About us
The Animal Welfare Science Centre (AWSC) was formed by member organisations to deliver rigorous innovative, basic and applied research and educational outcomes to improve animal welfare.

The four member organisations are located in Victoria and South Australia:

- Department of Economic Development, Jobs, Transport and Resources, Victoria
- The University of Melbourne (Faculty of Veterinary and Agricultural Sciences)
- The South Australian Research and Development Institute
- The University of Adelaide (School of Animal and Veterinary Sciences).

Mission
“The mission of the AWSC is to commit its members to undertake science-based research, development and education to provide information, advice and training to improve the welfare of animals used in agriculture, in zoos and as companions”.

Guiding principles
Our guiding principles are to:

- undertake collaborative, rigorous and innovative research, development and education (RD&E);
- drive growth and innovation through collaboration by harnessing the collective critical mass and the synergies and capability across the members and in organisations outside of the AWSC;
- provide facilities to support animal welfare science activities;
- provide scientific knowledge and advice to government, industry and the community which will underpin the global development of animal welfare policy and informed debate, and ensure the public and government stakeholders adopt defensible animal welfare standards; and
- develop and foster education programs for post-graduate education in the Field and to increase the level of scientific collaboration in the Field within Australia and internationally.
RD&E Program

The Centre conducts research in three program areas:

1. Welfare methodology or the development and validation of methods to assess animal welfare.
2. Housing and husbandry effects on animal welfare.
3. Attitudinal effects:
   - The effects of the attitudes of stockpeople, animal handlers and animal owners on the welfare of their animals.
   - The effects of attitudes to animal welfare on consumer and community behaviour.

These programs support the fourth program area:
4. Tertiary, post-graduate and industry education and training.

Through these programs, the Centre aims to:

- Develop scientifically defensible welfare methodology.
- Use scientifically defensible methodology to establish, amend or validate animal welfare standards and practices.
- Develop and support industry education and training strategies and provide scientific advice to support the development or revision of animal welfare standards and guidelines and codes of practice, and the development of quality assurance programs to introduce scientifically defensible welfare standards in the animal industries.
- Understand public and consumer attitudes to animal welfare to assist Governments and industry in:
  - Developing animal welfare policy
  - Assuring local and international consumers, public and other governments of the welfare standards for Australian domestic animals.
- 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.
- Provide high quality postgraduate and postdoctoral training for the next generation of researchers and teachers in animal welfare science.
Current personnel (Victoria)

Principal investigators

Prof. Paul Hemsworth (Faculty of Veterinary and Agricultural Sciences, The University of Melbourne) – Co-Director of the Centre: A research career studying the behaviour and welfare of farm and companion animals, particularly examining the influence of the social and physical environment on farm animal behaviour and welfare and the influence of human-animal interactions on animal welfare and productivity.

Prof. Grahame Coleman (Faculty of Veterinary and Agricultural Sciences, The University of Melbourne) – Grahame has followed a research career in aspects of human and animal behaviour associated with biological rhythmicity and sleep and changes in stress-related and reproductive hormones. Current research interests focus primarily on human-animal interactions in farm and companion animals and public attitudes to animal welfare.

Prof. Andrew Fisher (Faculty of Veterinary & Agricultural Sciences, The University of Melbourne) – Chair of Cattle and Sheep Production Medicine. Andrew has significant experience in the area of animal welfare, with a particular focus on production animal management and transport. Research interests include welfare aspects of flexible feeding systems of dairy cows.

Dr. Rebecca Doyle (Faculty of Veterinary & Agricultural Sciences, The University of Melbourne) – Rebecca’s research projects have included animal cognition and cognitive bias; correlating stress physiology with behavioural and cognitive welfare measures; and how to make practical animal welfare improvements locally and in developing countries. Her position with Centre focuses on welfare improvements in the sheep and beef industries.

Dr. Jean-Loup Rault (Faculty of Veterinary & Agricultural Sciences, The University of Melbourne) – Jean-Loup has worked with an array of species but focuses his research on pigs and poultry, specifically social behaviour and oxytocin, free-range systems in poultry, and euthanasia and slaughter.

Dr. Ellen Jongman (Faculty of Veterinary & Agricultural Sciences, The University of Melbourne) - Research interests include the effect of housing, husbandry procedures and management on the welfare of sheep and dairy cows.

Post-doctoral research fellows

Dr. Lauren Hemsworth (Faculty of Veterinary & Agricultural Sciences, The University of Melbourne) - Research interests include the human-animal relationship and its influence on animal welfare and productivity, field welfare assessment in farm and companion animals and developing education programs for recreational horse owners.

Dr. Megan Verdon (Faculty of Veterinary & Agricultural Sciences, The University of Melbourne) – Megan’s interests include the effects of mixing and early socialisation on the welfare of pigs.

Dr. Tiffani Howell (Faculty of Veterinary & Agricultural Sciences, The University of Melbourne) – Tiffani currently works closely with Grahame Coleman in delivering the Centre’s program on attitudinal research.
Supporting scientists

Dr. Ian Bland (Faculty of Veterinary and Agricultural Sciences, The University of Melbourne) – Lecturer in Animal Science and Management. Ian is interested in the behaviour and welfare of neonatal/weaned pigs and zoo animals.

Mr. Kym Butler (Agriculture Research, DEDJTR, Hamilton and Faculty of Veterinary and Agricultural Sciences, The University of Melbourne) – Kym works within the Biometrics Unit, Agriculture Research and applies biometric analysis to the Centre’s research projects.

Dr. Peter Cakebread (Faculty of Veterinary and Agricultural Sciences, The University of Melbourne) – Senior Lecturer in Animal Science and Management. Peter’s research interests include welfare implications of common dental procedures in horses, behavioural and welfare

Research Assistants, technical and administrative

Mr. Jeremy Skuse (Faculty of Veterinary & Agricultural Sciences, The University of Melbourne) – Executive Officer and program leader industry education and training.

Andrew Carlyon, Research Assistant, The University of Melbourne
Samantha Borg, Technical Officer, The University of Melbourne
Emily McLeod, Research Assistant, The University of Melbourne
Maxine Rice, Research Assistant, The University of Melbourne
Tracie Storey, Technical Officer, The University of Melbourne
Rebecca Woodhouse, Research Assistant, The University of Melbourne

Research, higher degree students

Josh Aleri (PhD candidate, The University of Melbourne) – Dairy
Leigh Atkinson (MSc student, The University of Melbourne) - Sheep
David Beggs (PhD candidate, The University of Melbourne) - Dairy
Meghan Berghamin (MSc student, The University of Melbourne) - Companion animals
Samantha Chiew (PhD candidate, The University of Melbourne) – Zoo
Sarah Cook (MSc student, The University of Melbourne) - Pork
Natalia Espejo (MSc student, The University of Melbourne) – Pork
Kristy Ficken (MPhil student, The University of Melbourne) Zoo
Ruby Fones (MSc student, The University of Melbourne) – Sheep
Belinda Hall (MSc student, The University of Melbourne) - Zoo
Megan Hayes (Hons student, The University of Melbourne) – Companion animals
Sally Haynes (PhD candidate, The University of Melbourne) – Companion animals
Samuel Healey (MSc student, The University of Melbourne) – Working animals
Maria Jorquera (MSc student, The University of Melbourne) – Dairy
Rebecca Kite (MSc student, The University of Melbourne) – Zoo
Sarah Kuyken (PhD candidate, The University of Melbourne) – Recreation animals
Hannah Larsen (PhD candidate, The University of Melbourne) – Laying hen
Mark Learmonth (PhD candidate, The University of Melbourne) - Zoo
Carolina Muñoz (PhD Candidate, The University of Melbourne) - Sheep
Monoar Sayeed Pallab (PhD candidate, The University of Melbourne) - Dairy
Lydia Rehnberg (PhD candidate, The University of Melbourne) - Zoo
Maxine Rice (MPhil student, The University of Melbourne) - Sheep
Marina Salazaar (Hons student, The University of Melbourne) – Pork
Declan Sega (MSc student, The University of Melbourne) – Pork
Desiree Smith (MSc student, The University of Melbourne) – Zoo
Bronwyn Stevens (PhD candidate, The University of Melbourne) – Cross-sector
Shuto Suzuki (Hons student, The University of Melbourne) – Pork
Jessalyn Taylor (MSc student, The University of Melbourne) – Zoo
Peta Taylor (PhD candidate, The University of Melbourne) – Meat chicken
Elanor Tiernan (MSc student, The University of Melbourne) – Zoo
Catherine Webb (PhD candidate deferred, The University of Melbourne) – Companion animals
Rebecca Woodhouse (MPhil student, The University of Melbourne) - Pork
Dennis Wormald (PhD candidate, The University of Melbourne) – Companion animals
Jinyu Yan (MSc student, The University of Melbourne) – Pork
Current major research

**Dairy**
- Dairy welfare (DEDJTR) - management strategies for large herds, (resulting in better welfare outcomes) and management strategies related to heat stress in dairy cows and behavioural changes of dairy cows selected for heat adaptation.

**Sheep**
- Lamb welfare (DEDJTR) - welfare assessment of sheep throughout the supply chain.
- Assessing and Addressing On-Farm Sheep Welfare (MLA)
- Quantifying welfare improvements in the live export industry (MLA)
- Relationships between fear of humans, temperament and handling pre-slaughter and lamb welfare and meat quality (AMPC)
- Informing future sheep extension strategies to improve reproduction and related welfare outcomes (MLA – collaboration within DEDJTR Project)

**Sheep/beef**
- Developing the basis for an attitude-behaviour training program for abattoir stockpeople (MLA – AW Strategic Partnership)
- Identifying public and producer attitudes to sheep and cattle animal welfare to inform education strategies (MLA – AW Strategic Partnership)
- Welfare benchmarking and management for the beef cattle and sheep meat industries (MLA – AW Strategic Partnership)

**Pork**
- Developing ways to measure and increase sow contentment (APL)
- Review of CO2 stunning in Australia (APL)
- Conditioned feeding to increase feed intake in the mature gilt model (Commonwealth/APL)
- Nitrous oxide for piglet euthanasia: validation by electroencephalography (EEG) (USDA – collaboration)
- A novel two-step gas system to allow for humane on-farm euthanasia of piglets (USDA – collaboration)
- Welfare implications of group lactation at various ages (Pork CRC)
- Sham-chewing in sows as a novel welfare indicator (Pork CRC)
- The feeding behaviour of sows and its relationship to sow welfare and reproduction (Pork CRC)
- Development of commercially-viable enrichment programs for group-housed sows (Pork CRC)
Poultry

- Assessment of factors influencing behaviour and welfare of birds in free range systems (broilers) (RIRDC)
- Free-range hen welfare: Characterisation of ‘outdoor’ and ‘indoor’ hens and physical features in the range (AECL)

Zoo / companion / recreation

- Human-animal relationships in zoos: Optimising animal and visitor experiences (ARC)
- Development of husbandry and management educational material for Victorian recreational horse owners (ANZ Trustees)

Recent publications

2016


Hartcher, K., Hickey, K., **Hemsworth**, P., Cronin, G., Wilkinson, S., Singh, M. (2016). Relationships between range access as monitored by radio frequency identification technology, fearfulness, and plumage damage in free-range laying hens. Animal, 10(5), 847-853. [http://dx.doi.org/10.1017/S1751731115002463](http://dx.doi.org/10.1017/S1751731115002463)


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“The Animal Welfare Science Centre will be recognised internationally as a leading source of independent, authoritative, science based animal welfare advice for government, industry and the general community”.

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