

INSTRUCTIONS FOR COMPLETING THE ANIMAL CARE AND USE PROTOCOL (ACUP)

A. General Instructions

In order to facilitate the submission and approval of your animal research protocol, it will be helpful for you to understand the objectives, viewpoint, and requirements of the Animal Welfare Committee (IACUC). Prior to submitting proposals for Committee approval, new investigators need to receive an orientation about the ethical issues of animal research and IACUC operating procedures from the IACUC Chairperson. In addition, an orientation to the Central Research Facilities (CRF) and the Animal Care and Use Program provided by the Director of the CRF is required prior to the approval/implementation of animal research protocols. You may arrange for these orientations by contacting the Director of the CRF (444-5788).

The Animal Welfare Committee is committed to the continued use of animals in research within the constraints of humane treatment. Most investigators show similar concern for the well-being of animals. However, evidence of this concern is often not documented in the submitted protocols. In order to justify approval of procedures the committee must have adequate written information regarding the steps you will take to assure humane treatment of your animals.

- 1) You must justify the use and number of any animals to be used.
- 2) State clearly any potential discomfort you expect the animals to experience. The members of the committee may be unfamiliar with your experimental procedures, but are all well-acquainted with animal studies. If a procedure seems likely to produce discomfort and you fail to explicitly deal with this issue, the committee may require more information before final approval.
- 3) To help us evaluate the discomfort experienced by animals in your protocol, you may compare your procedures with human experiences during similar diseases or clinical procedures; use standard veterinary and/or human criteria for evaluating well-being, etc. See the Guidelines for Pain/Distress Classifications.
- 4) Not all experiments can be done without some discomfort. If yours is such an experiment, you must document that:
 - alternative experiments that would produce no discomfort are unsatisfactory
 - you will take steps to assure that you will cause no more discomfort than necessary
 - the duration of the discomfort will be as brief as possible

- you have appropriate plans to monitor and correct problems (e.g., by use of analgesics or euthanasia).

5) Be certain that your answers in Appendix 4 (management of substances known to be hazardous) are in compliance with the Institution's standard practice instructions and/or standard operating procedures for the use of hazardous materials.

6) Although it is not the primary function of this committee to evaluate scientific objectives, scientific issues are considered. For example, if you are repeating published studies, point out the how the new information or methods justify that this is necessary.

7) **Present your material clearly, concisely, and legibly. Do not leave any blanks - use N/A (not applicable) if appropriate. The application should be understandable to the lay members of the committee. Members of the committee donate their time -- they are more likely to act favorably the first time if applications are easy to read!**

8). A Research Plan is required to provide scientific justification for the proposed studies. Attach the grant application that has been submitted for external funding or prepare a research plan using the format described below.

Organize the plan to answer these questions: (A) What do you intend to do? (B) Why is the work important? (C) What has already been done? (D) How are you going to do the work?

Include sufficient information in the plan to facilitate an effective review without reference to any previous application. Be specific and informative and avoid redundancies. Reviewers often consider brevity and clarity in presentation as indicative of a principal investigator/program director's approach to a research objective.

When a revised application is submitted, provide a statement specifying what significant changes have been made. Include additions, deletions, revisions, and any responses to criticisms in the previous summary statement.

The suggested format for a research plan is as follows:

Specific Aims. State concisely and realistically what the research described in this application is intended to accomplish and/or what hypothesis is to be tested.

Significance. Briefly sketch the background to present proposal, critically evaluate existing knowledge, and specifically identify the gaps which the project is intended to fill. State concisely the importance of the research described in this application by relating the specific aims to longer-term objectives.

Progress Report/Preliminary Studies. New applications may use this section to provide an account of the principal investigator/program director's preliminary studies pertinent to the application, and/or any other information that will help to establish the experience

and competence of the investigator to pursue the proposed project. Continuation applications would use this section to list the accomplishments on the research project during the reporting period. The titles and complete references to appropriate publications and completed manuscripts may be listed. Supplementary background graphs, diagrams, tables, and charts relevant to the progress report/preliminary studies may also be submitted.

Experimental Design and Methods. Discuss in detail the experimental design and the procedures to be used to accomplish the specific aims of the project. Describe the protocols to be used and the tentative sequence or timetable of the investigation. Include the means by which the data will be analyzed and interpreted. Describe any new methodology and its advantage over existing methodologies. Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims. Point out any procedures, situations, or materials that may be hazardous to personnel and the precautions to be exercised.

B. Guidelines for Pain/Distress Classification

The USDA regulations require that "the principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animals and has provided a written narrative description of the methods and sources . . . used to determine that alternatives were not available" [9 CFR Part 2.31(8)].

You will be required to provide this narrative in the Search for Alternatives section of the form. To help you more accurately complete this section, the USDA's classifications of pain/distress are detailed below.

The following guidelines are offered by the Animal Welfare Committee (IACUC) to assist research investigators in making appropriate pain/distress categorizations when writing animal care and use protocols. The IACUC has the prerogative to review and possibly alter any pain/distress categorization contained in the protocol submission.

CATEGORY:

Category C. Minimal, Transient or No Pain and/or Distress.

These procedures are considered to produce minimal, transient or no pain and/or distress when performed on small and/or docile animals by competent individuals using recognized methods.

1. Administration of:
 - a. Anesthetics, analgesics, and tranquilizers
 - b. Fluid and electrolyte therapy
 - c. Immunizations, when not expected to cause more than minimal morbidity or distress.

- d. Oral medications.
2. Non-chronic catheterization.
3. Blood collection, except transcardial and periorbital procedures in species without an orbital (retrobulbar) sinus.
4. Gastric lavage.
5. Certain procedures performed in the normal practice of veterinary medicine or animal care (e.g. injections, palpations, skin scraping, ear punching, etc.).
6. Hybridoma/ascites production, when the volume of fluid does not produce respiratory distress and paracentesis is performed only once.
7. Euthanasia as performed in accordance with the recommendations of the current AVMA Guidelines for Euthanasia. Euthanasia of fetuses and neonates needs to be performed under anesthesia utilizing either hypothermia (in rodents) or anesthetic drugs (in larger animals). Fetuses collected after the death of the dam are assumed to be nonviable.

Any of the above procedures may be painful and/or distressful to a large and/or infrequently handled and difficult to manage animal; these procedures should be listed in Category D or E. For example, even simple procedures done with nonhuman primates are placed in Category D since anesthesia is needed to avoid undue anxiety and resultant aggression. Similarly, such procedures for swine (without using specialized restraint equipment) generally require anesthesia or sedation to prevent anxiety and uncontrolled movements, and are considered as Category D.

Category D. Pain or Distress Relieved by Appropriate Measures.

Examples of procedures that may produce pain or distress, but which are performed using appropriate and adequate anesthesia, analgesia, or tranquilization and are followed with appropriate measures to alleviate pain or distress are as follows:

1. All forms of bleeding in which the animal is exsanguinated; orbital bleeding; and intracardial blood collection.
2. All surgical procedures, including those associated with “acute” experiments performed under anesthesia from which the animal does not recover.
3. Injections of agents which cause morbidity or induce excessive inflammation or necrosis. The amount of pain or distress that results from the injection(s) of an irritating or noxious agent will depend on the agent used, the site of injection and volume injected, and the animal species. Animal users should use their own judgment when classifying their particular procedures. Base the judgment on observation of the animal(s) and extrapolation of the causes of pain and distress in man.

4. Skin or corneal corrosivity testing.
5. Procedures requiring prolonged restraint of any animal (greater than 12 hours).
6. Polyclonal antibody production with immunization via intradermal injection (or via other routes if an adjuvant is used) where there are visible or clinical signs of inflammation.
7. Intracranial inoculations in animals with a fully ossified cranium.

Category E. Unrelieved Pain or Distress

Procedures listed in Category D above must be listed in Category E if they are performed without appropriate and adequate anesthesia, analgesia, or tranquilizers **or** if they are not amenable to relief by therapeutic measures. This would include assays that result in significant mortality, procedures resulting in moderate to severe morbidity, footpad inoculations, and the administration of drugs or irradiation which may cause toxicity.

C. Common Abbreviations and Definitions

ABBREVIATIONS

ACUP - Animal Care and Use Protocol

AWC - Animal Welfare Committee (IACUC)

AWEC - Animal Welfare Executive Committee

IACUC - Institutional Animal Care and Use Committee

DEFINITIONS

Activation - Formal notification from the Grants and Contracts Office of Research Administration to the researcher authorizing initiation of research project activities. Required for projects that will use external funds to support the work, such as grants or contracts.

Applications - Institutionally standardized forms which must be completed and submitted by the researcher to the IACUC.

Approval - Formal notification from the Research Protection Office of scientific approval of the research protocol by the IACUC. Approval does not constitute authority to begin research activities. (see Activation)

Continuing Review Progress Report - Written report of current project activities submitted by the researcher to the IACUC for review and approval for continuation of project

Continuing Approval- IACUC approval to continue research project activities (required at least yearly). Formal notification authorizing continuation of research activities, is sent from the Research Protection Office to the researcher.

Research Project - Systematic gathering and analysis of information in order to contribute to general knowledge. The overall design of the project is generally set forth in a written protocol.

Research Protocol - The formal design or plan of an experiment or research activity.

Surgery - Any procedure that results in the invasion of any body cavity, or joint space or produces permanent impairment of any kind.

- **Acute Surgery** - The animal is euthanized at the end of the surgical procedure before recovering from anesthesia.
- **Survival Surgery** - Surgery performed on a live animal under general anesthesia, from which the animal is expected to recover.

D. Form Specific Instructions

INSTRUCTIONS FOR PREPARING
LIFESPAN IACUC ANIMAL CARE AND USE PROTOCOL (ACUP)

- The ACUP form must be typed. Do not leave any blanks. Answer all questions. Use N/A if appropriate.
- Complete and include only the Appendices that are applicable to this project.
- The ACUP form is available at www.Lifespan.org/research/.
- **You must attach a copy of the external funding (grant) application, if applicable, or submit a separate research plan along with the ACUP.**
- **You must attach copies of the lab privileges and training forms, as well as health surveillance receipts for each individual included on the personnel list**

Please contact Roland Lariviere (phone 444-2093, email rlariviere@lifespan.org) if you require assistance