Services' otherwise known as 'The Frawley Report'. The Frawley Report was commissioned to address Australia's future animal health needs and roles and the availability and capabilities of rural veterinarians to meet those needs. The review reached three broad conclusions, one of which is directly relevant to the reason why we are here tonight. Recommendation two of the Frawley Report reads, 'There is no crisis in the availability of veterinarians. However, rural veterinarians have to contend with rising costs, a reluctance of producers to utilise their services, long hours, limited social opportunities and schooling for their families. These factors all impact on the willingness of veterinarians to live in rural areas, create local shortages and could lead to a chronic shortage of production animal veterinarians'.

"The contemporary nature of the CSU Veterinary School cuts to the core of the whole premise of the Frawley Report and his key findings. I am pleased to report that it was the Cattle Council that maintained pressure on the Federal Government to address the shortage of veterinarians in the bush. The selection process, use of the latest in education technology, the emphasis on communication, state-of-the-art cattle yards and of course this lovely rural setting, all work toward delivering real outcomes for rural Australia."

PBL in the Veterinary Science Program

“We are trying to teach students how to deal with the various issues faced by rural practitioners and make them aware of the realities of rural life”



The CSU veterinary program is the first veterinary program in Australia to utilise PBL during an entire phase of its undergraduate degree.

The inaugural group of veterinary science students at Charles Sturt University (CSU) are about to embark on a new method of study with the introduction of Problem Based Learning (PBL) into the third-year curriculum.

PBL was first established in Canada in the 1980s to combat poor student learning, low attendance at lectures and general student dissatisfaction with traditional teaching methods. Recently, Australian universities have been at the forefront of PBL education, with a number of programs now utilising PBL curricula including medicine, dentistry, engineering and nursing.

Co-ordinator of PBL within the Veterinary Science program at CSU Jenny Hyams, says PBL is both a curriculum and a process which will provide a supportive and enjoyable learning environment and encourage students to develop the commitment to lifelong learning.

“Essentially, PBL is conducted through a series of carefully selected problems or cases taken from practice and presented to students working in small teams. The student groups discuss the issues involved in each case, derive tentative explanations or hypotheses as a set of questions, seek the information they need and devise management plans,” she said. “The questions which arise from each problem become the learning goals for subsequent self-directed learning. The new knowledge is then applied to the case under study as the students work towards a full understanding of its complexities. This approach provides the student with an opportunity to think and act as a practitioner in a simulated environment. Student groups are supported by a staff member acting as a facilitator, whose task it is to stimulate the discussion, evaluate progress and monitor the contribution to the team by each member of the group.”

The PBL phase within the veterinary science program at CSU is broken into five themes including: Foundation Sciences; Vet

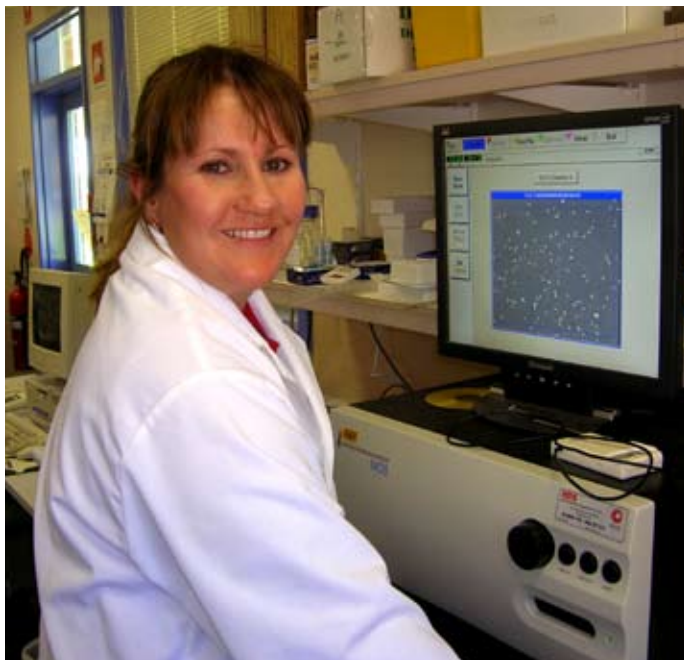
and Clients; Vet and Animals; Vet and Society; and Evaluation and Research. These overarching themes consist of four broad subject areas: companion animals (small animals, horses, pocket pets, wildlife); farm animals (individual farm animal medicine and surgery); population medicine; and public health and biosecurity.

“All subjects and themes have a common aim: to assist in developing and gathering evidence that the CSU Veterinary Science graduate attributes have been achieved by each student upon graduation,” said Ms Hyams. “Each package is ‘mapped’ against the graduate attributes, the five themes and a set of conventional disciplines, to ensure a broad coverage of topics, concepts and principles.”

The PBL curriculum (Phase 2 of the veterinary program) follows five semesters of traditional foundation science and pre-clinical subjects (Phase 1) and begins during the students’ third year of study. Phase 2 continues for four semesters and is followed by three semesters of clinical rotations (Phase 3). A number of veterinary experts outside the University are contributing to the development of packages.

PBL development is continuing under the guidance of internationally recognised PBL consultant Adjunct Associate Professor Penny Little. Workshops have been conducted which have led to the development of CSU’s own PBL program and package writing process. A number number of veterinary experts outside the University are also contributing to the development of the packages. Students and staff alike are looking forward to the PBL program as it will be an exciting and stimulating element of their ongoing education.

Training in Veterinary Pathology at CSU



Jenni Larsen, an undergraduate veterinary science student, examines an image of an abnormal specimen on the computerised semen analysis system.

Australia has a critical shortage of trained and experienced veterinary pathologists due to an aging population and a lack of training opportunities. In 2001, approximately 70% of registered specialist veterinary pathologists in Australia were over the age of 50 years. The veterinary program at Charles Sturt University (CSU) aims to rectify this problem.

According to CSU's Associate Professor of Veterinary Pathology Dr John Glastonbury training in veterinary pathology is vital for the future of Australia's livestock industries.

"Competent pathologists ensure the nation's biosecurity through effective surveillance and rapid diagnosis of disease, thus protecting the health of both people and livestock and securing export markets," said Dr Glastonbury.

"CSU is in an excellent position to train the next generation of veterinary pathologists. Effective teaching of pathology requires a mix of an ample flow of specimens, skilled teachers, active research and adequate physical resources," he said.

Being situated in a rich agricultural region, at the hub of transport networks and near large centres of human population, CSU's Wagga Wagga campus is ideally positioned to receive an excellent variety of specimens. A recent survey of veterinarians in southern New South Wales and northern Victoria showed that they were keen to submit samples to a Veterinary Diagnostic Laboratory (VDL) at CSU.

Pathologists, parasitologists, a microbiologist and a skilled histology technician are already in place, developing curricula, resources and facilities. The high calibre of these appointments will provide a solid base for teaching and attracting others to join this exciting venture.

The University has allocated more than \$6 million to design and construct a world-class diagnostic facility, built to the necessary bio-containment levels. The flow of specimens through this facility will satisfy the needs of diagnosis, teaching and research.

"Pathology is the study of the structural and functional changes which underlie disease. It can be approached at a number of levels from gross examination, to the microscopic and, finally, the molecular level," Associate Professor Glastonbury says. "Pathobiology is the term that has been adopted to encompass pathology and the related disciplines of microbiology, parasitology, clinical pathology and immunology."

With the aid of the VDL, CSU will provide first-class training in veterinary pathology to undergraduate and postgraduate students pursuing careers in research or the speciality of veterinary pathology.

"Undergraduate veterinary science students are exposed to pathology in their third year when they study Principles of Pathobiology," said Dr Glastonbury. "Through a combination of lectures and practical classes, students will be introduced to the underpinning principles of pathology, microbiology, parasitology, clinical pathology and immunology.

"During phase two of the course, undergraduates will apply these principles and learn the application of these sciences by working with case-packages in the problem-based learning curriculum. This will be augmented by feature lectures, tutorials and practical classes.

"Finally, in phase three of the course, students will undertake a compulsory placement in the VDL. Students with a particular interest in pathobiology will have the option of extending their placement in the laboratory," he said.

The disciplines of pathobiology and the VDL are expected to provide a strong focus for research and the attraction of industry funds. Ideally, research projects will involve integration of the different disciplines and utilise the modern facilities of the VDL. The flow of a diverse range of specimens through the laboratory will be fertile ground for the germination of ideas for worthwhile research. In return, research will often generate more accurate and efficient diagnostic techniques.

Associate Professor Glastonbury believes a unique strength of the teaching of veterinary pathology at CSU at all levels will be the availability of animals for post mortem examination and specimens from abattoirs nearby. Animals will be derived from the diagnostic service, surrounding livestock enterprises such as sale yards and feedlots and the university farm.

"Graduates from the veterinary science program at CSU will develop enthusiasm for pathology and a lifelong desire for a greater understanding of the structural and functional changes which underlie disease," he said.

Future veterinary leaders visit Washington

Embracing the borderless nature of their chosen profession, two Charles Sturt University (CSU) veterinary science students travelled to the United States in June last year to attend the Veterinary Leadership Experience (VLE) which develops the communication and life skills of veterinary students internationally.

Kimberly Groner and Fiona Kelk, now in the third year of veterinary studies at CSU, attended the week-long annual leadership program hosted by Washington State University along with dairy cattle practice lecturer Natasha Lees.

"Given the intrinsic global nature of veterinary medicine and protecting animal and human health, this trip is an ideal chance to foster ties between Australian and US students and to develop teamwork and communication skills," said Ms Lees. "This has benefits not only for the individual CSU students but the future of the profession and our work in herd management."

The program assists students by enhancing life skills to complement their medical and diagnostic training by focusing on communication, leadership and teamwork skills. Many students complete the program with a new understanding and perspective on their own personal and emotional development.

VLE participant Fiona Kelk says she attended the program to enhance her experience at CSU as well as furthering her leadership skills and networks. "The other people in the course are great contacts for me now, and I will maintain contact with most of the people I worked with," she said.

The three CSU representatives were given financial support by the Australian Cattle Vets, The Cattle Council of Australia and the Charles Sturt Foundation.



CSU Vet Science students Kimberly Groner and Fiona Kelk in Washington during the Veterinary Leadership Experience program.

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Student Profile: Stephanie Bullen



Why did you choose vet science at CSU?

I've always known I wanted to work in an agriculture-related field whether or not I became a vet, therefore the production animal focus of CSU's vet course was pretty appealing. Breaking up the standard vet science subjects with agriculture subjects also makes the course more interesting and I'm sure it will make us much more competent vets when we are working in rural areas.

What specific area of veterinary science are you interested in?

I have always been interested in artificial breeding of livestock, having been involved in the AI (Artificial Insemination) and ET (Embryo Transplant) programs with the cattle at home. I am finding that the more experiences I have both at Uni and out in the practices, the more areas in which I could see myself working. I guess I'd be happy working in any area provided I had plenty of hands-on work and involvement in one or more of the livestock industries.

What has been your biggest achievement outside the veterinary course?

My biggest achievement while studying vet science would be placing 3rd in the beef junior judging national finals in Perth. I was up against the best young judges in Australia at the time and to be in the top was pretty awesome.

Competing in the junior judging competitions has been enormously beneficial to my confidence. It involves standing up in front of a crowd of people you may or may not know, as well as many people who are well established in the industry, and speaking into a microphone

about the cattle in front of you. Many people won't agree with your decisions but accepting differences in opinion and taking constructive criticism is all about the learning experience. I'd still be competing no matter what end of the line I placed, because it's great fun and you're guaranteed to learn something new every time.

What keeps you passionate and motivated in your studies?

I think no matter what you study you will have moments of doubt but I find that as long as I keep in mind why I came here in the first place then I am generally ok. If you can see the practical application of what you're reading in a textbook or learning in a lecture, then studying it is a lot less tedious.

Having the opportunity to spend so much time out in veterinary practices so early in the course also lets you see the light at the end of the tunnel.

What do you hope to achieve in the future?

Aside from my studies in veterinary science, I have been involved in a number of beef industry-related youth organisations. Being involved has given me endless opportunities which I otherwise never would have had. For example, in 2005 I won a \$3000 scholarship from Stud-Beef Victoria towards my self-development in the beef industry and in January this year I won a stud Angus heifer through Angus Youth.

In the future I would like to promote opportunities such as these and encourage other young people to get involved in organisations in their area of interest. It's my opinion that the only way you can achieve your goals is to be involved and a lot of young kids just need to be pointed in the right direction. There were a lot of people who helped me out and I'd like to be one of those people now that I have achieved more than I ever could have dreamed of at age 18.

In your opinion, what is the biggest threat facing the industry at the moment?

Without making too big a generalisation, a lot of animal welfare issues, especially in production animal industries, are raised by groups who have a limited knowledge about the industries of concern. Many welfare concerns are justified, and the push by consumers towards more animal-friendly production is often needed to promote forward change in an industry. However, I still think that there are many areas where claims of 'cruelty' are a little misguided. As new graduates, we can use our more extensive knowledge of livestock production to educate the general public and help them develop more informed opinions and make better decisions about the products they buy.

“The only way you are going to achieve your goals is to be involved and a lot of young kids just need to be pointed in the right direction.”

Veterinary Science Wine Pricelist

Enjoy award-winning, great value wine, and the same time support the Charles Sturt Veterinary Science Foundation. Proceeds from every purchase will help the Foundation support the future generation of veterinary practitioners.



WINERY

Since its establishment in 1977, wines from Charles Sturt University Winery have been awarded 23 trophies, 84 gold, 164 silver, 394 bronze medals in national wine shows.

Cellar Door Hours Monday - Friday 11am - 5pm Saturday & Sunday 11am - 4pm

Wine List	Quantity ordered units	GST inclusive	Amount \$
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2003 Blanc de Blancs (Sparkling Chardonnay)		Sold Out!	
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Liqueur Port (375ml)		\$15.40	
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2005 Chardonnay (Top 100 Wine in Australia - James Halliday)		\$13.20	
2004 Riesling Traminer		\$13.20	
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Sydney	\$14.50	\$10.10
NSW country	\$14.50	\$11.70
Melbourne	\$14.50	\$10.10
Vic. country	\$14.50	\$13.70
Brisbane	\$13.80	\$13.80
QLD country	\$19.10	\$19.10
Adelaide	\$14.50	\$14.50
SA country	\$17.50	\$17.50
Perth	\$24.40	\$22.20
WA country	\$30.60	\$30.60
Tasmania	\$23.30	\$23.20
NT	\$32.30	\$32.30

PLEASE SEND WINES TO:

Name: _____

Delivery Address (not a PO Box): _____

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CREDIT CARD please tick one box
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Signature: _____

Expiry Date: _____

Name shown on card: _____

Please return order forms to:

The Charles Sturt Veterinary Science Foundation
The Grange, Charles Sturt University, Panorama Avenue
Bathurst NSW 2795

PHONE: 02 633 84680

FAX: 02 633 84833

EMAIL: aowens@csu.edu.au



Veterinary Science Foundation Membership

I would like to support the Charles Sturt Veterinary Science Foundation by becoming a (please tick one):

- Governor - \$5,000 per annum
- Donor - \$1,000 per annum
- Supporter - \$250 per annum
- Associate - with a monthly credit card contribution of
 - \$20 \$50 \$100

OR I would like to donate the amount of \$

Name: _____

Address: _____

Postcode: _____

Phone: _____ Email: _____

Payment options:

Please invoice me in _____ (month) each year for the above amount.

OR Make cheques payable to 'Charles Sturt Foundation' and forward to the address below

OR Please charge my credit card:

- Bankcard Visa Master Card American Express

Cardholder's name: _____

Expiry date: _____

Amount of authorisation: _____

Signature of cardholder: _____

Please return to:

Charles Sturt Foundation c/- Charles Sturt University
Panorama Avenue, Bathurst NSW 2795



Illustration by Jan Austin (Inland by Hand)
<http://www.inlandbyhand.com.au/>