



# National Animal Ethics Advisory Committee

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3 November 2010

## Update for AEC members from the Chair of NAEAC

A second communication to AECs from NAEAC, this one includes a number of queries we have received from AECs with NAEAC's responses. We are looking forward to seeing many of you at the NAEAC Workshop on November 26<sup>th</sup>.

### Requests to NAEAC for advice:

- **More information on release of exotic birds** – In the last newsletter I mentioned that NAEAC had been asked for an opinion on the legal situation regarding the release of exotic wildlife species – birds in this case – into the wild following their capture and manipulation. The researcher in this case had planned to euthanase the birds because the Wildlife Act does technically prohibit release of exotic species. The AEC was clearly unhappy with the ethical implications of this requirement. While it might seem logical that 'release' is used in the legislation to mean releasing an animal where it previously didn't occur (to prevent new populations or mixing of genotypes), the Department of Conservation (DOC) is unable to give legal opinions as such, stating that researchers should seek their own advice from local DOC staff. The following information from DOC is pertinent:

*"DOC's website gives operational support for people undertaking research on public conservation land and/or catching and releasing species covered by the Wildlife Act. This information can be found at <http://www.doc.govt.nz/about-doc/concessions-and-permits/research-collection-and-wildlife-permits/>."*

*This information and contacting the specified DOC staff may help researchers (as well as 'testers' and 'teachers') to understand the obligations they have under the Wildlife Act.*

*Researchers or other people who are undertaking activities requiring permits are advised to contact the specific DOC staff stated on the webpage Contacts for Research, Collections and Wildlife Permits. These staff are best placed to help researchers, testers and teachers to determine their requirements. Concessions staff deal with a wide range of permitting issues and they are well placed to assist."*

NAEAC takes this to mean that any researcher wanting to capture and release exotic species should contact the specific local DOC person to be found on the website for the appropriate information as there appears not to be a national policy on this. NAEAC therefore advises AECs to require evidence that their local DOC staff as per the given webpage have been contacted in any cases involving both capture and release of exotic birds.



- **Does perfusion under general anaesthesia constitute a manipulation?** "The perfusion of animals at the end of a study is a common practice in rodents used for research. In brief, general anaesthesia is induced and once surgical anaesthesia is achieved, the ventral chest wall is removed, to expose the heart. Some researchers prefer to access the heart via an abdominal and then a diaphragmatic incision. A needle is inserted into the left heart chamber to infuse a fixative solution (often formaldehyde) and the right heart is incised to allow blood to haemorrhage from the circulation. The procedure is ideally performed with the heart still beating. Using this method the animal is perfused with fixative for future research use. The procedure is humane because the animal is anaesthetised throughout.

NAEAC's response to the points raised is as follows:

- When performed as described above, the animal is euthanased by the fixative perfusion. Hence one could argue that this procedure is simply just another euthanasia technique? *While the fixative perfusion itself may result in the death of the animal, it cannot be performed without prior anaesthesia and surgery.*
  - The procedure is humane. *Agree although this is irrelevant to whether this is a manipulation or not.*
  - This procedure is a very common practice in research using rodents. It is used internationally. *Once again this is irrelevant to its status under New Zealand's Animal Welfare Act 1999.*
  - The incisions in the body wall to expose the heart are, in our view, not regarded as surgery. They are more akin to a post-mortem procedure. *The thoracotomy is a surgical intervention carried out under general anaesthesia on a living animal and therefore ante mortem and subject to scrutiny from the AEC.*
  - The purpose of the procedure is to produce tissue fixation immediately after general anaesthesia. There is no significant delay between the induction of anaesthesia and the death of the animal. *Ethical approval is not related to the length of the experiment.*
  - This contrasts with a procedure where anaesthesia is induced to perform a surgical or other manipulation, where the animal is unconscious for an extended period of time while research data is collected and then the animal is perfused. Such circumstances we would regard as a manipulation. *Once again this is simply a matter of timing.*
- **Could tail tipping and ear punching be considered standard husbandry practice for transgenic colonies and as such, no longer be regarded as a manipulation?**

NAEAC's response:

The definition of a manipulation under the Animal Welfare Act includes the following clauses:

(a) subjecting it to a procedure which is unusual or abnormal when compared with that to which animals of that type would be subjected under normal management or practice and which involves—

- (i) exposing the animal to any parasite, micro-organism, drug, chemical, biological product, radiation, electrical stimulation, or environmental condition; or
- (ii) enforced activity, restraint, nutrition, or surgical intervention; or

(b) depriving the animal of usual care;—

Tissue samples are collected for genotyping by either tail tipping or ear punching, both of which could be described as surgical interventions.



NAEAC is of the opinion that tissue sampling for the purpose of targeted breeding has become so common as to be considered a husbandry procedure necessary for the management of breeding colonies and therefore normal practice. However, it would be appropriate for AECs to require this to be done under a Standard Operating Procedure with appropriate regard to the welfare of the animals.

However, NAEAC considers that any biopsy to answer a specific research question (outside of the information required to breed) does constitute a manipulation and therefore requires AEC approval.

- **There are several new additions to the Good Practice Guide (GPG) that I would be grateful for advice on.**
  - The inclusion of behaviour in Section 4.5: Pens, cages etc "The following factors should be taken into account: species-specific behavioural requirements, including the availability and design of space to allow free movement and activity, sleeping, enclosed spaces, contact with others of the same species, and the opportunity to perform a species-specific behavioural repertoire".
  - The inclusion of a reference to behaviour and physiological needs in section 4.7: Enrichment and Environmental Complexity "Most animals used in research, testing and teaching are housed in unnatural environments. Wherever possible such animals should be provided with an environment that can accommodate the behavioural and physiological needs of the species."

The AEC had much discussion at its last meeting about what constitutes normal species-specific behaviour in the context of husbandry. Some independent, nationally-accepted guidance and some accepted literature would be more than welcomed.

NAEAC's response:

In terms of policy, NAEAC believes the GPG makes it clear that unless there is a compelling research requirement not to provide enrichment, laboratory animals should routinely be provided with a degree of complexity with their cages. This seems to be not only good welfare, but also, from some of the attached, good science. While we do not feel it is within NAEAC's role to provide exhaustive material on enrichment we can certainly provide you with some references.

- **The UFAW Handbook on the Care and Management of Laboratory and Other Research Animals, 8th edition**

The definitive work on practical husbandry, breeding, laboratory procedures and disease control for a wide variety of vertebrates from marine fish to non-human primates. Edited by Robert Hubrecht and James Kirkwood. Published by Wiley-Blackwell. April 2010. 848 pages. Hardback. ISBN 9781405175234, £199.99.  
<http://www.ufaw.org.uk/public-list.php#pl05>

- **Guide for the Care and Use of Laboratory Animals** A respected resource for decades, the *Guide for the Care and Use of Laboratory Animals* has been updated by a committee of experts, taking into consideration input from the scientific and laboratory animal communities and the public at large. The *Guide* incorporates new

scientific information on common laboratory animals, including aquatic species, and includes extensive references.

[http://www.nap.edu/catalog.php?record\\_id=12910](http://www.nap.edu/catalog.php?record_id=12910)

**AECs – please see attached papers for further information on enrichment.**

**Laboratory animal welfare during emergencies:**

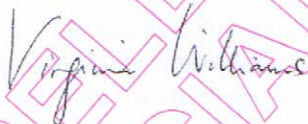
The Christchurch earthquake and its continued aftershocks have been a reminder that there is the potential for the welfare of confined animals to be compromised during such events. A good time to review your institution's Emergency Management Plan. Facilities in the Christchurch area seem to have coped well and devotion to animal welfare was demonstrated by staff going into buildings to check animals before those buildings had been declared safe.

- A tank of *Xenopus* were tipped out onto the floor. Luckily, as amphibians, there were no casualties.
- Having stainless steel racks not fixed to the walls but on castors with wheel locks was thought to have prevented rodent cages from toppling. The racks did bounce across the rooms quite a bit, but the cages on the rack shelves had actually gone further back into the shelf, rather than head in the opposite direction and over the edge. A couple of mouse lids had shimmied back, with three mice escaping their cages but not the room.

**School Essay Competition:**

NAEAC ran an essay competition for Year 11, 12 & 13 students (*Describe and analyse the use of animals in research in New Zealand, including examples of how and why animals are used, and how their use is regulated and controlled*) which was won by Himanshu Wadhwa from Dilworth School in Auckland. The essay will be published in the November issue of *Welfare Pulse*.

Kind Regards



Virginia Williams  
Chair