NAEAC Newsletter January 2021

Update from the Chair of NAEAC

Kia ora.

On November 20, NAEAC held its final scheduled meeting for 2020; the first face-to-face meeting since February. As if to underpin the disruption that we have faced for most of the year, two members still had to attend by video link.

One thing that the meeting reminded me about was that when a meeting setting requires a format where some attendees are present in the room and some are in a remote location, the Chair should have a good view of screens.

Codes of ethical conduct either imply, or in some cases state, that all scheduled AEC meetings are face-to-face. When the country was in lockdown some AECs invoked the emergency use of an online meeting format. Notwithstanding this, NAEAC holds to its advice that to remain compliant with CECs, scheduled AEC meetings should be face-to-face unless there are extenuating, or emergency circumstances.

Your role on the AEC

At the end of a year it is always good to reflect and, if necessary, revise. If you are reading this, it is highly likely that you are a member of an AEC. As such you are a vital part of New Zealand's animal welfare system. AECs administer the codes of ethical conduct that ensure the robust consideration of all manipulations of animals for the purposes of research, testing and teaching. Approvals for such work require that the AEC be satisfied that the work is relevant, the animal use is justified, and that the manipulations have the least possible impact on the welfare of the animals.

You may be an institutional member of the AEC or a statutory nominee. Whichever role you fill, you are part of an independent committee that, under s99 of the Animal Welfare Act 1999, has specified functions and the mandated power to perform those functions; setting, varying, or (if necessary) revoking the conditions for approval of applications; monitoring compliance and facilities. It is a significant responsibility.

The AEC advocates on behalf of society in relation to a use of animals that is sometimes contentious. As an AEC member you should be comfortable that you are equipping yourself as well as possible to fulfil that role. For example, are you familiar with Part 6 of the Animal Welfare Act 1999? Have you read your CEC? Have you read NAEAC's Good Practice Guide?

2021 ANZCCART Conference

ANZCCART is holding its annual conference in Queenstown July 2021.This conference is a fantastic opportunity to meet other AEC members and allows delegates to develop networks and to upskill at the same time. Early-bird registrations will open in the new year. Keep an eye on the ANZCCART website https://anzccart.org.nz/anzccart-conference/ for up-to-date information.

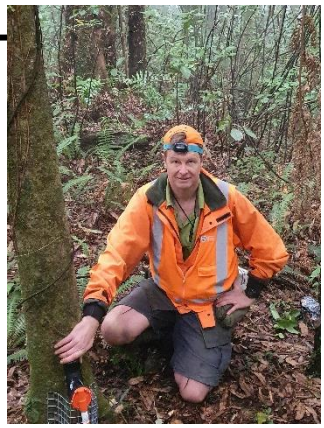
The theme for the 2021 Conference is "Openness in Animal Research". NAEAC continues to encourage codeholders to embrace openness and the number of institutes that have placed their CEC on their websites is increasing.

Season's Greetings

We are now almost at the end of what has been an extraordinarily strange year. I would like to extend to you, on behalf of NAEAC, Season's Greetings; and the Joy of spending leisure time recharging your batteries, the Peace of being in a safe place, the Love of family and friends and the Hope that we will become used to whatever new 'normal' 2021 brings.

Nga mihi,

NAEAC member profile – Dr Craig Gillies



Craig is currently Principal Science Advisor – Threats, with the Department of Conservation (DOC).

Craig started working as a scientist for DOC in 1997; his area of expertise is in understanding the ecology of feral cats, mustelids and rodents and researching better techniques for managing and monitoring them. He has been involved in numerous projects with a particular interest in interactions between invasive pest mammals and in monitoring the impacts of successful predator control. Craig's current role also involves providing specialist advice to DOC staff, external pest control agencies and community conservation groups.

He is currently leading two major field-based research programmes, one is a six-year project testing and developing standardised protocols for monitoring invasive predators using trail cameras. The other project involves evaluating the effectiveness of different methods for excluding native non-target species from self-resetting traps for rats and stoats.

Craig has always held strong views on the importance of animal pest control being done to a high standard and as humanely as possible. He was nominated for NAEAC by DOC and joined the committee in 2015. Craig was a member of the Kiwi Recovery from 2013 until 2019 and has sat on the DOC Animal Ethics Committee since 2017.

Outside of work, Craig enjoys spending time with his family and has a keen interest in military history. Whenever he can find time, Craig builds scale military models, a hobby he shares with his sons.

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Forced Swim Test

In the March 2020 Newsletter, I drew attention to the Economic Development, Science and Innovation Committee of the House of Representatives report on the petition of Tara Jackson on behalf of the NZ Anti-Vivisection Society, SAFE, and 7,861 others: to End the use of the Forced Swim Test in New Zealand.

While it did not recommend banning the test, the report stated: "*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.*"

Animal advocates around the world continue to campaign against the use of the forced swim test (also known as the Porsolt Swim Test or FST) and an increasing number of research and funding groups have ceased using it. Understanding Animal Research (UAR), in collaboration with the Laboratory Animal Science Association and the British Association for Psychopharmacology, has developed a factsheet providing details about the FST, how and why it is used, and why it remains a useful test in certain circumstances. UAR also acknowledged the British Pharmacological Society and members of the Royal Society of Biology's Animal Science Group for their help and suggestions in drafting the factsheet. You can download a pdf of the factsheet by clicking on the picture above.

You may also be interested in watching a short video of Dr Sarah Bailey from the University of Bath, who investigates new potential treatments for depression in mice, discussing her work. Dr Bailey sometimes uses the forced swim test. You can access the video by clicking here.

As with all applications and manipulations they are asked to assess, NAEAC encourages AECs to continue carefully considering those using the forced swim test, assessing the validity and impact of the manipulation closely in the context of the proposed research.

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AOTEAROA NEW ZEALAND JOHN SCHOFIELD 3 RS IMPLEMENTATION AWARD

Dr Benjamin Albert and his co-workers from the Liggins Institute, University of Auckland are the winners of the 2020 Aotearoa New Zealand John Schofield 3RS Implementation Award.

The application was titled “Emulsified gels for accurate and rapid oral administration of lipid-based preparations to small animals.”

In the left photograph, a pilot study dam has pulled the oil-enriched gel through the food hopper lid and holds it in its paws eating it quickly and entirely.

In the right photograph a dam can be seen choosing to eat the oil-enriched gel over its diet and choosing to briefly leave its litter to do so.

Photographs used with permission of Andrew Brown, Manager, Vernon Jansen Unit.

Commonly, oral administration of nutritional supplements or drugs to small laboratory rodents represents the most physiologically (and translationally) appropriate method. The current convention is to use oral gavage to administer the agent directly into the animal’s stomach. However, oral administration by gavage is associated with important challenges.

The project was driven by an observation that administration of agents by oral gavage can be challenging and the method of administration can compromise animal welfare and therefore represents a potential experimental confounder. The highest potential impact of oral gavage may be death and experimental design may include an inflated number of animals to allow for potential losses. Although the use of gels has been previously described for some circumstances, the novel aspect of this work was the development of a method to incorporate lipid-based materials.

The work described was undertaken to Refine the administration protocol for lipid-based products to reduce welfare impact and concomitantly Reduce the number of animals used in such studies by minimising the necessity to include extra animals to allow for potential losses.

Dr Albert showed commitment to Three Rs principles by his acknowledgement of a deep concern for animal welfare. Having identified that the gavage methodology was unacceptable and in need of refinement, future studies were delayed until he and his team were able to develop their own, improved, protocol.

The team’s innovative approach was to develop a novel methodology for incorporating oils into edible gels and proving that they are eaten rapidly and completely, with minimal impact on nutrition. As a means of administering an oral nutritional or drug intervention this delivery method has all the advantages of daily gavage, without the risk of harm, stress, and potentially painful mishap.

Several approaches have been made towards promoting awareness of this work. A manuscript reporting the methodology is currently under peer review. Publication will help support awareness of its superiority and underpin future work by advocating the methodology. The protocol is also being turned into an ANZCCART 3Rs resource, which will publicise how the refinement can reduce the number of animals used in supplementation studies. Raising awareness of this improvement internally has already resulted in at least one other group at the University of Auckland moving away from oral gavage to using gels in a drug administration animal study.

As well as congratulating Dr Albert and his team for winning the award, NAEAC also congratulates all the unsuccessful applicants on the quality of their applications. Each of the applications contained elements that would have made them worthy recipients of the award.

NAEAC also takes this opportunity of acknowledging the generous support of the Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART) for providing funding to support the award.

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IS IT TIME TO ADVOCATE A 4TH R?

In 1959, Russell and Burch's paper "The Principles of Humane Experimental Technique" identified the Three Rs, which subsequently became the cornerstone for considering the ethical use of animals in research, testing and teaching (RTT).

NAEAC recently received and discussed an internal paper suggesting that adding the concept of 'Respect' could unify competing ethical perspectives to further improve animal welfare. I thought you might appreciate a brief overview of the proposition to include Respect as a 4th R.

As with all such conventions there have been attempts to modernise the 3Rs concept by proposing the development of a 4th "R". A variety of options have been proposed; including Rehabilitation, Responsibility, Remembrance, Retirement and Rehoming. The challenge is that any proposed "improvement" must acknowledge that the notion of the '3Rs' is based on competing ethical views on use of animals in science but contains little guidance on how to reconcile these differences.

The concept of respect could be applied across different ethical views. For example, there are tensions between an anti-vivisectionist view that replacing animals with non-animal alternatives is simply a matter of time, while scientists may consider this unrealistic and unfeasible for future research. The term 'Respect' addresses the anti-vivisection perspective that all animals have an inherent value while remaining compatible with the science perspective that animals have instrumental value.

While it may be viewed as somewhat abstract and difficult to define, the concept of respect has merit for improving the welfare of animals used in RTT. As an example, the Swiss Animal Welfare Act (2008) protects the dignity as well as the welfare of animals. Violation of an animal's dignity includes unjustified stress, humiliation, interference with appearance or capacities, and excessive manipulation. If societal views can reflect these more abstract concepts, it can be argued that animal ethics committees should include them in their assessments of experimental protocols. Key to a concept of respect is articulating an expectation of how one should act towards animals, and in turn what it means for these expectations to be violated. Thus, holding others to account for violating expectations of how to behave towards animals is an important aspect of respect for animals.

In RTT respect for animals implies continuous improvements in the 3Rs as an expectation.

Respect for animals used in RTT could instil higher expectations on researchers to **Replace** animals by actively searching for alternatives to ingrate into current practices.

Respect can encourage people to **Reduce** the numbers of animals euthanased after protocols by rehoming them in a permanent location outside the research setting thus acknowledging that the animals can have a meaningful life beyond RTT.

Respect for animals used in RTT need not be simply adjusting experimental manipulations or procedures to **Refine** how the animals are used. Refinement can be applied outside of a research protocol. A high expectation on improving practices based on the animal's value can be met through ongoing training and professional development.

Respect for animals can include recognition that the dead animal has value. A sense of respect for dead animals used in RTT can be instilled by holding each other accountable for behaviour towards their cadavers and tissue.

As an addition to the current 3Rs of Replacement, Reduction, and Refinement, a 4th R of Respect, based on the values placed on animals in RTT, can function across differences in ethical perspectives, can be considered within a plurality of views, and may offer a promising addition to current principles for improving the welfare of animals used in RTT.

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300 NON-ANIMAL RESEARCH MODELS FOR RESPIRATORY DISEASE PUBLISHED

Respiratory diseases such as asthma, chronic obstructive pulmonary disease (COPD), cystic fibrosis, pulmonary fibrosis and lung cancer are the most common of all diseases and causes of death worldwide.

However, over 90% of new candidate drugs fail to make it through clinical trials and gain market approval. Although there are several reasons for this, limitations of animal models to capture critical aspects of human physiology and disease are being increasingly cited as a critical issue.

Attention is shifting therefore to non-animal models and methods based on human-relevant tools and thinking to advance our understanding of respiratory diseases and offer new hope to patients.

The European Union Joint Research Centre (JRC)
As the European Commission's science and knowledge service, the Joint Research Centre (JRC) supports EU policies with independent scientific evidence throughout the whole policy cycle. Among other activities the JRC creates, manages, and makes sense of knowledge and develops innovative tools and makes them available to policy makers. The Centre also anticipates emerging issues that need to be addressed at EU level and understands policy environments.

The JRC has six sites in five EU countries (Brussels, Geel, Ispra, Karlsruhe, Petten, Seville).

A knowledge base of advanced non-animal models now freely available
The study, coordinated by the JRC EU Reference Laboratory for alternatives to animal testing (EURL ECVAM), has produced a unique knowledge base that contains detailed descriptions of nearly 300 non-animal models being used for respiratory disease research.

The knowledge base is in an easy-to-use spreadsheet format and is available to download from the EURL ECVAM Collection in the JRC Data Catalogue here.

In building the knowledge base, over 21,000 abstracts from the scientific literature were screened and from these, a total of 284 publications were selected that described the most representative and innovative models.

"To our knowledge this is the first time that such advanced non-animal models used in biomedical sciences have been systematically collected and analysed", comments JRC scientist Laura Gribaldo. "It's been a real challenge to put all the information together in a structured and easily accessible format since there is a huge amount of heterogeneous data out there spread over a plethora of different scientific journals and electronic resources."

More to come
The JRC's EURL ECVAM is also undertaking a series of studies to review non-animal models and methods in several other disease areas, including breast cancer, immune oncology, autoimmunity, cardiovascular disease, and immunogenicity of advanced medicinal products. These areas have been selected based on disease incidence and prevalence, the reliance of related research on animal models, and the amount of animal procedures conducted.

"Using non-animal models in biomedical research makes scientific sense", comments Maurice Whelan, JRC scientist and head of EURL ECVAM. "We really hope this knowledge base will inspire scientists who currently rely on animal models for their research – we want to stimulate healthy scientific debate, to challenge mind-sets, and to pave the way for doing better and more human relevant science without animals."

As recently reported, in 2017 the EU used approximately 10 million animals in experimental procedures with about 70% of those being used for disease related research. As set out in Directive 2010/63/EU for the protection of animals for scientific purposes, the final goal of EU policy is the full replacement of animal experiments as soon as scientifically possible.

You can access more information about this and other related projects on the EU Science Hub website by clicking here. The text of this item was adapted from https://ec.europa.eu/jrc/en/science-update/tackling-respiratory-diseases-advanced-non-animal-models.

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ANZCCART ANNOUNCES COMPASS ANIMAL WELFARE TRAINING COURSE

What is ComPass Training?

This free online course covers the Australian Code and NZ Guide and welfare issues relating to animal use in research and teaching. Successful completion of the Phase one of the course and its quiz fulfils the mandated basic training needs of researchers and teachers using animals as well as members of Animal Ethics Committees (AEC) in Australia and NZ.

The aim is to standardize and augment the training offered for animal users in research and teaching throughout Australasia by offering this free online interactive and resource-rich course to all who need this training. This forms the first of several training phases that will be introduced in greater detail in the webinar.

Seven core modules cover the legislation, what an AEC is, writing a good application to the AEC, research project planning, the 3Rs, assessing and monitoring wellbeing, adverse events management, and euthanasia considerations.

- Completion of the course should take about three to four hours
- Each module contains a case study and practice questions to prepare the learner for the final quiz
- Quiz completion allows certificate generation for institutional AEC training sign-off
- Find out more by registering for the short ComPass Course Introductory webinar – Tuesday December 1st 12.30pm CDST, (12pm EDT, 1.00pm EDST, 10am WST and 3pm NZ). Invitation and registration details to follow.
- Available free soon via a link by email or the ANZCCART website
- Enjoy the new interactive and resource-rich course
- Questions? Contact Chris or Gail at anzccart@adelaide.edu.au

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ANZCCART AEC MEMBER OF THE YEAR

Background:
The AEC Member of the year award has been created by ANZCCART to recognise the excellent service offered to Animal Ethics Committees by their members throughout Australia and New Zealand.

Nomination Process:
Nominations may be made by members themselves, fellow AEC members, AEC Chairs, AEC Secretaries or sponsoring Institutions.

Nominations must be received in writing (via email anzccart@royalsociety.org.nz) and should not exceed one A4 page (12 point font) in length. The nomination should clearly outline the duration and level of support given to the AEC and where appropriate, acknowledge service to other AECs and other relevant activities. The nomination should clearly state why you believe the nominee deserves this award and outline how this might be of benefit to the recipient. All nominations received by ANZCCART will be regarded as current for a period of three years from the time of receipt.

More information: https://anzccart.org.nz

ANZCCART AEC MEMBER OF THE YEAR 2020 CO-WINNERS

Dr Ali Cullum, veterinarian and Animal Welfare Officer member of the AgResearch Ruakura Animal Ethics Committee. Ali helped start the Veterinary Animal Welfare Officer group under the NZVA (New Zealand Veterinary Association) umbrella in 2012, and has been a passionate advocate for gold standard health, husbandry and welfare solutions for animals used in research, testing and teaching.

Professor Anthony Phillips, Chair of the University of Auckland Animal Ethics Committee (AEC). Anthony has been a long-standing AEC committee member and involved in many projects around animal ethics, health and welfare at the University as well as encouraging the AEC to continually find ways to improve its processes and procedures**.**

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FACEBOOK PAGES YOU MIGHT FIND INTERESTING

If you are a Facebook user, below are links to some pages that you may want to look at. In the interests of adding balance; as well as the animal research pages listed, a number of local animal advocacy groups, including HUHA, NZALA, NZAVS and SAFE, also have Facebook pages.

Animal Behaviour and Welfare Research https://www.facebook.com/groups/361098670640150
This page aims at sharing all types of information on research on animal behaviour and welfare from ideas for discussion/collaboration, research project/job/internship opportunities, statistics, and new research.

Animal Welfare Aotearoa https://www.facebook.com/AnimalWelfareAotearoa
Animal Welfare Aotearoa is a collaborative venture between animal welfare scientists at Massey University and AgResearch. We share New Zealand research with the world to improve the welfare of animals internationally.

Animals in Society https://www.facebook.com/groups/AnimalsInSociety
The Animals in Society group originated as a place for the founders to share their research in animal studies widely and to provide a platform for scholar-advocacy on behalf of other animals.

The European Animal Research Association https://www.facebook.com/The.EARA
EARA aims to achieve broad understanding and acceptance of the humane use of animals in biomedical research in Europe, to advance science and medicine.

The National Centre for the 3Rs https://www.facebook.com/NC3Rs
The NC3Rs is a UK-based scientific organisation dedicated to replacing, refining, and reducing the use of animals in research and testing (the 3Rs).

Speaking of Research https://www.facebook.com/SpeakingofResearch
Speaking of Research is an advocacy group that provides accurate information about the importance of animal testing in medical and veterinary science

Understanding Animal Research https://www.facebook.com/UnderstandingAnimalResearch
To provide the public with clear, scientific information about the role of animals in medical, scientific, and veterinary research.

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FROM NAEAC'S MINUTES

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

Openness

As well as updating and consolidating advisory documents, NAEAC now advises meeting dates for each year and posting the minutes of those meetings online once they have been approved by the committee.

The committee is currently developing the mechanisms for public attendance at meetings and establishing a suite of standing orders for meetings when members of the public are in attendance.

Three Rs research funding

A reminder that the Sustainable Food & Fibre Futures (SFF Futures) fund has been identified as a source of investment from central government for research involving the Three Rs.

Expressions of interest for Three Rs funding should be made in writing to Natasha Telles D'Costa, Principal Adviser, Investment Programmes in the first instance. She will be able to provide further information on the application process. Natasha's email address is Natasha.TellesDCosta@mpi.govt.nz

There is no formal call for applications application can be made at any time. NAEAC encourages anyone who has a proposal for a research project to address one (or more) of the Three Rs to make enquiries regarding accessing this fund.

Euthanasia of production animals and vertebrate pest species

NAEAC is currently updating its guidance on euthanasia. Having identified that there are some areas where further clarification would be useful, Nita Harding is preparing guidelines for euthanasia of production animals and Craig Gillies is doing the same for vertebrate pest species. This information will be added to NAEAC's euthanasia guidelines once it has been developed.

Health and Safety / Compassion fatigue

When NAEAC is considering codes of ethical conduct, the question comes up from time to time about workplace safety. This can include anything from the risk of injury to a person when handling animals, including handling large production animals in confined spaces, to the health risks of some chemicals.

NAEAC also recently discussed whether there was an argument for AECs to consider the health and safety of researchers and animal care technicians when, for example, they were required to kill large numbers of animals.

After discussing the question at some length, it was agreed to acknowledge compassion fatigue in the *Good Practice Guide*.

In general terms however, it was noted that while NAEAC can offer some guidance, it is up to each individual organisation, not its AEC, to be responsible for health and safety policies in the workplace.

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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 2021 – "Openness in Animal Research" ANZCCART Conference, Queenstown

Any time – expressions of interest with proposals relating to Three Rs research to the Sustainable Food & Fibre Futures (SFF Futures) fund. Contact: **Natasha.TellesDCosta@mpi.govt.nz**

Contacts:

Chair: **grant.shackell@outlook.com**
Secretariat: **naeac@mpi.govt.nz**