

**The National Animal Ethics Advisory Committee (NAEAC)**  
**Three Rs Award**  
**Past Winners**

**2019:** The inaugural Aotearoa New Zealand Three Rs Award Research Grant was made to Dr Damian Scarf, from the University of Otago for his proposal to build an environment and develop computer systems where trained research pigeons can be observed in a more natural environment. The new environment has been coined the FLAP – free-range learning apparatus for pigeons.

**2018:** The inaugural Aotearoa New Zealand John Schofield Three Rs Implementation Award was made to the Massey-SPCA Desexing Clinic for reducing the number of animals used for veterinary clinical training and providing a valuable low-cost service to the community that has reduced the number of unwanted kittens at the SPCA.

**2017:** No award was offered in 2017.

**2016:** Otago Polytechnic's School of Veterinary Nursing in recognition of their commitment to implementing strategies which replace, reduce and refine animal use across their teaching programmes while still meeting the need of their students.

**2015:** Mr Neil Ward from Massey University for developing computer-aided learning resources which has reduced the number of animals it uses for teaching anatomy and animal biology subjects.

**2014:** Professor David Mellor from Massey University for his commitment, implementation and promotion of the Three Rs principles and development and refinement of the Five Domains model as a means to assess and rank potential negative impacts of proposed manipulations in research, testing and teaching.

**2013:** Professor Simon Malpas and team from The Circulatory Control Laboratory, Department of Physiology and the Implantable Devices Group, Auckland Bioengineering Institute, University of Auckland. The team's telemetry devices allow remote and continuous monitoring of signals such as blood pressure and heart activity. In addition to use in the team's own research work, the technology has been commercialized and exported to over 30 countries, and is now used in some of the world's major pharmaceutical companies.

**2012:** External publicity withheld.

**2011:** Dr Siouxsie Wiles, HRC Hercus Fellow, Department of Molecular Medicine and Pathology, Faculty of Medical and Health Sciences, The University of Auckland. Siouxsie uses bioluminescent (glowing) bacteria to study bacterial infection in animal models, allowing real time non-invasive analysis of infection processes in living animals. Her application showed great commitment and innovation in all three of the Three Rs, and a career passion to communicating and raising awareness of the value of science and careful application of Three Rs principles in animal work.

**2010:** Professor Natalie Waran accepted the 2010 award on behalf of the Department of Natural Sciences teaching team, at Unitec Institute of Technology, Auckland. The team won the award for consistent and dedicated implementation of the Three Rs principles across the teaching programmes of the department. This application highlighted the ways the team have embodied the Three Rs in their teaching - reducing the numbers of animals used despite annual increases in student numbers while still retaining key learning and assessment opportunities. In addition, the application illustrated

several innovative approaches to implementing the Three Rs in an academic environment, such as development of a Veterinary Simulations Suite, as well as the use of specialist software and multimedia resources.

**2009:** Dr Mark Oliver, of the University of Auckland's Liggins Institute. In recognition of his long-term work on the refinement of indoor physiological studies of sheep, this has improved animal welfare. Dr Oliver's work refining the feeding and housing of sheep, with a focus on reducing and refining animal use was seen to have far-reaching effects. His innovations include the design of a specialised concentrate feed for sheep in long-term indoor housing, a pre-trial programme that includes individual observation of sheep, and nutritional manipulation of pregnant sheep to measure effects on the foetus. With animals individually managed, in their own pens and on a well-balanced diet, under-nutrition can be managed by assessing weight changes and altering feeds. This allows superior monitoring of animal welfare and the reduction of adverse complications developing in animals with higher dietary demands.

**2008:** Dr Julie Dalziel and colleagues Dr Thai Phung, Dr Yan-Li Zhang and Dr James Dunlop at AgResearch Biomembrane Laboratory, Palmerston North. The Award recognises their work in developing a prototype assay test for seafood toxins that has the potential to replace testing in mice. The prototype test measures the effects of toxins and other compounds rapidly, in about an hour, compared with several days required when using mice. It also has the potential to be developed into a user-friendly format that could be used outside the laboratory. The Biomembrane Laboratory is now also using this assay technology to develop a test to detect the wanted and unwanted effects of potential new drugs.

**2007:** Professor Rob Hughes, University of Canterbury, for contributions towards the reduction and refinement of animal use in psychopharmacological research into the effects of substances, including potential medications, on aspects of cognitive performance. His development of free-choice tests of "neotic preference" contribute strongly to the refinement principle by relying on the animal's natural curiosity about novel stimuli rather than the use of aversive states.

**2006:** Dr Craig Johnson, senior lecturer (now Professor) in veterinary neurophysiology, Massey University, received the award in recognition of his work in developing a specialised anaesthesia technique and adapting it to a variety of applications in animal welfare research. His research contributes significantly to the refinement in methodology of pain research, allowing conclusions about the efficacy of methods of pain relief to be drawn using fewer animals and without causing pain in any animal.

**2005:** Award presented at the ANZCCART 2005 conference, but details withheld by request.

**2004:** The Cawthron Institute, a community owned, not-for-profit research centre based in Nelson, for its success in reducing the use and suffering of mice in the assay of biotoxins in New Zealand. The award was presented to Cawthron Institute representatives at the RSNZ Science Honours Dinner, held in Christchurch in November.

**2003:** The inaugural NAEAC Three Rs Award was made to Associate Professor Alex Davies of the Institute of Veterinary, Animal and Biomedical Sciences, Massey University. Professor Davies' work over the last ten years has focussed on the use of computer technology as an alternative to using animals in research and teaching.