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The complete ANZCCART News can be downloaded [here](#).

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### Moral Status and Obligations to Animals in Research

The New Zealand Committee of ANZCCART have created an essay competition to inspire students to think critically about the role animal research plays in today's societies and to engage with the difficulties that surround animal use. The Committee is pleased to announce that the 2018 winner is Alysha Mckeeman from University of Otago. Read Alysha's award-winning essay [here](#).

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#### Vale: Julia Nicholls

Prominent South Australian veterinarian and animal welfare advocate, Dr Julia Nicholls passed away in October 2018. Julia finally lost her 8-year battle with cancer, but left a legacy that will serve to ensure her extraordinary devotion to animals and the change to their welfare will live on. Read the full article [here](#).

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### Sharing unused samples – the ethical way to study rare and endangered species?

The Otlet Platform, launched in June 2018, provides a cost-effective way to ethically lower the sampling burden, maximise research output and boost collaboration. The Platform was launched in 2018 and allows scientists worldwide to share their unused samples with others. [Read more on this product here](#).

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### 2019 ANZCCART Conference and Call for Abstracts

The Conference this year will be held in Hobart from Tuesday 23 to Thursday 25 July. The theme for this year's Conference is "Breaking Down Barrier Walls". ANZCCART would like to announce that the call for abstracts is now open and closes Friday 5 April. Registration is also open and early bird closes 18 April. See [here](#) to register and for more information.

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### ANZCCART AEC Member of the Year Award

ANZCCART is calling for nominations for the 2019 Member of the Year Award and would welcome nominations for outstanding AEC members who are currently serving on one or more AECs in both Australia and New Zealand. The closing dates and more information on both awards are available [here](#).

## News from New Zealand

In July 2018, the National Animal Ethics Advisory Committee (NAEAC) launched 2 biennial awards to celebrate achievement in the development and implementation of the 3Rs.

- The Aotearoa New Zealand John Schofield 3Rs implementation award
- Aotearoa New Zealand 3Rs award research grant

Read more about the awards [here](#).

### “Using Animals in Science” Resource

The New Zealand ANZCCART Committee has developed a student resource called “Using Animals in Science” to accompany the school tasks it has produced for Biology students in New Zealand.

Information on the resource including the download link can be accessed [here](#).

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### *Recent Articles of Interest:*

#### **Is it Time for Australia to be More Open About Research Involving Animals?**

The question of openness in research using animals is complex, yet on-going and an issue that has always been of interest to ANZCCART. The fact that a significant proportion of animal based research necessarily goes on behind closed doors does lend itself to questions being asked. In a recent article, Tyler Paytas from the Australian Catholic University asked whether the time is right for Australia to adopt a system of greater openness, in line with the British Concordat on openness in animal research, which has seen more than 120 of Britain’s Universities, research institutes and pharmaceutical companies sign up.

As with most contentious ethical issues, the rationale underpinning concerns of all parties can vary enough to result in hostility that will make it more difficult for researchers and animal welfare supporters to resolve their disagreements. As activists become more vocal, scientists are less inclined to be open about their use of animals. This lack of transparency in turn, means the public are less informed and potentially increases distrust on the part of those who aim to protect animals’ interests. Read the full article [here](#)

#### **Funnel-web Spider Venom Found to Contain Potent Killer of Skin Cancer Cells**

Preparation of potentially life-saving peptides from the venom of deadly animals is becoming increasingly common. Scientists at Queensland Institute of Medical Research (QIMR) are testing a peptide found in Australian funnel web spiders, similar to Gomesin extracted from a Brazilian Spider's venom, to treat cancer. When the team set out to test the funnel web spider venom peptide, they found it was better at killing melanoma cancer cells and stopping them from spreading than the Brazilian spider peptide.

Dr Maria Ikonopoulou, who led the study, also indicated that the Australian spider peptide did not have a toxic effect on healthy skin cells. When the Australian peptide was tested on human melanoma cells in the laboratory, it killed the majority. They were also able to show the peptide slowed the growth of melanomas in mice.

Interestingly, the peptide was also found to have positive effects for another creature native to Australia, the Tasmanian devil. These meat-eating marsupials often succumb to what is known as Tasmanian devil facial tumour disease (DFTD), a transmissible cancer spread through biting that

often leads to their death. So much so, the species is now listed as endangered.

The scientists extracted cells from facial tumors of affected Tasmanian devils and tested how effectively the compound was able to kill them off. Like the melanoma cells, the compound was found to destroy them rather swiftly, so the team began experimenting with its chemical makeup to see if variations could prove even more potent.

It was found that alteration of two particular amino acids in the peptide chain made it even better at destroying the DFTD cells. This research is still at a very early stage and while results obtained to date are very promising, there are many years of work ahead. There is however hope that the peptide could potentially be developed into a new treatment for melanoma and DFTD. Beyond that, the team believes the discovery provides fresh impetus to work exploring bioactive compounds in venom and how they can be used to treat a variety of conditions. Read the full article at:

<https://newatlas.com/funnel-web-spider-venom-skin-cancer/56671/>

### **How to Fix the Sex Bias in Preclinical Research**

In 2011, statistics indicated that 80% of the rodents used in preclinical studies were male.

Many researchers use only male animal models to save money and argue that using both sexes would double the number of animals needed and switching between the two sexes can increase the difficulty of experiments thus risking mistakes. It is also argued the female oestrus cycle complicates research and can affect results.

A sex bias is present even in research on female disorders and in publications studying women's diseases only 12% of studies used female or both sexes of rodents in their research. This can result in a lack of information about treatments for diseases which primarily affect women.

In the United States over 20 years ago, clinical trials were required to include women and in 2006, 41% of participants in trials were women. In 2015, the National Institutes of Health (NIH) required applications for federal grants to include both sexes in biomedical research with some exceptions such as sex-specific disorders such as ovarian cancer. Around the same time, the Canadian Institute of Health required researchers applying for funding to answer compulsory questions about the sex of models used. The use of female animal models increased from 26 to 48%.

Despite appeals to increase the number of females used in preclinical research, change has been slow and it will take time and effort. However regulatory changes, such as those above, may be one way to help reduce sex-bias in preclinical studies. The full article can be read at:

<https://www.laboratoryequipment.com/news/2018/11/how-fix-sex-bias-preclinical-research>

### **Researchers Question Mirror Test After Fish Show Surprising Cognitive abilities**

While the idea of animal being sentient is gaining acceptance, there is actually a test used to define sentience (the mirror test). The mirror test has been used to show that primates and few other mammals meet the strict definition of sentience, which means that they have the individual capacity to feel, perceive or experience and clearly influences the debate around the use of animals in medical research and whether animals experience suffering.

The Mirror Test evaluates the ability to perceive and recognize one's self in a mirror. Sentient animals have all passed the mirror test and most humans have passed the test by the time they reach 18 months of age. Critics believe that it is biased against animals who cannot directly touch the marks and so Researchers from the Max Planck Institute for Ornithology (MPIO) and

Osaka City University (OCU) used the test on a tropical fish, the cleaner wrasse (*Labroides dimidiatus*), as questions have been asked about the possible sentience of fish for many years.

In the mirror test adapted and used for fish, a small colourful mark that could only be seen in the mirror was placed on the fish. To pass the test, the fish, like any animal must touch the mark showing what they saw in the mirror was themselves. Certainly in the case of fish, like many other species, the physical limitations of their body does potentially make such a response very difficult to assess. However, after viewing themselves in the mirror, the fish scraped the marked section of their bodies against hard surfaces, in an apparent attempt to remove the mark. When there was no mirror they did not try to remove the marks.

The response of the fish tested was interpreted as indicating the fish passed the mirror test and should be considered self-aware. The fact that such reactions had only been previously thought to be present in primates and some mammals, left researchers questioning if the mirror test evaluates something different than originally thought.

A noted primatologist who has spent his life studying self-awareness, added a commentary to the study and believes the mirror test should not be seen as definitive and self-awareness should be explored further to have a greater understand of the levels of self-awareness, including where fish fit into current perceptions of sentience.

[https://www.laboratoryequipment.com/article/2019/02/researchers-question-mirror-test-after-fish-show-surprising-cognitive-abilities?et\\_cid=6600262&et\\_rid=454969632&et\\_cid=6600262&et\\_rid=454969632&linkid=Mobius\\_Link](https://www.laboratoryequipment.com/article/2019/02/researchers-question-mirror-test-after-fish-show-surprising-cognitive-abilities?et_cid=6600262&et_rid=454969632&et_cid=6600262&et_rid=454969632&linkid=Mobius_Link)