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The complete ANZCCART News can be downloaded here.

Moves to Tighten Research Statistical Parameters and Their Potential Ramifications for Animal Use

In the constant search for ways to improve science and research, a group of expert statisticians has proposed the tightening of standards by changing the conventional stringency measure of the $P$ value from its current accepted limit of 0.05 to a new and higher standard of $P < 0.005$ as a requirement for publication of data. This proposal has prompted discussion of the broader impacts that might be associated with an increase in experimental stringency, including the effect it would have on the number of animals used in each experiment and this article explores some of the advantages and potential issues associated with the idea. As an alternative to changing the stringency of $P$ values, this discussion needs to explore some other potential options and objectively consider the relative merits and demerits of these alternatives. One favoured option considered would be a more complete adoption of the ARRIVE guidelines that have been endorsed and are being promoted by the NC3Rs in UK as well. The full article can be read here.

ANZCCART AEC Members of the Year Announced

The recipients of the 2017 AEC member of the Year Award were announced at the conference in Queenstown, New Zealand. As previously announced there were two awards made this year as the ANZCCART Board decided to make separate presentations to an Australian AEC member and one from New Zealand. The Australian recipient of the award was Robert Beattie and the recipient of the inaugural New Zealand Award was Miralie Thomas Vincent. Read the full article here.

In Search of a Category C (Animal Welfare) Member for your AEC?

It can be difficult to recruit Category C (animal welfare) members to an AEC, so the current President of the Welfare Special Interest Group of the Australian Veterinary Association (AVAZE) reminds us that Vets with an appropriate background can qualify for this role and has offered contact details for those AECs that might require assistance in this area. These can be found here.

2017 ANZCCART Conference

This year’s conference was organized by the New Zealand Committee of ANZCCART and held in Queenstown New Zealand as part of the annual Queenstown Research Week. The theme for this year’s conference was “Maintaining a Social Licence in a Changing World”. Delegates at the conference were all very impressed by the range, depth and quality of all...
Recent Articles of Interest:

**Tickling Improves Laboratory Rat Welfare**

Many laboratory animals are stressed by contact with animal care staff which can change their organ and biochemical functions and have a major effect on the consistency and validity of research results. One way to help alleviate some of that stress in rats might be to tickle them, according to a systematic review published in the April 2017 edition of PLOS.

Studies have found that tickling rats before an injection can reduce stress levels and a review article in *Physiology & Behavior* by Dr Jaak Panksepp, a proponent of tickling and author credited with the design of one popular method for tickling rats, has also suggested that rats being tickled produce ultrasonic sounds (detectable at around the 50KHz using ultrasonic sound equipment or a bat detector), which might imitate laughter.

Researchers have found that the effects of tickling can include increased positive vocalisations, improved handling and approach behaviours and decreased anxiety. There have also been reports of this kind of activity reducing levels of stress hormones. Read the full article at: https://www.alnmag.com/article/2017/07/tickling-improves-laboratory-rat-welfare?et_cid=6033481&et_rid=454966632&type=cta&et_cid=6033481&et_rid=454966632&linkid=https%3a%2f%2fwww.alnmag.com%2farticle%2f2017%2f07%2ftickling-improves-laboratory-rat-welfare%3fet_cid%3d6033481%26et_rid%3d%26%26%26type%3dcta

**Sea Snakes Lose Their Stripes to Deal with Pollution**

An ecologist from the University of New Caledonia in Nouméa, studying turtle-headed sea snake populations in the Indo-Pacific, found that some snakes had lost their stripes and were jet black, presumably as a mechanism for coping with the pollution. While the majority of adaptation seen resulted in darkening of skin colour, some others showed pale banding or mottled white markings. A marine biologist from the University of Sydney came across a study of Parisian pigeons which suggested that darker feathers stored more pollutants than lighter coloured feathers because the elements associated with the pollution bound preferentially to the pigments in darker feathers. The researchers collaborated to see if this was the case with sea snakes.

The colours of 1,400 turtle-headed sea snake specimens from both industrial and non-industrial sites in New Caledonia and Australia were compared and they found that the black variety was most common in polluted areas and like the feathers in the reported study, these skins were found to contain higher concentrations of pollutants. The researchers also found that the black snakes shed their skins more often and consider this could be a way of getting rid of pollutants. Unfortunately however, there are limits to how much this can protect a population. Read the full article at: http://www.nature.com/news/sea-snakes-lose-their-stripes-to-deal-with-pollution-1.22441?WT.ec_id=NEWS-20170817&spMailingID=54724489&spUserID=MTc2Njc3MzgzMwS2&spJobID=1222851175&spReportId=MThyMjg1MTE3NQ82

**Fish Reveal Clues to Healing Spinal Cord Injuries**

New research into how zebrafish repair their damaged nerve cells gives hope to restoring connections between the brain and muscles for people with spinal cord injuries.

Damage to the spinal cord for humans and other mammals is permanent and results in paralysis however Zebrafish can regain full movement within four weeks of injury to their spinal cord. By researching these fish, scientists at the University of Edinburgh have identified wound-healing
cells called fibroblasts that produce collagen 12 by activating specific biochemical signalling pathways. The collagen 12 molecules change the support structures in the area around the nerve fibres, allowing them to regrow across the area and restore the lost connections between the brain and muscles.

The researcher’s next plan is to study other animals to see if activation of the same signalling pathways could help repair nerve connections damaged by spinal cord injuries. Read the full article at: https://www.alnmag.com/news/2017/07/fish-reveal-clues-healing-spinal-cord-injuries?et_cid=6034917&et_rid=454969632&linkid=https%3a%2f%2fwww.alnmag.com%2fnews%2f2017%2fo72f fish-reveal-clues-healing-spinal-cord-injuries%3fet_cid%3d6034917%26et_rid%3d%26%26type%3dcta

**New Animal Models for Hepatitis C Could Pave the Way for a Vaccine**

Hepatitis C affects nearly 71 million people worldwide and as the disease often shows no obvious clinical signs more than 80% of cases go undiagnosed. So even though there is now an effective treatment available, the best solution would be an effective vaccine to prevent infection. Unfortunately, the development of such a vaccine has been stymied by the lack of a good animal model as Hepatitis C is a very specific virus that only infects humans and chimpanzees.

Professor Rice from Virology at The Rockefeller University, in collaboration with researchers from Columbia University has now developed a way to mimic the disease in rodents, by virtue of discovering a virus that is closely related to Hepatitis C, but able to infect rats and mice. Importantly, they have found this model recapitulates much of the human disease, which should help accelerate Hepatitis C vaccine research. Read the full article at: https://www.alnmag.com/news/2017/07/new-animal-models-hepatitis-c-could-pave-way-vaccine?et_cid=6030043&et_rid=454969632&location=top&et_cid=6030 043&et_rid=454969632&linkid=https%3a%2f%2fwww.alnmag.com%2fnews%2f2017%2fo7%2fnew-animal-models-hepatitis-c-could-pave-way-vaccine%3fet_cid%3d6030043%26et_rid%3d%26%26type%3dtop