# BUILDING BETTER DOGS

# ABSTRACTS

**11 February 2010, Monash University**

## Keynote presentations:

- **Pauleen Bennett**  Why behaviour is as important as conformation when selecting breeding dogs

- **Mike Goddard**  Genetics of dog behaviour and breeding programs to improve canine welfare

- **Paul McGreevy**  Breeding for quality of life

- **Kate Schoeffel**  A model for an association of professional pet dog breeders

## Student presentations:

- **Mia Cobb**  The experience of young dogs transitioning from the home environment into a kennel facility

- **Tammie King**  Identifying 'ideal' companion dogs for Australia

- **Kate Mornement**  Community attitudes towards shelter dogs

- **Vanessa Rohlf**  What makes people responsible owners?

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## Information about the Animal Welfare Science Centre

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# Why behaviour is as important as conformation when selecting breeding dogs

**Pauleen Bennett, Monash University**

### Abstract:
Dogs vary physically and behaviourally on almost every characteristic possible. This supports the artificial selection that underlies controlled breeding programs. Such programs have traditionally focused on producing dogs able to perform specific tasks, such as herding, guarding or tracking. More recently, however, dogs have been selected for breeding primarily on the basis of how they look. Commercial breeders seek to produce dogs that look exceptionally 'cute' as puppies, hoping for a quick sale and sometimes with no consideration of longer term health and behavioural outcomes. Purebred breeders are constrained by breed standards that tend to focus on observable morphological traits easily evaluated by conformation experts. In this presentation it will be argued that, given the current social and political climate in Australia, all breeders need to pay more attention to the behavioural predispositions of the dogs they produce. Dogs with well described and predictable behavioural traits can more easily be placed successfully in suitable homes, with consequent improvements in dog welfare, community safety and owner satisfaction.

### Further reading:
Bateson, P. (2010) Independent Inquiry into Dog Breeding: Final Report. University of Cambridge.

### Presenter biography:
Pauleen has always worked and lived with animals and completed a behavioural science degree, followed by advanced studies in behavioural neuroscience and psychology. While studying she began breeding and training dogs and became interested in the complex roles that companion animals play in our lives. She subsequently established the Anthrozoology Research Group at Monash University, which is part of the Animal Welfare Science Centre. Working with an extremely talented and enthusiastic bunch of graduate students, Pauleen has investigated many aspects of human-companion animal relationships, focusing mostly on dogs. Much of the work has been conducted in shelters, trying to figure out why some relationships fail and what can be done to prevent this. The group also works in the community, looking closely at companion animal management and exploring the efficacy of animal assisted interventions for a range of community groups. Pauleen also led development of Australia's first course in animal welfare and an 'Animals in Society' course which she teaches each year at The Ohio State University. When Pauleen is not working, she chills out on the family farm with a very large pack of companion dogs.



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# Genetics of dog behaviour and breeding programs to improve canine welfare

**Mike Goddard, University of Melbourne**

## Abstract:

The most important step in any breeding program is to decide on the objectives. Since most puppies sold become pets, the main objective should be to breed dogs that become successful pets. Two sets of traits contribute towards this – behavioural traits and health traits – and both of these also impact on the welfare of the dog. Some abnormalities are due to a single mutant gene such as progressive retinal atrophy (PRA). In many cases the mutant gene is recessive so a dog can carry the mutant gene but appear perfectly normal. In some cases there are DNA tests to detect such carriers. However most diseases are due to many genes and environmental factors (eg hip dysplasia and epilepsy). In these cases the best strategy is to estimate the overall genetic merit of the dog for each trait and select those with highest merit. This would be helped greatly by calculating estimated breeding values for each dog for each important trait but to do this would require that a central registry was kept of dogs' status for traits such as HD and epilepsy. Crossbreeding also reduces the incidence of abnormalities but it is still important to select for breeding the best dogs within each breed used. Among behavioural traits, fearfulness, aggression and over excitability are undesirable traits. They are also controlled by many genes and by environmental factors and the best way to improve them is to select animals with desirable estimated breeding values for these traits.

## Presenter biography:

Michael Goddard is Professorial Fellow in Animal Genetics at University of Melbourne and Victorian Department of Primary Industries (DPI). He graduated in veterinary science and did his PhD at University of Melbourne on the topic of 'A breeding program for guide dogs for the blind' in conjunction with the Royal Guide Dogs for the Blind Association. Since then he has worked at James Cook University in Townsville, DPI in Victoria and University of New England in Armidale where, as well as teaching, his research has been on the genetic improvement of livestock. He was recently awarded an honorary doctorate from the Life Sciences University of Norway for his contributions to livestock genetics. In 2010 he will be a keynote speaker at the World Congress on Genetics Applied to Livestock Production in Leipzig, Germany.

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# Breeding for quality of life

**Paul McGreevy, University of Sydney**

## Abstract:

Many breeds of companion animal have inherited disorders that may impair quality of life (QoL) to the extent that it is unkind to keep them alive. If we struggle to discern when this point is reached, why do we breed compromised, short-lived animals in the first place? If we struggle to judge when environmental conditions cause an unacceptable QoL, why not breed appropriately for modern environments? In breeding pedigree dogs, five major problems arise: (1) some breed standards and selection practices run counter to dog welfare; (2) insufficient selection pressure seems to be exerted on some traits that would improve animal well-being and produce dogs better suited to modern environments; (3) the incidence of certain inherited defects in some breeds is unacceptably high; (4) the dearth of registered animals of certain breeds in particular countries makes it extremely difficult for breeders to avoid mating close relatives; and (5) there may be financial disincentives for veterinarians to reduce the incidence of inherited diseases. Before we can judge when behavioural or morphological changes caused by selective breeding result in an unacceptable QoL, we have to know which are prevalent. This paper reviews progress in two Australian schemes to monitor trends in the prevalence of inherited disorders in dogs and to promote behavioural phenotypes likely to cope with contemporary domestic environments.

## Further reading:

Asher, L., Summers, J.F., Diesel, G., McGreevy, P.D., Collins, L.M. (2009) Inherited defects in pedigree dogs I: Disorders that are related to breed standards. *The Veterinary Journal*. 182, 402–411.

Summers, J.F., Diesel, G., Asher, L., McGreevy, P.D., Collins, L.M. (2009) Inherited defects in pedigree dogs II: Disorders that are not related to breed standards. *The Veterinary Journal. 183, 39-45*

Roberts, T., McGreevy, P.D. (2009) Selection for breed-specific long-bodied phenotypes is associated with increased expression of canine hip dysplasia. *The Veterinary Journal*, Accepted, in press.

## Presenter biography:

Associate Professor Paul McGreevy graduated from Bristol University Veterinary School in 1987. He worked as a general veterinary practitioner in Australia and England before returning to Bristol to take a PhD in animal behaviour. Since 1996, Paul has been teaching, researching and consulting at the University of Sydney's Faculty of Veterinary Science. He is recognised by the Royal College of Veterinary Surgeons as a specialist in Veterinary Behavioural Medicine. Paul's research focuses on the behaviour and welfare of dogs and horses. He is the author of six books and over 80 peer-reviewed articles on animal behaviour. Paul has received many awards for his pioneering work, including the British Society for Animal Science RSPCA Award for Innovative Developments in Animal Welfare, the Australian College of Veterinary Scientists Ian Clunies Ross Memorial Award and Universities Federation for Animal Welfare Companion Animal Welfare Award.



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# A model for an association of professional pet dog breeders

**Kate Schoeffel, Australian Association of Pet Dog Breeders**

### Abstract:

In this paper I will introduce The Australian Association of Pet Dog Breeders (AAPDB) which was started in 2007 but is about to relaunch after attracting commercial support to develop a professional manual and web site. The AAPDB has been established to assist and register responsible pet dog breeders. The association hopes to attract pure bred dog breeders, cross breeders and breeders developing new breeds. Members of the AAPDB must abide by the AAPDB code of ethics and must be inspected prior to gaining full membership. The objectives of the organisation are:

- To promote and improve the availability of healthy, reliable, well socialised pet dogs
- To promote and raise the standard of welfare of breeding dogs
- To encourage responsible pet ownership
- To maintain a voluntary data base of owners in order to promote activities and social interaction between owners
- To maintain a data base of breeders and dogs in order to monitor welfare and to promote communication and education between breeders
- To support research into the behaviour and genetic health of pet dogs

In discussing these objectives I will consider the role a breeders association can play in promoting the welfare of companion dogs.

### Further reading:

McGreevy, P. D., Nicholas, F. W. (1999) Some practical solutions to welfare problems in dog breeding. *Animal Welfare* 8, 329-341.

RSPCA Knowledge Base: 'What is a responsible companion animal breeder?' http://kb.rspca.org.au/What-is-a-responsible-companion-animal-breeder_327.html

Website of the Australian Association of Pet Dog Breeders  http://www.aapdb.com

### Presenter biography:

Katharine Schoeffel studied genetics and received the D M Myer medal for Biology at Latrobe University before studying veterinary science at Melbourne University. In 1984 she moved to Condobolin with her husband and fellow veterinarian Bruce Watt. There they ran a mixed veterinary practice, operated a cropping and livestock enterprise and raised four daughters. In the early 1990s they became interested in the notion of applying modern principles of animal breeding to breed purpose bred pet dogs. In 1993 Kate became the first breeder in the world to breed "Miniature Labradoodles" – crossing Toy and Miniature Poodles with Labradors. With the growth and success of "designer dogs" it has become clear that there is a need to rationalise and regulate this industry, for the benefit of breeding dogs, pet dogs and their owners. To this end Kate has been involved in the formation of the Australian Association of Pet Dog Breeders.
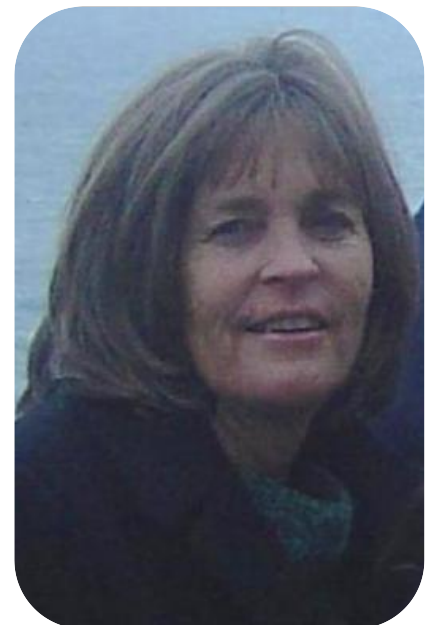
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# The experience of young dogs transitioning from the home environment into a kennel facility

**Mia Cobb, Anthrozoology Research Group & AWSC, Monash University**

## Abstract:

Growing awareness has led to calls for improved provision for the welfare of animals housed in captivity, including dogs housed in kennel facilities. This presentation will outline the preliminary findings from research conducted at Guide Dogs Victoria. Physiological samples (salivary cortisol and blood neutrophil:lymphocyte ratios) were collected from dogs (n=30) returning from puppy raising home environments into the training kennel facility. Dogs were sampled in their puppy raising home 14 days prior to entering kennels, after arrival in the kennel facility and again 14 days later (15 days after arrival). A group (n=10) of like-aged dogs from the same population remaining in the puppy raising home environment were similarly tested over the same four week sampling schedule for comparison. A significant effect of entering the kennel environment was demonstrated, indicating an initial stress response followed by a period of recovery. The importance of individual variation and the concepts of stress and distress will be considered in this presentation. The implications of these results in regards to the welfare of dogs entering kennel facilities will be discussed. Further research evaluating the effectiveness of strategies aimed at reducing canine stress responses in kennel facilities, such as enrichment programs, is indicated and currently underway.

## Further reading:

Stephen, J.M., Ledger, R.A. (2005) An audit of behavioral indicators of poor welfare in kenneled dogs in the United Kingdom. *Journal of Applied Animal Welfare Science* 8, 79-96.

Taylor, K.D., Mills, D.S. (2007) The effect of the kennel environment on canine welfare: a critical review of experimental studies. *Animal Welfare* 16, 435-447.

Davis, A.K., Maney, D.L., Maerz, J.C. (2008) The use of leukocyte profiles to measure stress in vertebrates: a review for ecologists. *Functional Ecology* 22, 760-772.

## Presenter biography:

Following an undergraduate degree focussing on animal behaviour (BSc Hons: 1999) Mia worked at RSPCA Victoria, where she gained experience in a wide range of human-animal interactions and animal welfare issues. Since 2003, Mia has worked as the Training Kennels & Veterinary Clinic Manager at Guide Dogs Victoria. Mia is currently undertaking a PhD researching the effects of social and environmental enrichment on the welfare and work performance of kennelled dogs as a member of the Anthrozoology Research Group at Monash University and as part of the Animal Welfare Science Centre. Her research was recently awarded the RSPCA Australia Alan White Scholarship for Animal Welfare Research in 2009.

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# Identifying 'ideal' companion dogs for Australia

**Tammie King, Anthrozoology Research Group & AWSC, Monash University**

## Abstract:

Dogs were originally selected and bred to perform specific working roles such as guarding, hunting and herding, resulting in dog breeds which vary enormously in their morphology and behaviour. However, dogs nowadays rarely get to undertake the roles for which they were once bred; instead they are primarily kept as companions for people. It is possible some dogs may be better suited to perform this role than others. The Australian public were surveyed to determine what characteristics are considered 'ideal' in a modern day dog. The results indicated that the most important behavioural characteristics relate to the canine personality trait 'amicability'. The aim of my research therefore, is to begin the process of accurately and reliably assessing canine behaviour by developing a measure of amicability. The ability to accurately assess canine behaviour would be of great benefit to many dog related organisations and assist dog breeders to make informed breeding choices. In addition to educating the public about dog training and behaviour, the ability to better describe a dog's behaviour could assist dog-owner matching which should reduce the numbers of dogs relinquished to shelters. Data collection is currently underway to test the validity and reliability of the Monash Canine Amicability Assessment.

## Further reading:

King, T., Marston, L.C., Bennett, P.C. (2009) Describing the ideal Australian companion dog. *Applied Animal Behaviour Science* 120, 84-93.

Ley, J., Bennett, P., Coleman, G. (2008) Personality dimensions that emerge in companion canines. *Applied Animal Behaviour Sci*ence 110, 305-317.

Diederich, C., Giffroy, J. M. (2006) Behavioural testing in dogs: A review of methodology in search for standardisation. *Applied Animal Behaviour Science* 97, 51-72.

## Presenter biography:

Tammie King completed a BSc (Hons) majoring in Zoology at The University of Melbourne and is currently undertaking a PhD as a member of the Anthrozoology Research Group at Monash University and as part of the Animal Welfare Science Centre. She also works part time as a veterinary nurse. Tammie is interested in research involving human-animal interactions, more specifically, studies which involve domestic dog behaviour.
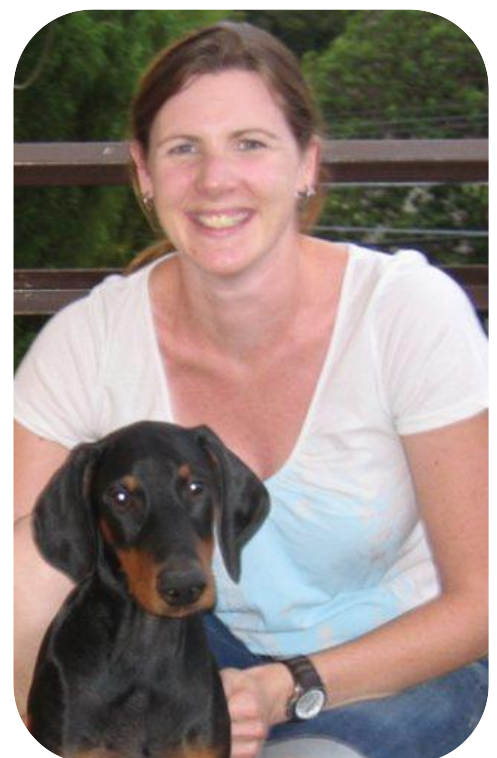


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# Community attitudes towards shelter dogs

**Kate Mornement, Anthrozoology Research Group & AWSC, Monash University**

## Abstract:
Of considerable welfare concern are the thousands of dogs euthanased in Australian shelters and pounds every year. Many of these dogs have the potential to make excellent pets. So why are so many shelter dogs overlooked as companions? Is it because supply outweighs demand or does the community hold negative attitudes towards shelter dogs resulting in potential dog owners obtaining a pet from alternative sources such as a breeder or pet shop? This presentation will summarise the preliminary results of an online questionnaire which investigated community attitudes towards; the future acquisition of a pet dog; shelter dogs, their behaviour and the assessment of their behaviour for adoption suitability; animal shelters and common shelter practices, and; experiences with their most recent dog. Data were collected from 1647 participants aged 18 to 81 years over a one month period. The results of this study could be used to inform strategies aimed at improving attitudes towards shelter dogs by increasing demand for them as companions. This will improve the welfare of shelter dogs by reducing the number euthanased and the length of time spent in the shelter awaiting adoption.

## Further reading:
Wells, D. L., Hepper, P. G. (2001) The behavior of visitors towards dogs housed in an animal rescue shelter. *Anthrozoös* 14(1), 12-18.

Marston, L.C., Bennett, P.C., Coleman, G.J. (2004) What happens to shelter dogs? An analysis of data for 1 year from three Australian shelters. *Journal of Applied Animal Welfare Science* 7(1), 27-47.

## Presenter biography:
Kate Mornement is currently completing her PhD in canine behaviour as a member of the Anthrozoology Research Group at Monash University and as part of the Animal Welfare Science Centre. Kate's research has investigated the assessment of shelter dogs for adoption suitability including the development of a standardised assessment protocol. In addition to this, Kate runs her own animal behaviour consulting business called Pets Behaving Badly and regularly writes on the topic of companion animal behaviour for various print and online publications. More recently Kate has started working for the RSPCA as the Animal Welfare Policy research assistant.



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# What makes people responsible owners?

**Vanessa Rohlf, Anthrozoology Research Group & AWSC, Monash University**

## Abstract:

Approximately 40% of Australian households own at least one pet dog. While dog ownership confers various benefits, there are many disadvantages associated with the high incidence of dog ownership. Roaming dogs can cause road accidents and barking dogs can become the focus of neighborhood disputes (Kayrooz et al., 2003). In many cases these issues arise out of mismanagement on the dog owners' behalf. An online survey of 1016 Australian dog owners was conducted in order to determine the relationships, if any, between demographics, attitudes, dog-owner relationship variables and dog management behaviours. These practices included confinement, desexing, participation in formal obedience training and socialisation. Levels of compliance were high ranging from 98% for confinement of dogs to 64.5% for attendance at formal obedience classes. Regression analyses revealed that compliance could be predicted from attitudinal and dog-owner relationship variables independent of demographic variables. Interestingly, many management behaviours were predicted by the extent to which owners believed the practices was approved of by friends and family. These results demonstrate that management behaviours may be partially determined by normative considerations. It is suggested that campaigns which seek to increase normative pressure and address other specific attitudes are likely to be effective in promoting responsible dog ownership.

## Further reading:

Heady, B. (2006). National people and pets survey. Socially responsible pet ownership in Australia: A decade of progress. Petcare Information and Advisory Service Australia Pty Ltd (PIAS).

Kayrooz, C., Dalton, C., Colavecchio, F., Hibberson, C. (2003). Barking dogs, noisy neighbours and broken fences: Neighbourhood dispute mediation. *Australasian Dispute Resolution Journal* 14(1), 71-80.

## Presenter biography:

Vanessa Rohlf is a PhD student studying owner factors predicting dog ownership practices. She has worked as a veterinary nurse, research assistant and conducted pet bereavement counselling. She currently teaches Psychology at Monash University and also works as a stable-hand.

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# The sensory jump test: a measure of sensory laterality in dogs

**Lisa Tomkins, Faculty of Veterinary Science, The University of Sydney**

## Abstract:

Given that significant resources go into training guide dogs, determining early predictors of success is of great value. Visual perception of guide dogs is paramount because appropriate locomotory responses to the physical environment are required when guiding the visually impaired. Visual biases to the left or right may therefore affect the suitability of dogs for guiding work. Sensory lateralisation was assessed in dogs ($n = 74$) using our innovation, the Sensory Jump Test (SJT). Modified head halters were used to create three ocular treatments (binocular, right, and left monocular vision) to assess eye preference in the SJT. Jump outcome measurements included: (i) launch and landing paws, (ii) type of jump, (iii) approach distance, (iv) clearance height of the forepaw, hindpaw and the lowest body part to clear the jump, and (v) whether the jump was successful. Several factors including ocular treatment, jump set and replication number were significantly associated with jump outcomes. Hindpaw clearance height (HCH) was highly predictive of success in the guide dog program, with dogs having a 34.60% increase in odds of passing for each 1cm increase in HCH ($p=0.008$). To our knowledge, this is the first study to describe sensory lateralisation in the dog, and furthermore, to show that HCH is predictive of success in the guide dog program.

## Further reading:

De Boyer Des Roches, A., Richard-Yris, M.-A., Henry, S., Ezzaouia, M., Hausberger, M. (2008) Laterality and emotions: Visual laterality in the domestic horse (*Equus caballus*) differs with objects' emotional value. *Physiology & Behavior* 94, 487-490.

Siniscalchi, M., Sasso, R., Pepe, A.M., Vallortigara, G., Quaranta, A., (Accepted; 2010). Dogs turn left to emotional stimuli. *Behavioural Brain Research*.

## Presenter biography:

Lisa Tomkins studied Agricultural Science, majoring in animal production for her undergraduate degree. After several years of research work into wool follicle development, Lisa returned to the University of Sydney to undertake her PhD in animal behaviour. She is now a final year student at the Faculty of Veterinary Science. Her project aims to identify predictors of success in the Guide Dog Program using a combination of temperament, lateralisation and kennel behaviour assessments. Lisa is interested in the behaviour of all animals, but particularly that of dogs and cattle.

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# The Animal Welfare Science Centre

## www.animalwelfare.net.au

The Animal Welfare Science Centre was established in 1997 to focus and coordinate research and academic resources of the collaborating organisations, providing the animal industries, animal users, farming communities, Government and the academic and general community with an internationally competitive research, training and teaching resource in animal welfare science.

## Operation of the Centre

The Animal Welfare Science Centre is a Centre of:

- The University of Melbourne: **School of Land and Environment**
- Monash University: **School of Psychology and Psychiatry** and **Department of Physiology**
- The Ohio State University: **Department of Animal Science** and **College of Veterinary Medicine**
- The **Department of Primary Industries**, Victoria

## Centre Vision

**"Animal welfare and its constant improvement are societal and cultural norms"**

## Centre Mission

**"To contribute to improved animal welfare as a world leading provider of expert information, advice and education underpinned by rigorous research"**

## Centre Outcomes

1. All animals are managed according to best animal welfare practices through informed, confident and proactive 'industries'.
2. The discussion on animal welfare is facilitated in the general community through well-informed and confident stakeholders.
3. Recognition of high welfare standards in Australia and preferential sourcing by purchasers of Australian products through informed and confident public and markets.

## Centre Outputs

1. Develop scientifically defensible welfare methodology.
2. Use scientifically defensible methodology to establish, amend or validate industry welfare standards and practices.
3. Develop and support industry education and training strategies and provide scientific advice to support the modification of codes of practice and the development of Quality Assurance programs to introduce scientifically defensible welfare standards in the animal industries.
4. Understand public and consumer attitudes to animal welfare to assist Governments and industry in (1) developing animal welfare policy and (2) assuring local and international consumers, public and other governments of the sound welfare standards for Australian domestic animals.
5. Ensure tertiary students entering the animal industries are better prepared to provide sound, science-based advice on animal welfare practices to industry, interest groups and the public.
6. Provide high quality postgraduate and postdoctoral training for the next generation of researchers and teachers in animal welfare science.

## RD&E activities of the Centre

The Centre's activities can be described under four major program areas:

1. Animal welfare methodology.
2. Housing and husbandry effects on animal welfare.
3. Attitudes to animals and animal welfare, and farmer, consumer and community behaviour.
4. Industry, tertiary and post-graduate education and training.
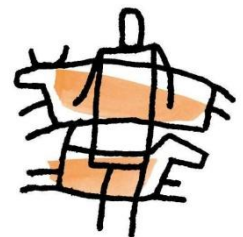
For further information on Centre RD&E activities, please email Jeremy Skuse, Executive Officer at:
**awsc-info@unimelb.edu.au**

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