

## Policies on the Use of Animals and Humans in Neuroscience Research

### Introduction

The Society for Neuroscience, as a professional society for basic and clinical researchers in neuroscience, endorses and supports the appropriate and responsible use of animals as experimental subjects. Knowledge generated by neuroscience research on animals has led to important advances in the understanding of diseases and disorders that affect the nervous system and in the development of better treatments that reduce suffering in humans and animals. This knowledge also makes a critical contribution to our understanding of ourselves, the complexities of our brains and what makes us human. Continued progress in understanding how the brain works and further advances in treating and curing disorders of the nervous system require investigation of complex functions at all levels in the living nervous system. Because no adequate alternatives exist, much of this research must be done on animal subjects. The Society takes the position that neuroscientists have an obligation to contribute to this progress through responsible and humane research on animals.

Several functions of the Society are related to the use of animals in research. A number of these involve decisions about research conducted by members of the Society, including the scheduling of scientific presentations at the Annual Meeting, the review and publication of original research papers in *The Journal of Neuroscience* and the defense of members whose ethical use of animals in research is questioned by animal rights activists. The Society's support for the research of individual members defines a relationship between the Society and its members. The purpose of this document is to outline the policy that guides that relationship. Compliance with the following policy will be an important factor in determining the suitability of research for presentation at the Annual Meeting or for publication in *The Journal of Neuroscience* and in situations where the Society is asked to provide public and active support for a member whose use of animals in research has been questioned.

The responsibility for implementing the policy in each of these areas rests with the relevant administrative body (Program Committee, Publications Committee, Editorial Board and Committee on Animals in Research, respectively) in consultation with Council.

### Policy on the Use of Animals in Neuroscience Research

Neuroscience research uses complicated, often invasive methods, each of which is associated with different problems, risks and specific technical considerations. An experimental method that would be deemed inappropriate for one kind of research may be the method of choice for another kind of research. It is, therefore, impossible for the Society to define specific policies and procedures for the care and use of all research animals and for the design and conduct of every neuroscience experiment.

The U.S. Public Health Service's Policy on Humane Care and Use of Laboratory Animals (PHS policy) and the *Guide for the Care and Use of Laboratory Animals* (the Guide) describe general policies and procedures designed to ensure the humane and appropriate use of live vertebrate animals in all forms of biomedical research. The Society finds the policies and procedures set forth in the PHS policy and the Guide to be both necessary and sufficient to ensure a high standard of animal care and use and adopts them as its official Policy on the Use of Animals in Neuroscience Research (Society policy). All Society members are expected to conduct their animal research in compliance with this policy. Members are required to verify that they have done so when submitting abstracts for presentation at the Annual Meeting or manuscripts for publication in *The Journal of Neuroscience*. Adherence to the Society policy is also an important step toward receiving help from the Society in responding to questions about a member's use of animals in research. A complete description on what to do if your research is questioned is included in this handbook. Also, a complete description of SfN's policy and procedures for defending members whose research comes under attack can be obtained by contacting the Society's Central Office.

## Local Committee Review

An important element of the Society's policy is the establishment of a local committee that is charged with reviewing and approving all proposed animal care and use procedures. In addition to scientists experienced in research involving animals and a veterinarian, the membership of this local committee should include a person who is not affiliated with the member's institution in any other way. In reviewing a proposed use of animals, the committee should evaluate the adequacy of institutional policies, animal husbandry, veterinary care and the physical plant. The committee should pay specific attention to proposed procedures for animal procurement, quarantine and stabilization, separation by species, disease diagnosis and treatment, anesthesia and analgesia, surgery and postsurgical care, and euthanasia. The review committee also should ensure that procedures involving live vertebrate animals are designed and performed with due consideration of their relevance to human or animal health, the advancement of knowledge or the good of society. This review and approval of a member's use of live vertebrate animals in research by a local committee is an essential component of the Society policy. For assistance in developing appropriate animal care and use procedures and establishing a local review committee, call the Society and consult the documents recommended at the end of this section.

## Other Laws, Regulations and Policies

In addition to complying with the policy described above, Society members who reside in North America must also adhere to all relevant national, state or local laws and/or regulations that govern the use of animals in neuroscience research. Thus, U.S. members must observe the U.S. Animal Welfare Act (as amended in 1985) and its implementing regulations from the U.S. Department of Agriculture. Canadian members must abide by the January 1993 Guide to the Care and Use of Experimental Animals. Members in Mexico must comply with the "Seventh Title of the Regulations of the General Law of Health Regarding Health Research." In addition to complying with the laws and regulations of their home countries, foreign members of the Society should adhere to the official Society policy outlined here.

## Recommended References

Canadian Council on Animal Care. Guide to the Care and Use of Experimental Animals Vol. 1. 2d ed. Ontario, Canada: CCAC, 1993. WWW:<http://www.ccac.ca/>

Foundation for Biomedical Research. The Biomedical Investigator's Handbook for Researchers Using Animal Models. Washington, D.C.: FBR, 1987. WWW:<http://www.fbresearch.org/>

Laws and Codes of Mexico. "Seventh Title of the Regulations of the General Law of Health Regarding Health Research." 12th updated ed. Porrua Collection, 430-31. Mexico: Porrua Publishers, 1995.

National Academy of Sciences. Guide for the Care and Use of Laboratory Animals, 7th ed. Washington, D.C.: National Research Council, Institute for Laboratory Animal Research, NAS, 1996. WWW:<http://www.nap.edu/catalog/5140.html>

National Institutes of Health. OPRR Public Health Service Policy on Humane Care and Use of Laboratory Animals. Rockville, MD: NIH/Office for Protection from Research Risks, 1996. WWW:<http://grants.nih.gov/grants/olaw/olaw.htm>

National Institutes of Health. Preparation and Maintenance of Higher Mammals During Neuroscience Experiments. Report of a National Institutes of Health Workshop. NIH Publication No. 94-3207. Bethesda, MD: NIH/National Eye Institute, 1994. WWW:<http://www.nei.nih.gov/>

Society for Neuroscience. Handbook for the Use of Animals in Neuroscience Research. Washington, D.C.: SfN, 1991.

Visual Neuroscience. 1 (4): 421-6. "Anesthesia and Paralysis in Experimental Animals." Report of a Workshop held in Bethesda, Md., Oct. 27, 1984. Organized by the Division of Research Grants, National Institutes of Health. England: VN, 1984. WWW:<http://www.nih.gov/>

## General Principles

The following principles, based largely on the PHS Policy on Humane Care and Use of Laboratory Animals, are a useful guide to designing and implementing experimental procedures involving laboratory animals.

- Animals selected for a procedure should be of an appropriate species and quality and the minimum number required to obtain valid results.
- Proper use of animals, including the avoidance or minimization of discomfort, distress and pain, is imperative.
- Procedures with animals that may cause more than momentary or slight pain or distress should be performed with appropriate sedation, analgesia or anesthesia. Surgical or other painful procedures should not be performed on unanesthetized animals paralyzed by chemical agents.
- Postoperative care of animals should minimize discomfort and pain and, in any case, should be equivalent to accepted practices in schools of veterinary medicine.
- Animals that would otherwise suffer severe or chronic pain or distress that cannot be relieved should be painlessly killed at the end of the procedure or, if appropriate, during the procedure. If the study requires the death of the animal, the animal must be killed in a humane manner.
- Living conditions should be appropriate for the species and contribute to the animals' well-being. Normally, the housing, feeding and care of all animals used for biomedical purposes must be directed by a veterinarian or other scientist trained and experienced in the proper care, handling and use of the species being maintained or studied. In any case, appropriate veterinary care should be provided.
- Exceptions to these principles require careful consideration and should only be made by an appropriate review group such as an institutional animal care and use committee.

## Policy on the Use of Human Subjects in Neuroscience Research

Experimental procedures involving human subjects must have been conducted in conformance with the policies and principles contained in the Federal Policy for the Protection of Human Subjects (U.S. Office of Science and Technology Policy) and in the Declaration of Helsinki. When publishing a paper in *The Journal of Neuroscience* or submitting an abstract for presentation at the Annual Meeting, authors must sign a statement of compliance with this policy.

## Recommended References

"Declaration of Helsinki." Adopted by 18th World Medical Assembly, Helsinki, 1964; revised by 29th World Medical Assembly, Tokyo, 1975; Venice, 1983; and Hong Kong, 1989. WWW:[http://www.wma.net/e/policy/17-c\\_e.html](http://www.wma.net/e/policy/17-c_e.html)

"Federal Policy for the Protection of Human Subjects: Notes and Rules." Federal Register. (June 18, 1991) 56: 28001-32. WWW:<http://ohrp.osophs.dhhs.gov/humansubjects/guidance/45cfr46.htm>

Varga, Andrew C., Ed. The Main Issue in Bioethics Revised Edition. New York: Paulist Press, 1984. WWW:<http://www.paulistpress.com/>