

Reports and Comments

Prize for research showing how to humanely handle mice

Professor Jane Hurst was awarded the UK's National Centre for the Three Rs (NC3Rs) 2011 prize for improving animal welfare at the NC3Rs Annual Review Meeting on the 25th January 2011. The award was given for her publication (Hurst & West 2010) on improving handling methods for mice. Professor Hurst and Rebecca West have shown that the traditional method of handling, in which the mice are picked up by the base of the tail, results in the mice becoming very anxious as well as aversive to further handling. She has also shown that mice can be more humanely handled by, either coaxing them into a tube from which they can be tipped into the hand or another cage, or by cupping them in the palm of the hand. Mice handled in these more humane ways will subsequently approach a hand placed in the cage while traditionally handled mice retreat from the hand and show behaviours indicative of anxiety. As is often the case, good welfare goes hand-in-hand with good science; as while some traditionally handled mice will eventually habituate to being picked up by the tail, some never do, so that this handling method introduces increased variation into research. Further, the researchers found that restraint methods, such as scruffing the mouse or restraining it by the tail, did not result in stress if one of the humane handling techniques had been used. As it has now been demonstrated that traditional handling evokes strong anxiety and that an estimated 40 million mice or more are used worldwide, the potential for improving welfare becomes clear. Moreover, the techniques will also be relevant to those that keep or handle pet mice.

Taming Anxiety in Laboratory Mice (2010). Hurst JL and West RS. *Nature Methods* 7: 825-826. Available at: <http://www.nature.com/nmeth/journal/v7/n10/full/nmeth.1500.html>.

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UFAW

New Guidelines on euthanasia from the Canadian Council on Animal Care

Animals used in science may be killed for welfare reasons to prevent unavoidable pain or distress, to provide tissue for research, or to dispose of animals that are no longer needed. Euthanasia is probably one of the least popular of the tasks of animal care personnel, but it is important that it is always carried out in a way that causes the minimum of pain or distress to the animal. Ideally, the pain or distress should be nil, but unfortunately that is not always practically feasible. It is also important that the method chosen should take into account the likely psychological impact on the staff carrying out the procedure and the views of the public, however the welfare of the animal should come first. The Canadian Council on Animal Care (CCAC) recent publication (see details below) on euthanasia provides 10 guiding principles to help ensure that it is undertaken as humanely as possible. The document also provides an overview of

acceptable methods of euthanasia for various groups of species used in research. This takes into account the results of recent research and some traditional methods of killing animals have been reassessed. For example, there have been increasing concerns, and a number of papers, regarding the use of carbon dioxide to kill rodents and in these guidelines, the use of this gas, on its own, is relegated to a conditionally acceptable method which needs particular ethical justification. The Guidelines refer to an addendum, which was not published at the time of writing but is intended to provide information about the potential impact of particular euthanasia methods on research results.

CCAC Guidelines on: Euthanasia of Animals used in Science (2010). A4, 36 pages. Published by the Canadian Council on Animal Care. ISBN: 978-0-919087-52. Available at: http://www.ccac.ca/en/CCAC_Programs/Guidelines_Policies/PDFs/Euthanasia.pdf.

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Voluntary European Declaration signed on alternatives to pig castration

Across the European Union approximately 250 million pigs are reared annually to supply the pig meat market and the vast majority of males are surgically castrated before they are one-week old. Castration of piglets occurs for management reasons (to reduce aggression, lessen unwanted mounting behaviour, and prevent unplanned pregnancies) and to decrease the probability of 'boar taint'. Boar taint occurs in some carcasses due to the presence of skatole and androstenone and may be perceived by consumers as unpleasant. Entire, male pigs are most likely to be affected by boar taint (although some female pigs are also affected) and production systems which slaughter animals at higher weights, eg between 100 and 110 kg, frequently castrate all male piglets routinely since these animals are more likely to have reached puberty and there is some association between puberty and taint (additionally if animals have reached puberty then there is a chance that females may become pregnant before slaughter). Sensitivity to boar taint varies between people and there are also differences between countries as to its acceptability (eg consumers in France, Germany and Spain find boar taint highly unacceptable whilst consumers in the UK less so). Carcasses with a pronounced taint are considered unfit for human consumption.

It is widely accepted, due to behavioural and physiological indicators, that castration is painful, however in the vast majority of cases when castration is carried out, anaesthesia and/or analgesia are rarely used. This is a welfare concern and one which a number of key stakeholders within the pig industry are beginning to address through voluntarily agreeing to a European Declaration on alternatives to surgical castration of pigs. The Declaration has been signed by many key groups within the pig industry, including: COPA-COGECA (European farmers and European agri-cooperatives), VDF (German meat industry association),