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Pain & Distress Report

June 2005
Volume 5, Issue 2

A report from the Pain & Distress Campaign of The Humane Society of the United States

Policies & Perspectives

OLAW Guidance on Reporting Requirements

The Office of Laboratory Animal Welfare (OLAW) has published guidelines in the National Institutes of Health (NIH) *Guide for Grants and Contracts* to help Institutional Animal Care and Use Committees (IACUCs) and institutional officials meet the reporting requirements of section IV.F.3 of the *Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals*. The guidelines are intended to promote better uniformity in the reporting of serious or continuing noncompliance, any serious deviations from the National Research Council's *Guide for the Care and Use of Laboratory Animals*, and any suspension of activity by an IACUC. For more information, go to *http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-034.html*.

Public Access to Information on NIH-Funded Research

Effective May 2, 2005, the NIH has adopted a policy to enhance public access to peer-reviewed publications resulting from NIH-funded research. NIH-funded researchers are requested to submit an electronic version of the final manuscript to the NIH (at *www.nihms.nih.gov*) immediately after the final date of publication. This information will be available to the public on the National Library of Medicine's PubMed Central (*www.pubmedcentral.nih.gov*). This policy seeks not only to enhance public access but also to ensure "permanent preservation" of research findings, monitor scientific productivity, and help set research priorities. Additional information can be found at *http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-045.html*.

Noteworthy

Fifth World Congress: Preliminary Program Online

The preliminary program of the Fifth World Congress on Alternatives & Animal Use in the Life Sciences, to be held August 21–25, 2005, in Berlin, Germany, is now available online. The program is structured into seven themes: education; lab animal welfare and refinement; moral issues of animals, alternatives, and public policy; information systems and databases; safety testing, validation, and risk assessment; modeling; and applying new science and technology. To view the program and to register, go to *www.ctw-congress.de/act2005*.

Insulin Assay Minus Animal Use

Earlier this year, the Physicians Committee for Responsible Medicine (PCRM) announced the development of

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an insulin assay that does not involve the use of animals in the production of the kit's components. The new test kit contains antibodies produced from cells cultured in an animal-component-free media supplement. The assay is an effective replacement for kits containing insulin antibodies grown in the abdomens of live mice or antibodies produced from cells cultured with fetal calf serum. PCRM worked with BiosPacific Lab to culture the cells in the media and collaborated with Linco Research to incorporate antibodies grown in the medium into a test kit for human insulin. For more information, go to *www.pcrm.org*. To order commercial test kits from Linco, e-mail info@lincoresearch.com.

The history of insulin assays, beginning with complete reliance on animals and now poised to become completely free of animal use and animal-derived products, illustrates the strides that can be made in alternative methods through technological innovation and humane concern.

Worst Science Jobs

In a recent article in *Popular Science* (Weed, "The Worst Jobs in Science: The Sequel," November 2004), the laboratory animal veterinarian is dubbed the third "worst science job." Colorado State University (CSU) veterinarian David Neil notes that while veterinarians typically make sick animals healthy, laboratory animal veterinarians make healthy animals sick. The article points out that although animal research has its benefits, laboratory animal veterinarians must do the "dirty work." Neil admits that he cannot answer whether "the greater good" ultimately achieved by animal research "makes it right." However, the author found that most laboratory animal veterinarians, as well as holders of the 16 other "worst science jobs," do not dislike their jobs or are willing to endure the negative aspects for what they believe makes the work important and virtuous.

Resources & Services

Report Available on Pain and Distress Associated with Polyclonal Antibody Production

A report that provides general and specific recommendations for minimizing pain and distress associated with polyclonal antibody (Pab) production is now available free online at *www.hsus.org/antibody_manuscript*. A group of experts in the fields of antibody production, animal welfare, in vitro alternatives, and regulatory compliance, chaired by Coenraad Hendriksen, developed the recommendations during a workshop organized by The Humane Society of the United States (HSUS). The 19-page report addresses determination of appropriate adjuvants, optimal volume of adjuvant per species, optimal route of immunization, use of booster injections, available alternatives, and measurement of animal welfare. To order free printed copies of the report, e-mail ari@hsus.org or call 301-258-3041. The June 2005 issue of *ILAR Journal* also addresses immunization and adjuvant procedures.

Enrichment Strategies for Laboratory Animals

The March 2005 issue of *ILAR Journal*, *46*(2), provides information on implementing environmental enrichment programs for animals in laboratories. Strategies for a number of species—including dogs, cats, rodents, nonhuman primates, rabbits, and farm animals—are provided. Various issues related to enrichment programs are discussed, such as regulatory requirements, consideration of impact on research, harmonization of strategies, definition of terms such as "enrichment," measurement of the effects and evaluation of the success of enrichment strategies, and roles of personnel within animal research institutions regarding enrichment programs. For more information, go to *http://dels.nas.edu/ilar_n/ilarjournal/journal.shtml*.

Guidelines on Primate Care and Use

The National Centre for the Replacement, Refinement and Reduction in Research (NC3Rs) of the Medical Research Council (MRC) in the United Kingdom has produced best practice guidelines on the accommodation and care of nonhuman primates used in research. These guidelines, which must be followed by any researchers who receive MRC funding, address experimental design,

Upcoming Conferences

Second International Conference on the Use of Humane Endpoints in Animal Experiments for Biomedical Research

- Coordinated by the Working Group on Humane Endpoints
- August 20–21, 2005
- Berlin, Germany
- For more information, go to *www.humane-endpoints.org*

Fifth World Congress on Alternatives and Animal Use in the Life Sciences

- Sponsored by the Alternatives Congress Trust
- August 21–25, 2005
- Berlin, Germany
- For more information, go to *www.ctw-congress.de/act2005*

TestSmart Developmental Neurotoxicity (DNT) Meeting

- Coordinated by The Johns Hopkins Center for Alternatives to Animal Testing
- March 13–15, 2006
- Reston, Virginia
- For more information, go to *http://caat.jhsph.edu/dnt*

housing and environment, handling, veterinary care, staff training, fate of the animals, and implementation of the Three Rs (replacement, reduction, and refinement). The guidelines can be viewed at *www.mrc.ac.uk/pdf-primate-best-practice.pdf*.

IACUC 101 Website

OLAW's new website (*http://grants.nih.gov/grants/olaw/iacuc101s.htm*) provides scheduling, hosting information, and program descriptions of the IACUC 101 series of training programs, which are designed to provide information on the role and responsibilities of IACUCs. For more information, contact Mary Lou James at mljames@mo.net.

Correction

The news item entitled "Serum-Free Media" in the March 2005 *Pain & Distress Report, 5*(1), stated that a report by van der Walk et al. addressed replacing fetal bovine serum *with* in vitro culture. However, the report addressed replacing such serum *in* in vitro culture. We apologize for this error.

From the Technical Literature

Cage Enrichment Does Not Interfere with Behavioral Results in Mice

Researchers have found that enriched housing for mice does not increase the individual variability in behavioral tests or the risk of conflicting data if studies are replicated, dispelling concerns that enriched housing might disrupt standardization (Wolfer et al., 2004, *Nature*, *432*, 821–822). The researchers stress, however, that mice in standard laboratory cages show impaired brain development and stereotypical and anxious behavior. Two inbred strains of female mice in three laboratories were raised in either small standard cages or large enriched cages. As adults, the 432 mice were used in four common behavioral tests—elevated O-maze, open-field test, novel-object test, and water maze—used in drug screening and behavioral phenotyping. Enriched housing did not affect within-group variability, indicating that enrichment does not decrease sensitivity of tests. Enrichment also had no significant effect between laboratories, demonstrating that enrichment does not increase the risk of conflicting results between laboratories. The effects of enrichment on male mice were not studied.

Intelligence and Suffering in Animals

A recent article in the British newspaper *The Independent* (O'Connell, Feb. 16, 2005) discusses a project led by the University of Bristol's Michael Mendl to explore whether studies showing the high intelligence of certain animals, such as apes, could also show that farm animals are "not intelligent" and that their lack of intelligence may make them even more susceptible to suffering. Traditionally, scientists have equated intelligence with consciousness of thought and, subsequently, with the ability to suffer. However, even if animals are not conscious of their thoughts, they are conscious of their feelings. What an animal *feels* is at the heart of animal welfare. Mendl says that "animals that are more intelligent are capable of realizing that the pain will stop, whereas less intelligent animals may be worse off because they suffer not knowing the pain will end." Mendl and colleagues designed a study that showed that, like depressed humans, depressed rats respond negatively to ambiguous events. Mendl proposed that this could be a new method for measuring animal emotions. Researchers in London were able to teach pigs to communicate their feelings by giving one response when they felt normal and a different response when they felt anxious. If pigs can tell researchers how they feel, they could be trained to understand that frightening events will be over quickly. Mendl and his colleagues will continue to explore "feelings consciousness" in pigs; this and similar studies could lead to the enhancement of animal welfare.

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Recent Publications

Segner, H. (2004). Cytotoxicity assays with fish cells as an alternative to the acute lethality test with fish. *Alternatives to Laboratory Animals*, *32*(4): 375–382.

Interagency Coordinating Committee on the Validation of Alternative Methods & the National Toxicology Program Interagency Center for the Evaluation of Alternative Toxicological Methods. (2005, March). *Expert panel report: Evaluation of the current validation status of in vitro methods for identifying ocular corrosives and severe irritants*. Available online at *http://iccvam.niehs.nih.gov/methods/ocudocs/EPreport/ocureport.htm*.

Vitale, A., & Licata, E. (2004). Refinement techniques in experimental protocols involving Callitrichids, *Ann 1st Super Sanita 40*(2): 237–240.

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From the Technical Literature

Pain Management in Cats

Pain in cats has historically been undertreated for a number of reasons—overt pain-associated behavior is subtle in cats, few analgesics have been specifically authorized for use in cats, and cats are more susceptible to analgesic toxicity compared with most other species. Two articles on pain management in cats (Taylor and Robertson, 2004, *Journal of Feline Medicine and Surgery*, 6(5), 313–320 and 321–333) provide information on pain assessment, which mainly involves behavioral observations because physiological measures are not as effective. The authors also discuss various classes of analgesics for use in cats, including opioids, NSAIDS, alpha2-adrenoceptor agonists, and local anesthetics, as well as their use for different types of pain such as chronic, traumatic, and surgical. The authors include information on dosing levels and dosing routes and intervals (which are particularly important considerations in cats) and emphasize that a multimodal analgesia approach is most effective. Pain management other than analgesics, including acupuncture and general care, are also discussed.

Attitudes & Public Opinion

Poll Examines Attitudes toward Animal Welfare in Asia

In a poll conducted in China, South Korea, and Vietnam, 90% of respondents in each country believe that minimizing animal suffering is a moral duty. Commissioned by the International Fund for Animal Welfare (IFAW) and conducted by Market & Opinion Research International (MORI) in early 2004, the poll sampled the views of 1,000 people. The findings are very similar to responses of the British public to a MORI poll commissioned by the Compassion in World Farming Trust, in which 1,946 people were asked similar questions.

Approximately 90% of people in Vietnam and Britain, as well as 77% and 78% of those in China and South Korea, respectively, agreed that minimizing animal suffering should be the law. IFAW notes that the actions of the governments of these Asian countries do not reflect the public's stance. South Korea and China have minimal animal protection laws, and Vietnam does not have any. These findings may demonstrate to Asian governments that the public would welcome new laws protecting animals.

Helpful Websites

The University of California–Davis Center for Animal Alternatives website—*www.vetmed.ucdavis.edu/Animal_Alternatives/weblinks.htm*—lists resources for alternatives that allow the reduction, refinement, and replacement of animals in research, testing, and education.

The Royal Society for the Prevention of Cruelty to Animals (RSPCA) has a new section on its website—*http://www.rspca.org.uk/servlet/Satellite?pagename=RSPCA/RSPCARedirect&pg=laymembers*—for lay members of ethical review committees (similar to IACUCs in the United States). The new section includes a resources book, guides to best practices, information on categorization of painful and distressful procedures, and other resources.

Pain & Distress Report

The *Pain & Distress Report* provides laboratory animal veterinarians, technicians, oversight committees, and others with up-to-date information on issues regarding pain and distress in laboratory animals.

E-mail ari@hsus.org for a free subscription to the electronic version of the newsletter; copies are also available online at *www.hsus.org/pain_distress_report*. Please share this report with your colleagues and IACUC members.

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Promoting the protection of all animals