

NAEAC Newsletter March 2020



Update from the Chair of NAEAC

Porsolt Swim Test

On 10 March 2020, the Economic Development, Science and Innovation Committee of the House of Representatives, released its report on the petition of Tara Jackson on behalf of the NZ Anti-Vivisection Society, SAFE, and 7,861 others: End the use of the Forced Swim Test in New Zealand.

The report stated: *“We were pleased to hear that the test is not widely used in New Zealand, and that many pharmaceutical companies, universities, and research institutes no longer use the test. We do not believe legislation is necessary to end the use of the Forced Swim Test. The test is used infrequently in New Zealand, and we heard that its use in academic studies is not likely to continue into the future. We support the continuing education of the ethics boards of universities and research institutes.*

We believe that communicating the disadvantages of the Forced Swim Test, and providing education on alternative research techniques, will assist in the transition away from the use of the test. We also acknowledge the call for a formal review and evaluation on the validity of all animal based psychological tests used in New Zealand. While we cannot recommend a full review at this time, we encourage the validity of animal testing to be continuously examined.”

The full report can be found here:

https://www.parliament.nz/en/pb/petitions/document/PET_91564/petition-of-tara-jackson-on-behalf-of-the-nz-anti-vivisection

Animal research: It's time to be more open

The following is based on a media release from the Australian and New Zealand Laboratory Animal Association

“Veterinarians and technicians who care for animals used in medical and veterinary research overwhelmingly believe scientific institutions should be more open about their use of animals. A survey of more than 150 people working in animal care has found that 87 percent believe research institutions in Australia and New Zealand should be more open about their research involving animals.

The survey also found strong support for a public pledge committing Australian and New Zealand institutions to greater openness.

Speaking at the conference of the Australian and New Zealand Laboratory Animal Association (ANZLAA) in Perth, veterinarians Dr Malcolm France and Dr Jodi Salinsky said that 87 percent of respondents indicated they wanted research organisations to be more open and would support the development of an ‘openness agreement’ similar to the UK’s successful [Concordat on Openness on Animal Research](#).

There are definitely some organisations that have been commendably proactive about openness in this part of the world, but most are still hesitant and there is nothing in place at a national level to encourage greater openness.

Those who work with animals in the research, testing and teaching (RTT) space are often reluctant to talk about their work because they fear a negative reaction, which is often based on public misunderstanding.

Greater openness would help give well-earned recognition to these dedicated individuals, increase public understanding of animal research and highlight the effort made to ensure the welfare of the animals.”

NAEAC’s position

NAEAC supports the select committee’s findings and encourages animal ethics committees (AECs) to continue to carefully consider all applications and to examine the validity and impact of all manipulations they are asked to consider.

NAEAC has identified openness as integral to educating the public and underpinning the robustness and transparency of the RTT system in New Zealand. There has been a positive response to a recent letter to code holders encouraging them to place their code of ethical conduct on their website.

Kind regards,

NAEAC member profile – Rob Hazelwood



Rob was nominated for NAEAC by AGCARM – The Agricultural Chemical and Animal Remedy Manufacturers Association.

After emerging into the wider world (in his own words, a while ago now) with a BSc in zoology, Rob went to work in the area of ruminant vaccine development, at the Corporate Research Laboratories of ICI New Zealand.

The field trials involved, led him to his first exposure to the use of animals in RTT. Rob currently works in the private sector, for a manufacturer of animal health remedies. For 30 years now, he has taken an interest in the ethical use of animals in RTT. Rob considers it a privilege to be able to serve on NAEAC and to contribute in a wider arena. He finds it a really interesting time for animal welfare in New Zealand, as the Animal Welfare Act is underpinned with an increasing range of new regulations.

Away from work, along with his wife, Rob owns and run a small farm. This has branched out recently, with a new enthusiasm for beekeeping. A deep love for the mountains and rivers of New Zealand, means Rob likes to get away to them as often as possible, tramping, fishing, and hunting.

Changes at NAEAC

Retirements:

Professor Craig Johnson and Dr Malcolm Tingle retired from NAEAC after two 3-year terms each.

Both made valuable contributions during their time on NAEAC. Craig's extensive animal welfare background; his ability to be objective; and his several years as deputy chairperson were appreciated by all who served with him.

Malcolm's impressive knowledge of the legislation; his attention to detail; and his robust analysis of all matters put before the committee were an asset. Recently, Malcolm made a significant contribution to the review of the *Good Practice Guide* and code of ethical conduct review process.

Both also served on the NAEAC Regulations subcommittee.

Appointments:

The Minister of Agriculture, Hon Damien O'Connor, recently made three appointments to NAEAC:

- Dr Mike King (Senior Lecturer, Bioethics Centre, University of Otago)
- Dr Nita Harding (Technical Policy Adviser (*Veterinary*), DairyNZ)
- Dr Jacquie Harper (Chief Scientist, Overseer Ltd)

All three, attended their first meeting in February. Their collective expertise will be invaluable to the committee's function. Mike and Nita are already well known to many of you. Jacquie has a strong background in animal research including 18 years with the Malaghan Institute.

I will introduce you to each of them as their terms on NAEAC progress.

At NAEAC February 2020 general meeting, Rob Hazelwood was elected as deputy chairperson.

PARENTING

Under the Animal Welfare Act 1999 s84 **Power to carry out certain projects**, individuals and organisations who wish to undertake RTT using animals in New Zealand, but have not developed their own code of ethical conduct (CEC), can elect to operate under an existing CEC. This is generally referred to as parenting. It is allowed under some CECs and specifically excluded under others and is entirely at the code holder's discretion.

If an individual or organisation elects to operate under an existing CEC, there are several requirements:

- (1) *A person may carry out research, testing, or teaching without obtaining, under section 91, approval of a code of ethical conduct and without appointing an animal ethics committee, if—*
- (a) each project carried out by that person is approved by an animal ethics committee established by a person who is a code holder; and*
 - (b) the policies and procedures relating to the arrangements in relation to the research, testing, or teaching are set out in the code holder's code of ethical conduct; and*
 - (c) the arrangements in relation to the research, testing, or teaching are agreed on by that person, the code holder, and the animal ethics committee; and*
 - (d) the code holder, before the research, testing, or teaching is commenced, gives to the Director-General written notice of the arrangements for the research, testing, or teaching.*

Parenting arrangements therefore impart obligations on both parties:

If your CEC allows parenting; before an agreement is entered into, the code holder must be certain that the AEC has the composition and knowledge to evaluate the type of proposals that the parented organisation is likely to submit.

The AEC should also keep in mind that the code applies to the parented organisation in the same way it applies to the code holder organisation.

Therefore, when an agreement is entered into, the AEC must have processes in place to ensure that:

- the parented organisation(s) is aware of its obligations under the Act, including
 - ensuring that the parented organisation knows it cannot undertake any RTT involving animal manipulations without applying to the AEC first; and
 - supporting the parented organisation(s) to meet those obligations especially regarding reporting animal use statistics to the Ministry for Primary Industries annually
- the parented organisation(s) is aware of its obligations in relation to complying with the CEC, including:
 - reporting (including adverse events)
 - developing standard operating procedures (SOPs)
- when a parented organisation has not made application to the AEC recently a cross check is undertaken to:
 - confirm that a parenting agreement is still required
 - confirm that the parented organisation has not 'forgotten' to apply to the AEC
- arrangements are up to date and are renewed when the code is renewed *including:*
 - when a parenting agreement is due to be renewed that all RTT approvals are up to date (*NAEAC would advise that parenting agreements follow the same cycle as the CEC review*)
- the AEC can comply with the CEC regarding monitoring visits to the parented organisation (*this is especially important if the parented organisation is remote to the code holder's location*)
- when an agreement is terminated, MPI is advised.

THE 3RS

2019 was the 60th anniversary of the publication of the seminal book of Russell and Burch “The Principles of Humane Experimental Technique”, from which the Three Rs became the cornerstone of the use of animals for RTT. In recognition of the anniversary, *Animals* dedicated an entire issue to the 3Rs.

(These articles belong to the Special Issue [60 Years of the Three Rs and Their Impact on Animal Welfare](#))

Alternatives to Carbon Dioxide - Taking Responsibility for Humanely Ending the Life of Animals Shannon Axiak Flammer *et al* *Animals*, 9(8), 482; <https://doi.org/10.3390/ani9080482> - 24 Jul 2019

Abstract: Carbon dioxide (CO₂) is commonly used to kill rodents. However, a large body of research has now established that CO₂ is aversive to them. A multidisciplinary symposium organized by the Swiss Federal Food Safety and Veterinary Office discussed the drawbacks and alternatives to CO₂ in euthanasia protocols for laboratory animals. Dialogue was facilitated by brainstorming sessions in small groups and a “World Café”. A conclusion from this process was that alternatives to CO₂ were urgently required, including a program of research and extension to meet the needs for humane killing of these animals. The next step will involve gathering a group of international experts to formulate, draft, and publish a research strategy on alternatives to CO₂. [Full article](#)

The 3Rs and Humane Experimental Technique: Implementing Change Robert C. Hubrecht and Elizabeth Carter *Animals*, 9(10),754; <https://doi.org/10.3390/ani9100754> - 30 Sep 2019

Abstract: In 1959, the Universities Federation for Animal Welfare (UFAW) Scholars Russell & Burch published the Principles of Humane Experimental Technique in which they laid out the principles of the Three Rs. However, the Three Rs owed much to others. It was UFAW and, in particular, UFAW’s Founder and Director, Major Charles Hume who identified the problem that needed to be tackled, and who developed the non-confrontational approach that was needed to both formulate the questions that needed answers and to obtain the answers from the research community. Russell & Burch’s work was also guided by an expert scientific and technical committee chaired by the Nobel Prize winner Sir Peter Medawar. This essay describes the history of the Three Rs using publications by the protagonists and others as well as material from UFAW’s archives. It describes the background to the employment of Russell & Burch, the methodology of Russell & Burch’s approach and the impact of their work up to the present day—where the Three Rs are incorporated in legislation throughout the world. [Full article](#)

Humanely Ending the Life of Animals: Research Priorities to Identify Alternatives to Carbon Dioxide Aline R. Steiner *et al.* *Animals*, 9(11), 11; <https://doi.org/10.3390/ani9110911> - 02 Nov 2019

Abstract: The use of carbon dioxide (CO₂) for stunning and killing animals is considered to compromise welfare due to air hunger, anxiety, fear, and pain. Despite decades of research, no alternatives have so far been found that provide a safe and reliable way to induce unconsciousness in groups of animals, and also cause less distress than CO₂. Here, we revisit the current and historical literature to identify key research questions that may lead to the identification and implementation of more humane alternatives to induce unconsciousness in mice, rats, poultry, and pigs. In addition to the evaluation of novel methods and agents, we identify the need to standardise the terminology and behavioural assays within the field. We further reason that more accurate measurements of consciousness state are needed and serve as a central component in the assessment of suffering. Therefore, we propose a roadmap toward improving animal welfare during end-of-life procedures. [Full article](#)

3Rs-Related and Objective Indicators to Help Assess the Culture of Care Penny Hawkins & Thomas Bertelsen *Animals*, 9(11), 969; <https://doi.org/10.3390/ani9110969> - 14 Nov 2019

Abstract

Within animal research and testing, the need for an effective Culture of Care is widely recognized and described in terms of an establishment-wide commitment to improving the implementation of the 3Rs, animal welfare, scientific quality, care of the staff, and transparency for all stakeholders, including the public. Ideally, each establishment would determine what the Culture of Care means for them, and be able to assess and potentially benchmark their own culture. Some establishments already do this, using various indicators and formal or informal assessments. This paper provides examples of these approaches to assessing the Culture of Care, including surveys and surrogate measures. Many

currently-used criteria and indicators tend to be human-centric and subjective, and we suggest using further objective indicators and animal-centric, 3Rs-based criteria. It is preferable to consider each of the 3Rs separately when assessing culture, and some indicators are suggested to facilitate this. Several documents produced by regulators in the UK and European Union are good sources of objective indicators of a good Culture of Care. This concept paper aims to complement the literature on assessing the Culture of Care, providing ideas and sources of information to help identify relevant and measurable criteria. [Full article](#)

The Role of the Three Rs in Improving the Planning and Reproducibility of Animal Experiments Adrian J. Smith & Elliot Lilley *Animals*, 9(11), 975; <https://doi.org/10.3390/ani9110975> - 14 Nov 2019

Abstract: Training in the design of animal experiments focuses all too often on those aspects which can be approached mathematically, such as the number of animals needed to deliver a robust result, allocation of group size, and techniques such as randomization, blocking and statistical analysis. Important as they are, these are only a small part of the process of planning animal experiments. Additional key elements include refinements of housing, husbandry and procedures, health and safety, and attention at all stages to animal welfare. Advances in technology and laboratory animal science have led to improvements in care and husbandry, better provision of anesthetics and analgesics, refined methods of drug administration, greater competence in welfare assessment and application of humane endpoints. These improvements require continual dialogue between scientists, facility managers and technical staff, a practice that is a key feature of what has become known as the culture of care. This embodies a commitment to improving animal welfare, scientific quality, staff care and transparency for all stakeholders. Attention to both the physical and mental health of all those directly or indirectly involved in animal research is now an important part of the process of planning and conducting animal experiments. Efforts during the last 30 years to increase the internal and external validity of animal experiments have tended to concentrate on the production of guidelines to improve the quality of *reporting* animal experiments, rather than for *planning* them. Recently, comprehensive guidelines for *planning* animal studies have been published, to redress this imbalance. These will be described in this paper. Endorsement of this overarching influence of the Three R concept, by all the stakeholders, will not only reduce animal numbers and improve animal welfare, but also lead to more reliable and reproducible research which should improve translation of pre-clinical studies into tangible clinical benefit. [Full article](#)

Group and Single Housing of Male Mice: Collected Experiences from Research Facilities in Sweden Josefina Zidar, *et al* *Animals*, 9(12), 1010; <https://doi.org/10.3390/ani9121010> - 21 Nov 2019

Abstract: Animals used for scientific purposes are protected by EU legislation. Social animals should be kept in stable groups that enable species-typical social behavior and provide individuals with social comfort. However, when group-housing male mice, aggression within the homecage is a common husbandry and welfare problem. Excessive fighting and injuries due to aggression can cause pain and stress, resulting in individuals being euthanized or housed individually. In addition, stress can alter physiological parameters, risking scientific validity and generating larger sample sizes. Mouse aggression, and the consequences thereof, thus opposes the 3R goals of Refining the methods to minimize potential pain and suffering and Reducing the number of animals used. Animal technicians, veterinarians, and scientists using animals have valuable information on how these problems are experienced and handled in practice. We assembled these experiences from laboratory animal facilities in Sweden, mapping problems observed and identifying strategies used to prevent mouse aggression. In line with current literature, less aggression was perceived if mice were grouped before sexual maturity, re-grouping avoided and nesting material transferred at cage cleaning. Preventing aggression will minimize pain and suffering and enable housing of stable groups, leading to more reliable scientific outcomes and is thus of high 3Rs relevance. [Full article](#)

Assessing Affective State in Laboratory Rodents to Promote Animal Welfare — What Is the Progress in Applied Refinement Research? Paulin Jirkof, Juliane Rudeck & Lars Lewejohann *Animals*, 9(12), 1026; <https://doi.org/10.3390/ani9121026> - 25 Nov 2019

Abstract: An animal's capacity to suffer is a prerequisite for any animal welfare concern, and the minimization of suffering is a key aim of refinement research. In contrast to the traditional focus on avoiding or reducing negative welfare states, modern animal welfare concepts highlight the importance of promoting positive welfare states in laboratory animals. Reliable assessments of affective states, as well as the knowledge of how to elicit positive affective states, are central to this concept. Important achievements have been made to assess pain and other negative affective states in animals in the last decades, but it is only recently that the neurobiology of positive emotions in humans and animals has been gaining more interest. Thereby, the need for promotion of positive affective states for laboratory animals is gaining

more acceptance, and methods allowing the assessment of affective states in animals have been increasingly introduced. In this overview article, we present common and emerging methods to assess affective states in laboratory rodents. We focus on the implementation of these methods into applied refinement research to identify achieved progress as well as the future potential of these tools to improve animal welfare in animal-based research. [Full article](#)

“But It’s Just a Fish”: Understanding the Challenges of Applying the 3Rs in Laboratory Aquariums in the UK

Reuben Message and Beth Greenhough *Animals* 2019, 9(12), 1075; <https://doi.org/10.3390/ani9121075> - 03 Dec 2019

Abstract: Adopting a social science perspective and qualitative methodology on the problem of laboratory fish welfare, this paper examines some underlying social factors and drivers that influence thinking, priorities and implementation of fish welfare initiatives and the 3Rs (Replacement, Reduction and Refinement) for fish. Drawing on original qualitative interviews with stakeholders, animal technologists and scientists who work with fish—especially zebrafish—to illustrate the case, this paper explores some key social factors influencing the take up of the 3Rs in this context. Our findings suggest the relevance of factors including ambient cultural perceptions of fish, disagreements about the evidence on fish pain and suffering, the discourse of regulators, and the experiences of scientists and animal technologists who develop and put the 3Rs into practice. The discussion is focused on the UK context, although the main themes will be pertinent around the world. [Full article](#)

Applying the 3Rs: A Case Study on Evidence and Perceptions Relating to Rat Cage Height in the UK [Hibba](#)

[Mazhary](#) and [Penny Hawkins](#) *Animals* 2019, 9(12), 1104; <https://doi.org/10.3390/ani9121104> - 09 Dec 2019

Abstract: This article investigates the barriers to implementing higher caging in animal research establishments in the UK. The use of animals in research and testing in the UK is regulated by the Animals (Scientific Procedures) Act 1986, which sets out how animal experiments must be licensed and regulated. Within this, the Code of Practice currently allows laboratory rats to be housed in cages that are 20 cm high, even though adults can rear up to 30 cm. Most adult rats therefore cannot stand upright in ‘standard’ cages. We found that the main factors hindering the implementation of higher caging were classified into five different groups; health and safety, financial, animal welfare, scientific, and ‘human’. Suggestions to overcome these barriers are provided, as well as alternative animal welfare changes that can be put into place. We conclude that much of the desired evidence for moving to higher cages is already available, and therefore the focus should be on education and improving access to the existing evidence, in order to encourage facilities to work around existing financial and health and safety concerns. [Full article](#)

How Can Systematic Reviews Teach Us More about the Implementation of the 3Rs and Animal Welfare? [Merel](#)

[Ritskes-Hoitinga](#) & [Judith van Luijk](#) *Animals* 2019, 9(12), 1163; <https://doi.org/10.3390/ani9121163> - 17 Dec 2019

Abstract: This paper describes the introduction of the systematic review methodology in animal-based research and the added value of this methodology in relation to the 3Rs and beyond. The 3Rs refer to Replacement, Reduction, and Refinement of animal studies. A systematic review (SR) is defined as a literature review focused on a single question that tries to identify, appraise, select, and synthesise all high-quality research evidence relevant to that question. Examples are given on how SRs lead to the implementation of the 3Rs and better science. Additionally, a broader context is given regarding societal, political, and scientific developments. Various examples of systematic reviews are given to illustrate the current situation regarding reporting, quality, and translatability of animal-based research. Furthermore, initiatives that have emerged to move further towards more responsible and sustainable research is of benefit for both animals and humans. [Full article](#)

NAEAC AECs WORKSHOP 2020 – advance notice

The 2020 AECs Workshop will be held in Wellington on Thursday 19 November 2020. The theme of this year’s Workshop is: “Getting it right”.

NAEAC encourages all code holders to support their AEC members to attend. Put a placeholder in your calendar.

FROM NAEAC'S MINUTES

This regular section in the NAEAC newsletter includes snippets from recent meeting minutes that I hope you find interesting.

Mātauranga Māori

In 2019 NAEAC members held a joint meeting with members of the National Animal Welfare Advisory committee (NAWAC) and the Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART), with the purpose of developing an understanding of how Mātauranga Māori principles might enhance how each committee works.

Since that meeting, we now begin each NAEAC meeting with a brief karakia in order to focus before we begin our discussions.

NAEAC also continues to advocate strongly for new codes of ethical conduct to specify that AEC decisions are made using consensus (kotahitanga).

Transparency

Improving knowledge of NAEAC's role in RTT is one of the committee's work streams aimed at improving transparency.

At the November 2019 meeting, Gareth Derby (Principal Adviser, Office of the Ombudsman) spoke to members about how both the Local Government Official Information and Meetings Act 1987 (LGOIMA) and the Official Information Act (OIA) apply to NAEAC.

LGOIMA provisions apply to NAEAC but currently, there is no obligation to report meeting dates. After the presentation, NAEAC placed the following notice on its website. *"NAEAC holds 4 ordinary meetings each year. Members of the public can attend the open section of the meetings. For details about meeting attendance please contact the NAEAC secretariat on NAEAC@mpi.govt.nz."*

NAEAC also agreed to proactively place redacted meeting minutes on the MPI website.

Good Practice Guide and CEC template

Both the *Good Practice Guide (GPG)* and the *Code of Ethical Conduct Template* are updated at the end of each year. A priority for 2020 is to update the non-compliance section of the GPG to include some exemplar 'decision trees'.

NAEAC resolved to remind all AECs that they should have in place processes that enable them to refer animal welfare non-compliance breaches to the appropriate agencies.

Honouring animal welfare stalwarts

Hosted by the International Society for Applied Ethology, the Understanding Animals conference was held in Wellington in mid-November 2019. Professor David Mellor's contribution to animal welfare was celebrated at the end of the meeting and Hon Pete Hodgson was inducted as an Honorary Associate Member of the Animal Welfare Science and Bioethics Centre.

Statutory AEC members

Statutory external members represent the community on our AECs. As such, the interests of animal welfare advocates, the veterinary profession and public interest are represented on all AECs. Their role is vital to ensuring a robust system for evaluating and approving applications to manipulate animals for RTT.

NAEAC recently resolved to remind AEC committees of their obligation to have in place procedures and processes that give statutory members their voice in an environment where they feel safe and in a way that ensures that voice is both heard and heeded.

NAEAC also agreed to remind AECs that the Act requires external statutory members to not have any association with the code holder.

AEC contact details

Please remember to inform Linda Carsons (linda.carsons@mpi.govt.nz) if details for your AEC's contact person change.

Dates for your diary

26-28 July 2020 – "Openness in Animal Research" ANZCCART Conference, Queenstown

19 November 2020 – "Getting it right" NAEAC AECs Workshop to be held in Wellington

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