



ANIMAL WELFARE  
SCIENCE CENTRE



- *Animal Welfare Science Centre*
- *CSIRO Livestock Industries*
- *Centre for Animal Welfare and Ethics, University of Queensland*
- *Animal Welfare Science and Bioethics Centre, Massey University*
- *Animal Behaviour and Welfare Research Centre, AgResearch*
- *Department of Agriculture Fisheries and Forestry, Australia*
- *Ministry of Agriculture, Fisheries and Forestry, New Zealand*

## OIE Collaborating Centre for Animal Welfare Science & Bioethical Analysis - training program

The OIE Collaborating Centre for Animal Welfare Science & Bioethical Analysis is a collaboration of Australia's and New Zealand's major animal welfare research groups and national government agencies.

A training program is being developed for individuals with tertiary-level qualifications including those who have:

- a strong interest in different facets of AW and its management at local and national levels who do not necessarily have a scientific background;
- scientific, veterinary or other such qualifications at Bachelor level, but no direct experience of AW science and management;
- more advanced qualifications and some experience in some aspects of the AW arena.

This 9-day training program, *Understanding animal welfare: foundations, practice and regulation*, will be presented at Massey University in July this year and material will be delivered by Collaborating Centre scientists including AWSC scientists Paul Hemsworth, Andrew Fisher, Grahame Coleman and Ellen Jongman.

For further information, please contact Prof. David Mellor:  
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## A selection of student research project updates

**Katie Betts, OSU:** Katie has completed her MS degree investigating the effects of feeding Ractopamine to growing pigs. In addition to other parameters measured, her research showed that ractopamine inclusion at either 5ppm or 10ppm did not affect salivary or plasma cortisol concentrations.

**Sally Sherwen, Melbourne:** Over the past few months, Sally has been investigating the effect of crowd noise and interactivity on meerkat behaviour in several Victorian Zoos.

The data is yet to be analysed but the meerkats definitely proved a very interesting species to observe.

Sally has also been working closely with Marie-Astrid Bigo, a student from France on a study investigating the behaviour and welfare of kangaroos in a free range exhibit at Melbourne Zoo. Data collection for this study is still in progress but the students are already seeing some very interesting behaviours from both kangaroos and humans!

**Tammie King, Monash:** Tammie has been investigating the characteristics that make an 'ideal' companion dog. She has developed the "Canine Amicability Assessment" as a standardised measure to identify amicable dogs. Results show that specific behaviours (i.e. of time spent in contact with stranger, time spent trotting/cantering and body posture),

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## Seminars



David Mellor

### David Mellor

The AWSC was pleased to host Prof. David Mellor of Massey University's Animal Welfare Science and Bioethics Centre in early March 2012.

While David was in Melbourne, he gave a thought-provoking seminar which focused on the effect of both positive and negative experiences on animal welfare.

You can find a link to David's presentation by going to our Seminar page:

<http://www.animalwelfare.net.au/article/scientific-seminars>

and listen to David's presentation by visiting our *Vimeo* page:

<http://vimeo.com/awsc>



Peter Sandøe

### Peter Sandøe

Professor Peter Sandøe from the Faculty of Life Sciences, University of Copenhagen, Denmark challenged our thinking on the ethical treatment of animals.

In particular, the discussion focusing on why our ethical assumptions vary depending on whether we're talking about farm animals or companion animals and how researchers can present results in a way that makes their ethical assumptions transparent was most illuminating.

Over 120 people from all sectors attended Peter's seminar which the AWSC presented in conjunction with RSPCA Australia.

You can download Peter's presentation by visiting our seminar page:

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and listen to his presentation by visiting our *Vimeo* page:

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### Tilbrook to SARDI

Professor Alan Tilbrook has joined the South Australian Research and Development Institute (SARDI) from the Department of Physiology at Monash University as Research Chief, Livestock and Farming Systems, based at Roseworthy.

Alan's research interests in stress and animal behaviour and welfare, across a range of species will boost SARDI's capability in animal welfare research.

The AWSC already has collaborative ties with SARDI through poultry welfare research with Dr Phil Glatz and research into sow housing with the Pork CRC. Alan's appointment can only strengthen these ties and open up opportunities in new areas.



Alan Tilbrook

### Hemsworth visits OSU

AWSC Director, Paul Hemsworth, visited The Ohio State University (OSU) in March to further research collaboration and to discuss joint teaching opportunities between OSU and the University of Melbourne.

The potential for scientists and students across the AWSC to meet more regularly utilizing teleconferencing facilities will be explored to improve communication between AWSC partners.

## A selection of student research project updates (cont'd from P1)

best predict amicable dogs. Further data analyses are underway examining expert vs. owner ratings of a dog's behaviour.

It is anticipated that this project will provide the first scientifically validated test of canine amicability, which will then be available for use by trained assessors to evaluate dogs in a transparent manner.

**Tiffani Howell, Monash:** With the help of her supervisors, Tiffani has investigated three ways to explore dog cognitive processing: behavioural, electrophysiological, and survey-based.

She has used behavioural studies to examine whether dogs can use a mirror as a problem-solving tool. Tiffani has also used EEG to measure brain-waves in dogs. The particular waveform she was looking for is believed to be related to memory, and it exists in humans.

Her research has showed that it also exists in dogs. Finally, Tiffani surveyed the public to find out what people think dogs are really capable of, to help inform future dog cognition studies.

**Jo Coombe, Melbourne:** As part of a joint initiative between the Faculty of Veterinary Science and the DPI (Ellinbank), Jo has conducted several experiments to investigate the health and welfare of pasture - based dairy cows in different feeding systems.

Her main areas of research have focused on rumen health, and hoof health. These experiments have involved assessment of the risks of sub acute rumen acidosis (SARA), using indwelling pH meters and investigation of the integrity of the rumen wall as well as a major experiment assessing hoof health, which can be impacted as a result of SARA.

**Jessica Oliva, Monash:** Jessica is about to commence data collection for her project at Animal Aid shelter in Coldstream, which will investigate whether the 'love hormone' oxytocin functions in the canine brain to facilitate bonding behaviours towards humans.

The effects of stress and variants of the oxytocin receptor gene will also be evaluated.

Jessica will be presenting preliminary findings at the Int. Society for Anthrozoology, Forum of Neuroscience and Canine Science Forum Conferences in July this year.

**Mia Cobb, Monash:** Mia is investigating the effect of a structured social and environmental enrichment program on the welfare of kennelled working dogs.

Data collection has been completed and analyses of the physiological and behavioural data are underway. Preliminary results demonstrate marked individual variation, suggesting that relationships between welfare, assessment outcomes and provision of enrichment are not straightforward. Careful monitoring of individual dogs may be required to optimise training outcomes and welfare objectives.

An online survey has also been conducted to learn more about people's beliefs regarding the welfare of dogs housed in kennel facilities and the perceived importance of enrichment.

## Marie-Astrid with a local



Marie-Astrid Bigo is working as an intern student with the AWSC at the University of Melbourne. She is a student at AgroParisTech. She has always had a passion for animal behavior and this internship at the AWSC is a great opportunity for her to participate to a research project about animal behaviour and welfare. Marie is working with Sally Sherwen on a project about visitor effect on kangaroos at Melbourne zoo.

## Megan Verdon at South Australian Pig Industry Day

Megan Verdon, a Pork CRC supported PhD student at the University of Melbourne attended the SA Pig Industry Day at Roseworthy in February and reported on the work being undertaken at the AWSC into group sow housing.

Megan's study hypothesizes that pigs display specific and consistent behaviours, such as aggressiveness, and that these behaviours can be used to classify the social strategy (dominant, sub-dominant and submissive) a pig adopts when group-housed under stress. In addition, a relationship should exist between a pigs' social strategy and its performance in terms of welfare and productivity. Consequently, her study aims to test whether the distribution of strategies within a group affects the performance of individuals in that group, as well as the group as a whole.

Speaking to Peter Bedwell from the Australian Pork Journal, Megan said that major challenges to the sow when mixed included aggression causing injury and stress and that the industry needs to determine tools to regulate the process of sows establishing their hierarchy.

"Competition for restricted resources like food called for careful thought about the design of feeding areas: tests to establish cortisol release help to establish stress levels during specific periods and activities," Megan explained.

She referred to a study conducted in 1998 where 48 sows were split into 8 separate groups "as allocated space for each group increased there was a reduction in aggression lesions and cortisol levels. Allocated space per sow of 1.4 square meters is likely to be too small and an area of around 1.8 m<sup>2</sup> appears to be a more beneficial but more study and understanding of the whole space question needs to be undertaken," she said.

"Body stalls reduce aggression and in the first 4 days after mixing, aggressiveness is somewhat repeatable- experience and genetics of sows are important factors and group composition in the mixing pens is important, as is staff training to enable the best group formation. Be careful of space at mixing time and it is advisable to maintain small static groups if possible," Megan concluded.

Peter was impressed by Megan's understanding of the topic of group sow housing and also by her ability to transmit her knowledge to an Industry audience outside the research community.



Megan Verdon



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