

19 April 2013

Update for AEC members from the Chair of NAEAC – April 2013

New technology

It is one of NAEAC's priorities to keep abreast of and to address the impact of new technology on animal usage. To this end we would:

- a. Ask AECs to keep us informed, on an ongoing basis, of developments that may have implications for the use of animals in research, testing and teaching.
- b. Encourage AECs considering applications involving new technologies to seek MPI/NAEAC advice if they are uncertain whether activities involved come within the ambit of the Animal Welfare Act 1999.

Bird by-catch

In response to a query from an AEC, NAEAC discussed the issue of the status of birds captured as part of a research project. Inevitably, non-target species will be caught alongside the required species. It is NAEAC's view that birds caught as by-catch should not be included in the Ministry for Primary Industries (MPI) statistics. Capture is not included in the definition of "manipulation" and as such does not come under Part 6 of the Act. The general provisions of the Act do apply to by-catch however, and these animals should be dealt with in an appropriate way – either released back into the wild or humanely euthanased.

Roles of NAEAC vs MPI

Speaking of statistics, it is timely perhaps to clarify the roles of MPI and NAEAC, which are often confused when it comes to animal use statistics. This may be because the statistics have traditionally been published within the NAEAC Annual Report. However, it is not NAEAC's but MPI's role to collect and collate the annual statistics. It is MPI that has the regulatory role with respect to the Animal Welfare Act, as compared to NAEAC's function as an advisory committee. From last year's report, this has been emphasised by reporting the statistics as an appendix rather than in the body of NAEAC's Annual Report.

Animal Welfare Act review update

During August and September last year, MPI publically consulted on *Animal Welfare Matters: Proposal for a New Zealand Animal Welfare Strategy and amendments to the Animal Welfare Act 1999*.

The Ministry received over 2,200 written submissions on the consultation from a variety of sectors, industry organisations, animal welfare interest groups, and individuals. The majority of these submissions (over 1,700) were generated from the SAFE website. There were also about 150 submissions that dealt mostly or exclusively with dog issues, often about dog tail docking. The submissions are now available on the Ministry's website, along with a summary of the submissions.

During the consultation period, the Ministry also held six stakeholder workshops around the country to encourage discussion and debate about the issues and options

raised in the document. These were attended by approximately 120 key animal sector stakeholders.

The Ministry finalised the draft strategy and proposals to amend the Act in light of consultation feedback, and the strategy and legislative proposals were considered by Cabinet in January. An announcement on the outcome of the Government's consideration of the draft strategy and proposals is expected in the near future.

NAEAC Three Rs award

While NAEAC was pleased to be able to grant the 2012 Three Rs Award to researchers who were clearly mindful of the necessity to replace, reduce and refine in relation to animal use in research, testing and teaching, both we and last year's sponsors, the Royal New Zealand SPCA, were disappointed that the institution involved would not allow any publicity about the award. We see it as important to publicise the efforts of scientists in the Three Rs arena, and so have taken the action of limiting entrants to those scientists whose institutions will allow the winners and their work to be publicized.

Nominations for the 2013 NAEAC Three Rs Award are currently being sought! See below for more detail.

British Three Rs awards

The British equivalent of our Three Rs Prize is run by the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs) <http://www.nc3rs.org.uk/>

Last year, the prize was awarded to Professor Donald Ingber of Harvard University for his 'lung-on-a-chip' microdevice that can accurately replicate conditions in a diseased human lung, offering a viable alternative to using animals in preclinical drug testing. The microdevice contains hollow channels lined with living human cells, mimicking both the interface between tissues and the unique physical environment seen in whole living organs. Crystal clear and flexible, it is approximately the size of a USB memory stick.

Huh D, Leslie DC, Matthews BD, Fraser JP, Jurek S, Hamilton GA, Thorneioe KS, McAlexander MA, Ingber DE (2012). A human disease model of drug toxicity-induced pulmonary edema in a lung-on-a-chip microdevice. *Science Translational Medicine* 4 (159): 159ra147.

Three other papers were highly commended:

- Scottish-based researcher Professor Susan Barnett, University of Glasgow, was commended for research developing an in vitro model of spinal cord injury using rat embryonic spinal cord cells. This has enabled the laboratory to test the combination of drugs being studied using cells from one animal only, representing a 97% reduction had an established methodology been used. This method is being further developed for testing therapeutics more widely.

Boomkamp SD, Riehle MO, Wood J, Olson MF, Barnett SC (2012). The development of a rat in vitro model of SCI demonstrating the additive effects of Rho and ROCK inhibitors on neurite outgrowth and myelination. *Glia* 60 (3): 441456.

- London-based Professor Gareth Sanger, Queen Mary, University of London, was commended for research demonstrating the benefit of using human - rather than animal - gastrointestinal tissues for drug testing, which are obtained as part of normal surgical procedures.
Broad J, Mukherjee S, Samadi M, Martin JE, Dukes GE, Sanger GJ (2012). Regional- and agonist-dependent facilitation of human neurogastrointestinal function by motilin receptor agonists. British Journal of Pharmacology 167 (4): 763774.
- US researcher Professor Shuichi Takayama, University of Michigan (USA), was commended for developing a 3D cell culture to test anti-cancer drugs, which proved to be more representative of clinical responses than standard 2D 'flat' cell cultures, demonstrating the potential for this method to replace and reduce the use of animals in pharmaceutical testing.
Tung YC, Hsiao AY, Allen SG, Torisawa Y, Hoc M, Takayama S (2011). High-throughput 3D spheroid culture and drug testing using a 384 hanging drop array. Analyst 136 (3): 473478.

Kind Regards

Virginia Williams

Virginia Williams
NAEAC Chair

**The National Animal Ethics Advisory Committee (NAEAC)
invites applications or nominations for the:**

THREE Rs AWARD 2013

**To reward and promote implementation of Three Rs principles
in research, testing and teaching**

The Three Rs (replacement, reduction and refinement) are the cornerstone of the ethical use of animals in research, testing and teaching. This award celebrates achievements in the implementation of the Three Rs and promotes the concept within the scientific community and to the wider public. The award is co-ordinated by NAEAC and sponsored by the Royal New Zealand SPCA and is made to an individual, group or institution within New Zealand that shows great commitment to, or innovative implementation of, the Three Rs, or whose work will help to promote awareness of Three Rs principles.

The prize will consist of a certificate and a financial award of \$2,000, which will be presented at an appropriate formal occasion later this year. Receipt of the award will be publicised in selected media, although specific details of the work involved can be restricted if appropriate.

Please contact the NAEAC Secretariat via email (naeac@mpi.govt.nz) for an application form.

Applications close on Friday 21 June, 2013