

# **SCHOOL OF BIOLOGICAL SCIENCES**

## **CODE OF ETHICAL CONDUCT FOR THE USE OF LIVE ANIMALS FOR TEACHING AND RESEARCH**

### **1.Preamble**

The use of animals for teaching and research within the School of Biological Sciences by staff and students shall be controlled by the Animal Ethics Committee (AEC). No member of staff or any student shall use animals for teaching or research without the prior approval of this group.

The AEC shall review written applications for the use of animals for teaching and research and issue approval for their use only if it is satisfied that their use is ethical and the welfare of animals is protected. The following code of ethical conduct, and all approval for use will depend on the AEG being satisfied that the proposed use of animals will comply with this code.

### **2.Composition of the Animal Ethics Group**

The AEC shall comprise the Head (Chair) and three members of the School, one being the CT or ST. A secretary will be nominated who will receive applications to be screened by the committee. A member of the academic staff capable of evaluating proposals involving animal manipulation to act as executive officer. At least one and preferably two independent member(s), not employed at USP will also be nominated and asked to attend meetings.

### **3.Applicability of the code of ethical conduct**

#### **3. (a) Species**

Approval for use of animals must be sought with respect to the following species:

- 1) all mammals (including any marine mammal)
- 2) all birds
- 3) all other vertebrate animals ( including reptiles, amphibians, and fish)
- 4) any octopus, squid, crab, or crayfish (including freshwater crayfish)
- 6) The above species include any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development, but not including human beings or other prenatal, pre-hatched, larval, or other such developmental stages of species other than mammals, birds, and reptiles.

### **3. (b) Manipulations requiring approval**

Approval shall be required for all procedures and techniques involving animals, including the sacrifice of animals for dissection or for use of their tissues. In particular, approval for use of the above species must be sought if the animal is subject to one of the following:

Any reference with its normal physiological, behavioural, or anatomical integrity by

- i) Deliberately exposing it to any parasite, microorganism (including viral), drug, chemical, biological product, radiation, electrical stimulation or environmental condition.
- ii) Subjecting it to enforced activity, unusual restraint, abnormal nutrition, or surgical intervention.
- iii) Depriving it of usual husbandry/welfare considerations.

Any therapy or prophylaxis necessary or desirable for the welfare of any animal will not require approval.

## **4. Method of application and statutory responsibility**

### **4. (a) Method of application**

Approval shall be sought by application to the AEC on appropriate application forms. After School approval, all applications will be forwarded to the Ministry of Agriculture, Sugar and Land Resettlement – Animal Health and Production Division for clearance and SPCA. Ministry approval must be granted before any procedures may commence. If the School is advised that Ministry approval is not needed for a particular species, then approval may be given at School level. Approval shall be given only after comment from for a period of 3 years or any lesser period the AEC shall determine. Approval for projects related to teaching will be given on a specific project basis only. The AEC may require inspection of the facilities, procedures and personnel before giving approval. Any significant modification to the protocol or change in personnel must be subject to approval from the AEC.

#### **4. (b) Compliance**

i) The AEC or its appointed representative shall have the right at any time to inspect the facilities in which the animals are housed, the procedures used and the condition of the animals; and where there is concern they shall be required to investigate and to take appropriate action. All members of the School or other persons may bring to the attention of the AEC any concern regarding compliance with this code.

ii) The AEC shall be responsible for ensuring compliance with the code of practice and can require a School member through the HoS to either modify (as directed by the committee) or to stop their teaching or research programme involving live animal and/or tissue usage.

#### **4(c) Reporting or animal use**

All use of animals approved by the AEC must maintain the records for their use and make them available as required. Information recorded should include:

- (a) The type of animal manipulated or used
- (b) The number of animals of each species manipulated or used
- (c) The source of supply of each animal used
- (d) The status of each animal used.
- (e) The purpose for which each animal was used.
- (f) The previous history of use of the animal
- (g) The grade or degree of manipulation of the animal.
- (h) The fate of each animal used and disposal procedures.

#### **4. (d) Responsibility**

The principal investigator or course organizer must accept primary responsibility for work undertaken including the selection of an appropriate animal species, the choice of the number of subjects, the nature of the procedures and all matters related to the continuing welfare of the animals and their ultimate disposal according to the principles outlined in this ethical code.

The committee requires short reports on all research protocols and reserves the right not to approve new protocols in the event of non-compliance.

## **5. Code of ethical conduct**

In considering whether to approve an application for animal use AEC must be satisfied with respect to the following, each of which the applicant is specifically required to address in making application to the AEC.

- i) The application shall state why the proposed use of animals is desirable and whether there are any practical alternative approaches which avoid the use of animals and yet achieve the identical goal.
- ii) The application shall state whether the species is appropriate on scientific, technical, humanitarian and educational grounds for the procedures proposed, to allow extension of the body of knowledge in the case of a teaching proposal. The AEC will not approve use of an endangered or threatened species unless the findings are expected to assist the management and conservation of that species.
- iii)
  - (a) In the case of a research protocol, the application shall include an assurance that the number of animals used will be minimized to ensure that no more animals are used than are necessary to ensure unequivocal interpretation of the findings. An indication of the number likely to be used shall be given in the application. The AEC must be satisfied that the experimental design is adequate; a detailed protocol must be provided and adhered to during the study.
  - (b) In the case of a teaching protocol an assurance must be given that the number of animals to be used is the minimum compatible with the educational objective.
- iv) In the case of a research protocol there must be good reason to believe that the findings will add to the scientific understanding of biological functions and behaviour, or will extend the body of knowledge aimed at improvement in the health and welfare of humans or animals or the productivity of animals.

In the case of a research protocol the investigator shall state whether the protocol is a duplication of previous work. Duplication shall in general only be considered ethical if evidence is provided that the original study requires scientific validation, or if the study was flawed or inadequate such that the conclusions were invalid.

- v) Teaching is a prime function of the School of Biological Sciences. With respect to applications for teaching purposes, in general, live animals may only be used where there is no alternative satisfactory method to achieve an appropriate educational objective (see I above).

Graduate education is an essential role of the University and applications for the use of animals for research towards a dissertation or thesis shall be made by the

supervisor and shall be considered with respect to both educational and research objectives.

- vi) In general the AEC will not approve multiple procedures on a single animal but recognizes that in certain experimental or teaching exercises multiple procedures may be necessary. Excessive intervention (especially if sufficient recovery time is not considered) shall be grounds for not approving an application.
- vii) The application shall state whether the animal has been lawfully acquired and whether the source of animal is appropriate for the proposed use. Where possible animals should be used that have been specifically bred for research and teaching. Experiment must not be performed on injured, sick or ill animals.
- viii) The application shall provide details of where and how the animals are to be housed, who is to care for them, who is to perform any manipulations and who has primary responsibility for their care and management (feeding, watering, cleaning and disposal of waste, etc.) and for the experiment/teaching. The AEC must be satisfied that the facilities are adequate and meet OHS guidelines to allow for the general health and welfare of the animals at all times, that the personnel have the appropriate training and expertise to care for the animals and to perform the manipulations.
- ix) The application shall state the proposed fate of the animal at the end of the experiment/teaching. If it is to be destroyed either as part of the manipulation or subsequently, the means of euthanasia and the personnel involved must be approved by the AEC. The means of euthanasia and disposal must comply with the methods considered by the AEC to be humane and generally in accord with standard practice.
- x) The applicant shall provide details and satisfy the AEC that the animals will be inspected at frequent intervals by persons with sufficient expertise to recognize any animal with ill health or in distress. Appropriate means must be available to maintain pain and distress at a minimum, within reasonable levels and in the case of post-operative care consistent with the accepted practice of veterinary surgeons. Facilities must be available, provision made in the protocol and authority given to those in immediate care of the animal to allow for immediate humane destruction of animals if pain and distress cannot be held within reasonable levels.
- xi) The AEC must be satisfied that during operative procedures, appropriate anaesthetics are used to eliminate sensitivity to pain. Where recovery from anaesthesia is not intended the animal must be killed in a humane way at the conclusion of the experiment.
- xii) The AEC will not approve the use of a neuromuscular blocking agent without concurrent use of an anaesthetic except in an exceptional circumstance.