



Guidelines for Appropriate Treatment of Laboratory Animals

Toru Suzuki*

Department of Zoology and Wildlife, Nagoya University, Nagoya, Japan

DESCRIPTION

Growing usage of animals in the research projects has drawn more attention to their welfare and ethics surrounding this practice. Dissemination of information about the existing ethical consideration and alternatives in animal experiments has two important functions; first, it increases the researcher's awareness of the possible methods of using animals in the experiment, and second, to ensure that potential users are aware of the established alternatives. For example, legislations enacted in many countries during the 1980s state that laboratory animal applications should be reduced, refined and replaced wherever possible according to principles of the 3Rs. Thus, scientists around the world tried to apply the 3Rs in their biomedical researches regarding welfare of the laboratory animals.

Increasingly use of animals in the scientific procedures has drawn more attention to the primary ethics of these valuable creatures. There are international guidelines for use and care of animals in scientific procedures which are divided into three parts. The first part explains all principles which promote the humane and responsible care and use of animals for research and scientific goals. The second part includes the guiding principles for using and care of animals for research goals and explains in detail the operational aspects pertaining to the Institutional Animal Care and Use Committee (IACUC). The third part describes the training activities and requirements for users of animals and animal facilities personnel. The principle of 3R's that should be considered in treating of laboratory animals includes:

- i. The mathematical models, in-vitro biological systems, computer simulation can be used as a replacement instead of animals before embarking on any procedure involving use of animals. This is called "Replacement".
- ii. The number of animals used can be reduced for experimentation to obtain scientifically valid results. The projects involving the use of animals should not be repeated to obtain the results as it can

cause pain to the animals. This is called "Reduction".

iii. The animals chosen for conducting scientific experiments should be of appropriate species and quality. Their specific biological properties including genetic constitution, behaviour, nutritional and general health status should be taken into consideration. This is called "Refinement".

The animal housing should be accurately designed, constructed, equipped and maintained and should be as per the acceptable standards of animal welfare. Adequate veterinary care should be taken such as using the appropriate procedures to control diseases, diagnose and treat diseases, evaluate the animal's health and well-being and other tasks related to the care and use of animals must be performed only by the attending veterinarian.

The Institutional Animal Care and Use Committees must assess the research process involving the animals before granting approvals. They should obtain a written assurance from researchers that the activities do not unnecessarily duplicate previous experiments. The personnel or the staff who are conducting the procedures on animals should be well qualified and well trained.

The researchers who are conducting experiments on animals must be familiar with the normal behavioral patterns of the animal species chosen. The repeated use of animals in the experiments should be prohibited. The time taken for the experiments involving animals should be minimized. The appropriate euthanasia method has to be followed. The surgical procedures on animals should be carried out using local or general anesthesia. Post-operative care should be taken.

Millions of animals are used every year in many extremely painful and distressing scientific procedures. Legislation of animal experimentation in modern societies is based on the supposition that this is ethically acceptable when certain more-or less defined formal (e.g. logistical, technical) demands and ethical principles are met.

Correspondence to: Suzuki T, Department of Zoology and Wildlife, Nagoya University, Nagoya, Japan, E-mail: torusuzi32@mi.jp

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