

# Current Events

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## *MEETING REPORTS*

### **Changes Needed in U.K. Animal Experiment Law**

The Association of Veterinary Teachers and Research Workers held a meeting at the Royal Society of Medicine, London, on February 26 to consider what factors and issues need to be considered to ensure that any new legislation on animal experiments conforms to the specific needs of the veterinary profession.

That new legislation was necessary, all agreed. But a careful consideration

*INT J STUD ANIM PROB 3(3) 1982*

of what exactly should be included, in particular, how "pain" should be defined, gave rise - as usual - to more questions than answers.

Dr. Jenny Remfry cautioned that the groups had to avoid anthropomorphism and sentimentality and, instead, concentrate on anatomical and physiological differences between humans and other animals. While perception of acute pain was similar in all animals, there was no evidence as to whether animals suffered emotionally on account of pain. She also noted that chronic pain, in particular, was perceived in the prefrontal cortex, which is highly developed in humans. Therefore, she asserted that it is reasonable to assume that humans probably have a more conscious awareness of chronic pain than other animals.

Dr. Remfry then listed several of the many kinds of questions that come quickly to mind when animal experiments are discussed, for example:

- Should animals bred solely for the purpose of experimentation be used preferentially?
- Should the purposes for which animals can be used be controlled?
- Should animals be killed at the end of an experiment?
- How can we best assess the comfort and well-being of the experimental animals? Should natural behavior such as burrowing be provided for?

Dr. Judith Hampson of the RSPCA discussed recent changes in public attitudes toward animal experimentation. She observed that the type of person actively concerned about this issue was now more likely to be young, with more extreme views than traditional "little old ladies in flowery hats." The general reluctance of scientists to provide much explanation for their positions on the use of animals was felt to be one reason for the recent rise in extremism.

Dr. Hampson also thought that the consensus of public opinion would probably support funding of the development of research into alternatives, as well as more control over what is done in laboratories. Like most of the other speakers,

she commented on the need for a new, workable definition of pain. She cautioned that any precise defining of "pain" must be subjective, but felt that some benchmarks for measuring suffering should nevertheless be established.

Dr. Bill Hiddlestone, from ICI, said that he thought industry would back legislation to restrict animal experimentation to registered sites and to set up a code of practice for the care of experimental animals. He advocated the general use of purpose-bred animals for research, but said that there should also be room for exceptions to this rule, for example, in the screening of wild animals as potential models.

Dr. Olga Uvarov of the Research Defence Fund stated that current legislation needed modification, to protect both animals and experimenters against extremists. She proposed simplification of the present licensing system and suggested that the license itself take the form of a passport-type booklet that would contain descriptions of experimental procedures and of facilities available. The present inspection system, she said, should be retained. She also felt that reuse of animals in a second experimental procedure should be permitted, if the first experiment was relatively simple and the animal appeared to be healthy after it. Concerning the breeding of animals, Dr. Uvarov thought that while rodents ought to be purpose-bred, the source of supply for other animals should depend on the purpose of the experiment. Assessment of pain, she believed, must depend purely on objective clinical signs, rather than subjective descriptions.

Mary Midgley, retired philosophy professor from the University of Newcastle, noted that views on the ethics of animal experiments had become more humanitarian recently, because the old Christian attitude toward animals, based on the idea that animals had no souls and could therefore be used as we wish, had largely been discarded. So a new clash of ideals, in which the acquisition of pure knowledge is being pitted against

the welfare of the animals used in obtaining it, has begun to emerge.

Finally, the Home Office Inspector, Dr. Derek Trevor, raised the issue of what method should be used in weighing the value of a proposed experiment, for instance, in terms of estimates of expected cash return from a proposed new procedure, or in advances in knowledge.

### **SCAW Conference Studies Responsible Use of Animals**

More than 100 scientists met at the National Institutes of Health at the invitation of the Scientists' Center for Animal Welfare to assess the effectiveness of current review procedures for animal experimentation and to make plans for a coordinated effort on behalf of responsible use of animals in research.

At a series of workshops, the four checkpoints in research review were dissected: the individual scientist, the institution, the funding agency, and the editorial review that precedes publication. Recommendations were then made for improving animal welfare, at each point in the process. But the consensus was that final responsibility for proper treatment of animals must remain with the individual investigator, regardless of what safeguards are currently in force.

Participants felt that, although the Animal Welfare Act and the NIH guidelines were helpful in maintaining high standards, better monitoring was needed. It was therefore recommended that NIH include an expert in animal care as a member of selected site visit teams and deny funding from programs that fail to comply with NIH guidelines for animal research.

The workshop on funding agency responsibility compiled a list of questions that a peer review committee should address:

1. Is the experiment worth doing?
2. Is the ethical cost to the animals commensurate with the scientific significance of the expected results?
3. Are the animals really required to test a proposed hypothesis and if so,

what are the suitable species and numbers?

The full proceedings of the conference will soon be available from Scientists' Center for Animal Welfare, 11325 Seven Locks Road, Suite 221, Potomac, MD 20854.

### **Man's Management of Domestic Species**

Eric Lamming, of the Nottingham University School of Agriculture, spoke at a meeting of the Central Veterinary Society on February 18 in Darking, U.K. He examined the spectrum of problems that have resulted from the badly misguided notion that we can convert seasonally breeding animals to non-seasonal patterns of reproduction. As a prime example, he cited the thoroughbred horse. These animals breed naturally on the longest day of the year, but humans try to make them begin breeding in February. As a result, conception rates average about 67 percent, as compared with 95 percent for natural pony herds.

Similar problems occur in dairy cows. In tests for conception rates done by comparing progesterone profiles at 90 days after delivery, only 53.7 percent of the cows studied had significant levels of the hormone in their milk, whereas wild animals showed much higher percentages, and correspondingly higher conception rates. For example, red deer in Scotland had conception rates of close to 95 percent and a calving period of only 8 days.

Commonly used procedures for breeding of domestic animals also interfere with natural behavior, again resulting in fewer pregnancies. In natural conditions, the thoroughbred horse is a harem owner, and seldom interacts with females except at mating. This aspect of wild-type behavior is useful to the animals for sorting males from females. Also, endocrine signals play an important role in initiating mating. But under the conditions common to most farms, total segregation of males and females

inhibits these hormonal signals and, consequently, the animals' breeding. Dr. Lamming suggested that the more frequent use of field mating could help avoid this problem.

Other breeding difficulties in horses that arise from man's interference include the selection of older strains that have been shown to exhibit declining fertility. In particular, keeping mares from breeding until they are older in order to select for high growth rates means more ovulations without pregnancy, which in turn causes increased levels of zonal antibody and higher infertility rates. In cattle, an additional factor in low fertility is the tendency to breed repeatedly from females that are already of low fertility.

Professor Lamming noted that one problem in the manipulation of fertility was that the study of applied endocrinology is still in its infancy, and that many new investigations need to be done, for instance, on the factors that cause irregular or nonexistent cycles of ovulation in cows (in one study, more than 38 percent of all cows had abnormal ovarian cycles).

Both horses and pigs suffered badly, in terms of fertility, Professor Lamming concluded, if the sexes were segregated from one another. This practice, he asserted, was an easily avoidable instance of humans' mismanagement of their domesticated animals.

### **Non-animal Alternatives - Tissue Culture Methods**

The National Capital Area Branch of the Tissue Culture Association devoted its 1982 Spring meeting to the topic of "in vitro alternatives to the use of animals in research and testing." As is common in such meetings, some speakers addressed the concept of alternatives more thoroughly than others - the two most interesting talks were given by Dr. Joseph Leighton (Medical College of Pennsylvania) and Dr. Phillip Noguchi (Food and Drug Administration).

Dr. Leighton discussed the use of the chick chorioallantoic membrane (CAM) as a possible system for irritancy testing as well as in cancer research. Some of the advantages of CAM include the facts that

- It has no demonstrable nerve fibers for pain sensation
- Eggs from healthy flocks are almost entirely germ-free, and therefore the effects of extraneous agents can be greatly reduced
- The costs involved are very low - fertile eggs currently sell at three for \$1.

CAM has been used for many years to study viruses and bacteria, but its potential for evaluating the biological effects of chemicals has not yet been explored. Leighton noted that the new Zwillung technique for opening up a window in the egg shell avoids the problem of mechanical irritation of the CAM caused by shell fragments. This procedure should make it easier to introduce the CAM system into routine testing procedures.

His preliminary results with strong acid (hydrochloric acid) and alkali (sodium hydroxide) indicate that there is a quantitatively significant decrease in the size and severity of the lesion as one reduces the concentration of the agent. (This is true of tests on the 14-day embryonic CAM, but results from the 9- to 10-day CAM were very variable and did not show any significant trends.) Unfortunately, he had not yet examined any milder irritants, although he did suggest a variety of parameters, such as ectodermal thickening, which could possibly be employed to quantify the response. Finally, he argued that, if he could develop a satisfactory test system, the cost advantages of fertilized eggs (\$0.33 each) versus rabbits (\$25 each) should be a major inducement to industry to switch to the new test system.

Dr. Noguchi described results from his chick embryonic skin (CES) system for determining the tumorigenicity of cells. The classic test for this property involves injecting a nude or immunoincompetent mouse with a defined num-

ber of the test cells. If a tumor forms, then the cells are tumorigenic. However, the animal test has many disadvantages (e.g., false-negative results, variable sensitivity, and the necessity of long-term care for the test animals). The CES test involves inoculation of the suspect cells onto a piece of CES, followed by histologic examination 3 days later. Dr. Noguchi presented results indicating that the CES system was quick, sensitive, and predictive of tumorigenicity. In fact, it appeared to be more sensitive than the nude mouse system and also holds promise for allowing us to predict the metastatic potential of a tumor. So far, however, relatively few groups have switched to this system, although it was first described in *Science* (199:980-983) 4 years ago.

### **More on Animal Experiments - British Association**

On January 26, a symposium held in London by the British Association for the Advancement of Science also discussed the emotive and complex issues associated with animal experimentation. Many of the usual controversies, especially about how best to concoct an enforceable legal definition for "pain" arose, but several new aspects of the problem also came to light.

Brian Gunn, of the National Anti-vivisection Society, voiced concern about administration of the pain clause, because there was no way to measure pain, and the terms "severe" and "enduring" were being interpreted differently by each license holder.

Dr. W. Parrish of Unilever spoke for industry; he stressed the moral and legal obligations of producers to protect consumers from potential adverse reactions to new products. He also defended the utility of the LOSO test- he asserted that it was an essential element in quantifying possible toxicity. He stated that the Draize test seldom caused more than mild irritation in the eyes of the test

rabbits and that, at the present time, no non-animal method tested had proved adequate for industry's needs. He acknowledged that there were variances in response between humans and animals, but insisted that experience had demonstrated which tests could provide good correlation between effects in different species. He did admit that, slowly, more *in vitro* methods were being introduced as replacements for animal testing.

Dr. Judith Hampson spoke on the moral aspects of experimenting on animals. She detailed several particular instances of dubious experiments, in which pain appears to have been ignored. For example, in one study monkeys had been poisoned with paraquat to examine renal failure. However, this condition only appears in about 24 humans a year, so the suffering of the animals hardly seemed justified.

Professor C.T. Drollery countered Dr. Hampson's contentions. He stated that he himself had seen about 12 cases of fatal paraquat poisoning. He also asserted that toxicity testing in animals was vital, although he thought that an LD10 or LD15 might provide adequate data. Test animals, he said, had in his experience received excellent care and suffered less than humans.

Tom Dalyell, MP for West Lotham and Opposition spokesperson for science, observed that, in Parliament, "you are either for or against animals." He doubted that any new legislation on animal experimentation would be introduced before the next general election. The public's feelings about the welfare of dogs and cats, he noted, were far different from their emotions about rats. Proposed new safety regulations, according to Dalyell, could mean the lives of 25 million experimental animals.

Mr. Gunn concluded the session with the observation that, in the 105 years since the Cruelty to Animals Act had been in force, no one had ever been convicted of an offense. He speculated that this dearth might be due to the fact that Home Office inspectors are, in the main, former vivisectionists themselves.

## **FORTHCOMING MEETINGS**

**National Zoological Park:** 6th Reptile Symposium on Captive Propagation and Husbandry, July 28-31, Washington, DC. Contact Bela Demetar, Department of Herpetology, National Zoological Park, Washington, DC 20008.

**The University of Georgia:** Conference on Business and the Environment, August 4-8, 1982, Athens, GA. Presentations will include: "From Biology to Business: Principles Are Modified, in Practice, by Facts"; "Land Reclamation: Regulatory Compliance and Corporate Responsibility"; and "Ethical Effects of the Adversary System in Environmental Affairs." Contact Business and the Environment, Georgia Center for Continuing Education, the University of Georgia, Athens, GA 30602.

**Gordon Research Conferences:** Symposium on Toxicology and Safety Evaluations, August 6-8, 1982, Kimball Union Academy, Meriden, NH. Papers presented will include "In Vitro Methods of Characterizing Various Pathways in Carcinogenesis"; "The Changing Roles of Pathology in Toxicology and Safety Evaluations"; and "Behavioral Assessments." Contact Dr. Alexander M. Cruickshank, Director, Gordon Research Conferences, Pastore Chemical Laboratory, University of Rhode Island, Kingston, RI 02881.

**International Primatological Society: IXth Congress,** August 8-13, 1982, Atlanta, GA. The annual meeting of the American Society of Primatologists will be held jointly with the Congress. Contact Dr. Frederick A. King, Director, Yerkes Regional Primate Research Center, Emory University, Atlanta, GA 30322.

**American Association for Laboratory Animal Science:** 33rd Annual Session, October 3-8, 1982, Washington, DC. Contact Joseph J. Garvey, American Association for Laboratory Animal Science, 210 North Hammes, Suite 205, Joliet, IL 60435.

**The American Forestry Association:** 2nd Annual National Urban Forestry Conference, October 10-14, Cincinnati Convention Center and Stouffer's Towers Hotel, Cincinnati, OH. Of interest to those concerned about the interaction between animals and the environment will be sessions on urban forestry; recreation and wildlife: the multiple uses of community forestry; environmental education in interpretation; and integrated pest control. Contact Henry De Bruin, American Forestry Association, 1319 18th Street, NW, Washington, DC 20036.

**American Society for Testing and Materials:** Symposium on Pesticide Formulation and Application Systems, October 12-14, 1982, Drawbridge Motor Inn, Fort Mitchell, KY. Contact Don Viall, (202) 299-5546.

**Shipping World & Shipbuilder and Aniservices International:** "Anitrans '82," October 21-22, 1982, London. Various aspects of animal transport will be covered, including the extent of the trade, financial implications, international laws and regulations, transport of animals to and from the ship, experiences of an animal carrier, insurance, the World Wildlife Federation's point of view, the animals' welfare, case studies, ship design and operation, animal condition monitoring, and loading/unloading and port practice. Contact G.B. Taylor, 6 Rosedale Close, North Hykeham, Lincoln, U.K.

**Alternatives in Toxicology:** An international meeting which will include extensive discussion of the above topic will be held at the Royal Society in London, November 1-3, 1982. It is suggested that those who are interested contact FRAME, 56 The Poultry, Bank Place, St. Peter's Gate, Nottingham, NG1 2JR, U.K.

**International Council for Laboratory Animal Science:** "The Contribution of Laboratory Animals to the Welfare of Man and Animals: Past, Present, and Future," July 31-August 5, 1983, Vancouver, BC,

Canada. (Please note that the conference will be held in 1983, not 1982, as was erroneously printed in the last issue of the *Journal*.) Topics covered will include: a geographic overview of laboratory animal science; the animal model in gerontological studies; the development, status, and future of international quality in laboratory animals (standardization); and new and future trends in biotechnology. Contact Mr. D. Joi, ICLAS/ CALAS 1983, Box 286, 810 West Broadway, Vancouver, BC, Canada V5Z 1J8.

**Australian Society for the Study of Animal Behavior and the Australian Academy of Sciences:** 18th International Ethological Conference, August 29-September 6, 1983, Brisbane, Australia. Potential participants are being given early notification for this conference, since this is the first time an International Ethological Conference has been open to all behavioral scientists, and therefore no channels of communication have been established to reach all those who might be interested in attending. The content of the plenary sessions has not yet been determined, and the committee sponsoring the conference would welcome any suggestions on possible session topics. Plenary sessions will be strongly didactic, but will also provide a general overview of recent developments and highlight any problems or controversies. Contact Conference Secretary, Animal Behavior Unit, University of Queensland, St. Lucia, Australia 4067.

## ANNOUNCEMENTS

### Animal Rights Bibliography

Professor Charles R. Magel, Director of the Society for Animal Rights, has compiled a comprehensive bibliography to the English-language books and articles on the subject of animal rights. The volume, which includes several thousand entries, is entitled *A Bibliography on Animal Rights and Related Matters* and is published by the University Press of America, Washington, DC. The price is \$28.50.

### Archive on Animal liberation

In a related effort, the Animal Liberation Collective of Canada has begun to assemble a wide-ranging collection of materials that will comprise the core of a clearinghouse for information on animal rights issues. The staff of the collective has been gathering materials for about 4 years, and is now starting to organize and categorize it. Types of materials available include:

- Government papers and statistics
- News clippings
- Organization literature
- Material representing opposing viewpoints.

At a later date, slides will also be added to the collection. The Collective is also searching for any new contributions to its collection that people feel are of significance - these contributions should be originals or clear copies, with source and date noted on the item.

The data is organized into the following categories:

- Animals as human food and vegetarianism
- Laboratory animals and replacement techniques
- Trapping and commercial hunting, sport hunting and fishing
- Animals in entertainment (zoos, rodeos, circuses, dog racing, horse racing, animal fights, etc.)
- The pet industry
- Animals and ecology (topics such as pest animals and endangered species).

The Collective asks that all requests for information be as specific as possible. For further information, contact Animal Liberation Collective, C.P.148, Durham Sud, Quebec, Canada JOH 2CO.

### New Publication on Non-animal Testing Procedures

Volume 1, Number 1, of *In Touch... Alternative Methods in Toxicology* came off the presses in May of this year. It will be published quarterly, in a four-page

newsletter format. An editorial note on the first page comments that the purpose of the publication is to enhance communication within the scientific community on the single topic of alternative methods for toxicological testing, and to act as a "catalyst to effect progress and innovative change in this field."

This first issue features an overview of new non-animal methods for assessing toxic effects - including an analysis of the inherent limitations of the Draize test - an update on legislation related to alternatives, and a brief article on the importance of incorporating courses on non-animal methods in the curricula of future research scientists.

Information about the newsletter can be obtained from Princeton Scientific Publishers, Inc., P.O. Box 3159, Princeton, NJ 08540.

### **Veterinarians for Animal Rights Launches Publication**

The Association of Veterinarians for Animal Rights, whose formation was announced in the last issue of the *Journal*, has published its first issue of *Animal Rights - News and Views*, a compilation of reprinted letters and articles on animal problems that will be of particular interest to the veterinarian. Included are letters on ear cropping, an article on legal regulation of dogs in the Soviet Union, and a list of courses on ethics and animals. To find out more, write to Neil Wolff, D.V.M., Association of Veterinarians for Animal Rights, 69-40 229th Street, Bayside, NY 11364.

### **Millenium Guild Offers Half a Million for New Non-animal Test Methods**

Pegeen Fitzgerald, president of the Millenium Guild, announced on April 13 that her organization will offer two \$250,000 incentive awards for innovative non-animal testing techniques. One of the awards will be given for a workable alternative to the Draize or LD50 tests. The other prize will be offered to

promote the development of techniques that will facilitate measurable reductions in the numbers of animals used in toxicity testing.

The funding for these awards has come from a multitude of concerned individuals (rather than large corporations) who, in the words of Ms. Fitzgerald, "insist on crash programs," and hope that the impetus of large cash rewards will provide sufficient incentive to motivate more researchers to discover and utilize testing methods that do not involve pain in animals.

### **Farm Animal Humane Society Is Announced**

The Farm Animal Care Trust (FACT) has recently been formed in Chicago, and represents the first humane society to focus its attention solely on animal production practices. The group will be directed by Robert A. Brown, who was formerly the head of the Anti-Cruelty Society of Chicago.

Mr. Brown has said that the group will be especially concerned with intensive confinement systems. One of its first activities will be the publication of *Fact Sheet*, which will be distributed free to humane societies across the U.S. Another program will be devoted to field research, which will encompass investigations of both North American and European developments. This information will be used, Brown stated, to press for changes in current production methods.

### **British Veterinarians Oppose Intensive Farming**

A meeting of veterinary surgeons was held at Reading University to discuss concerns about the trend toward the increasingly intensive conditions in animal husbandry, largely a result of current government policies, combined with economic and consumer pressures.

The group felt that there was a real need for a forum where the issue of intensive farming could be discussed without sentimentality, on the one hand, or



pressure from agribusiness, on the other. The meeting also noted that it was unfortunate that the government had rejected the recommendations of the Parliamentary Select Committee on Animal Welfare, intended to curb the worst abuses of intensive farming.

Therefore, to provide an opportunity for open dialogue, and to press the government to reconsider accepting the Select Committee's recommendations, it was decided that an Association of Veterinarians Concerned About Animal Husbandry should be formed. The group is inviting all interested colleagues to join them in their efforts. For more information, contact Association of Veterinarians Concerned About Animal Husbandry, 8 Hamilton Close, South Mimms, Potters Bar, Herts EN6 3QD, U.K.

was found that animals tended to be only transient visitors, brought in by residents or humane societies, whereas in supervised living facilities, more resident animal programs are common.

The center offered a university course during the Spring of 1982 entitled "Perspectives: Interrelationships of People and Animals in Society Today," which explored issues such as problems engendered by the keeping of pets in urban environments, as well as more general concerns such as the meaning and relevance of the "animal rights" concept. For more information about the center's activities, contact the Center to Study Human-Animal Relationships and Environments, 1-117 Health Sciences Unit, 515 Delaware Street, S.E., University of Minnesota, Minneapolis, MN 55455.

### **Human-Animal Relationships to Be Explored at University of Minnesota Center**

CENSHARE, a joint venture of the College of Veterinary Medicine and the School of Public Health of the University of Minnesota, has been serving since 1981 as a focus for multidisciplinary research, education, and service concerning human-animal relationships and their environments.

A recent project concerned the practical ramifications of a law passed in 1979 by the Minnesota state legislature that allows nursing homes and other health care facilities to keep pets on the premises, subject to reasonable rules as to the care, type, and maintenance of the animals. However, as so often happens with legislation intended to establish standards for use of animals, the language of the statute gave rise to considerable confusion and ambiguity.

CENSHARE therefore conducted a survey of nursing homes and similar establishments to find out more about how pets were being utilized in these facilities. Of the 762 respondents, nearly 50 percent reported that they were currently using animals. In nursing homes, it