**Instructions for Searching for Alternatives**

The search for alternatives refers to the three Rs described in the book, The Principles of Humane Experimental Technique (1959) by Russell and Burch. The 3Rs are reduction in the number of animals used, refinement of techniques and procedures to reduce pain or distress, and replacement of animals with non-animal techniques or use of less-sentient species.

**Refinement**: The use of analgesics and analgesia, the use of remote telemetry to increase the quality and quantity of data gathered, and humane endpoints for the animals are examples of refinements.

**Reduction**: The use of shared control groups, preliminary screening in non-animal systems, innovative statistical packages or a consultation with a statistician are examples of reduction alternatives.

**Replacement**: Alternatives such as in vitro, cell culture, tissue culture, models, simulations, etc. are examples of replacement. This is also where you might look for any non-mammalian animal models—fish or invertebrates, for example—that would still give you the data you need.

**The AWIC (Animal Welfare Information Center) recommends alternative searches be performed in 2 phases.** Phase 1 considers reduction and refinement and the recommendation is NOT to use the word "alternative" unless the particular area of research happens to be an area in which there has been considerable work in developing alternatives (e.g. Toxicology and education). This phase should get after no unnecessary duplication, appropriate animal numbers, the best pain-relieving agents and other methods that may serve to minimize or limit pain and distress.

Phase 2 of the search is focused on Replacement. In this phase the use of the word "alternative" is appropriate and the use of the word "model" is recommended. The result of this second phase of the search is supposed to retrieve information on animal and non-animal models as potential alternatives.

The search strategy consists of the reduction and refinement phase and the replacement phase as mentioned before. The reduction and refinement phase should be similar to the typical literature review done in preparation for a new project or scientific publication. Keywords used will help the researcher determine if there is unintentional duplication, how many animals are necessary using the proposed model, appropriate anesthetics and analgesics, and any other method of minimizing pain and distress. Since much of the refinement and reduction information will be found in the materials and methods sections, it is important for the researcher to review some of the articles that may be of interest.

Many people make the mistake of putting the term alternatives in to the strategy and expect to find all possible alternatives. Because alternatives is a complex concept involving refinement, reduction and replacement, this term is best used only in those areas of study where larger amounts of research have been conducted on alternatives, such as in toxicology or education.

The replacement phase should include keywords for potential alternatives such as "vitro", "culture", or simulation". The word "alternative" may also be included here. The selected animal model, other species, and the word "model" will help retrieve animal and non-animal models as potential alternatives. **EAST TENNESSEE STATE UNIVERSITY**

# Leave Blank

Protocol #:

Expiration Date:

**ANIMAL STUDY PROTOCOL**

**Annual Surveillance**

|  |
| --- |
| **FOR UCAC ONLY:**  Disposition:    UCAC Chair (signature) Date |

Version: 9/1/10

Please Type

##### I. GENERAL INFORMATION

A. Principal Investigator / Course Director:      Degree(s):

Academic Title:

Department:      Division:

Campus Address:

E-mail Address:

Phone:       Fax:       Pager:

Emergency Contact Name & Phone:

Department Administrator:      Phone:

B. Grant / Project Title:

##### II. SPONSORSHIP OF PROJECT

A. Funding Agency / Source of Funds:

External Grant / Contract No. (if known):

Inclusive Dates of Project Funding: From:       To:

Procedure Classification Categories

|  |  |
| --- | --- |
| B. Experiments, which involve no pain, distress, or use of pain relieving drugs (e.g. breeding).  C. Experiments, which may involve momentary or slight pain or distress, including short-term physical restraint, injection, blood sample from a peripheral vein or euthanasia. (submit Form C) | D. Experiments, which may potentially cause pain or distress to animals and for which appropriate anesthetics, analgesics, or sedatives are used.  (submit Form C)  E. Experiments involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or sedative drugs would adversely affect the procedures, results, or interpretation of the experiments (submit Form E) |

##### III. NUMBER OF ANIMALS

Specify Number Of Animals To Be Used **For The Coming Year**:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Species | Type B | Type C | Type D | Type E | Totals\* |
| 1. |  |  |  |  |  |
| **2.** |  |  |  |  |  |
| **3.** |  |  |  |  |  |
| **4.** |  |  |  |  |  |

##### IV. PERSONNEL

Provide The Following Information for all **NEW INDIVIDUALS** Personnel to Be Involved with This Study: *This includes the* ***Principal Investigator****, co-investigators, technicians, students, etc. All personnel involved with this project must have completed the Animal Research Training Program (http://www.etsu.edu/animals/dlar/training.htm).*

|  |  |  |  |
| --- | --- | --- | --- |
| Name: | PI: |  |  |
| Experience/training with **all** animal species listed | No  Yes =  how long | No  Yes =  how long | No  Yes =  how long |
| Experience with **all** procedures performed on these animals | No  Yes =  how long | No  Yes =  how long | No  Yes =  how long |
| Describe the animal-related responsibilities for each person |  |  |  |
| Completed Animal Research Training Program: | No  Yes =  Date: | No  Yes =  Date: | No  Yes =  Date: |
| Current OHP Risk Inventory form for this laboratory on file in the OHO (annual updates required). | No Yes =  Date: |  |  |
| OHP Health Assessment form submitted to OHO (annual updates required). | No Yes =  Date: | No Yes =  Date: | No Yes =  Date: |

If your answer to any of the above questions is No, please explain:

For additional personnel please copy the above table.

#### V. CHANGES IN PROCEDURES / TECHNIQUES

If you plan to make any changes to your protocol in any of the following categories during the next year, please check the appropriate box(es), then attach the completed Statement(s) to this Annual Surveillance. *If the changes are significant, a new Notice of Intent should be filed.*

|  |  |
| --- | --- |
|  | Statement D: Diet Manipulation and Environmental Modifications |
|  | Statement G: Euthanasia |
|  | Statement F: Antemortem Fluid/Tissue/Tail Collection |
|  | Statement H: Non-Survival Surgery |
|  | Statement I: Survival Surgery |
|  | Statement K: Anesthesia, Analgesia, Sedation, or Tranquilization |
|  | Statement L: Behavioral Screening/Conditioning |
|  | Statement M: Antibody Production |
|  | Statement P: Clinically Adverse Rodent Phenotype |
|  | Statement R: Animal Restraint |
|  | Statement S: Biohazard and Special Requirements |
|  | Statement T: Tumor Studies |
|  | Statement X: Administration of Exogenous Substances or Tissues |
|  | Statement Y: Imaging |
|  | Statement Z: Other Procedures |

VI. PUBLICATIONS

**Please Provide A List Of Publications Since The Last Annual Surveillance. *Citation only, please.***

##### IX. INVESTIGATOR ASSURANCE

1. I certify that I have completed the Animal Research Training Program.

2. I certify that I have determined that the research proposed herein is not unnecessarily duplicative of previously reported research.

3. I certify that all individuals working on this protocol and who are exposed to animals or their viable tissues or waste, are participating in the ETSU Occupational Health and Safety Program.

4. I certify that only the individuals listed in Sections VI are authorized to conduct procedures involving animals under this protocol, have completed the animal Research training Program and have received training in: (1) the biology, handling, and care of the species to be used; (2) aseptic surgical methods and techniques (if necessary); (3) the concept, availability, and use of research or testing methods that limit the use of animals or minimize distress; (4) the proper use of anesthetics, analgesics, and tranquilizers (if necessary); and (5) procedures for reporting animal welfare concerns.

5. For all Pain/Distress Classifications C, D and E proposals I certify that I have reviewed the pertinent scientific literature and the sources and/or databases and have found no valid alternative to any procedures described herein which may cause more than momentary pain or distress, whether it is relieved or not.

6. I certify that I will obtain approval from UCAC before initiating any significant changes in this study; this includes substantive changes in the procedures, changes in personnel performing the procedures on animals, or in the number of animals to be used.

7. I certify that I will notify the UCAC regarding any unexpected study results that impact the animals. Any unanticipated pain or distress, morbidity or mortality will be reported to the Attending Veterinarian and the UCAC.

8. I certify that I am familiar with and will comply with all pertinent institutional, state, and federal rules and policies.

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Signature of Principal Investigator Department Chairman (signature)

# Statement C: Justification for Type C/D Animal Use

*(If this statement is blank, omit it)*

Attach a **separate** Statement C for each species.

1. Species:

*Procedures that may cause more than momentary or slight pain or distress* ***must****, in their planning, involve consultation with a veterinarian trained in Laboratory Animal Medicine.*

*Dr. Greg Hanley may be reached by calling the Division of Laboratory Animal Resources 9-6783.*

2. Which Veterinarian Have You Consulted?

Date Consulted:

3. List Procedures That Could Potentially Cause Pain or Distress That You Propose To Use:

4. Alternatives To Painful or Distressful Procedures:

***(Refer to the* Instructions for Searching for Alternatives *above)***

**The minimal written narrative must include:**

**• Databases searched** or other sources consulted,

**• Date of the search,**

**• Years covered by the search**, and

**• Key words or search strategy** used by the Principal Investigator when considering *alternatives* to the above listed procedures or descriptions of other methods. **This information should provide assurance that there are no alternatives available to the painful or distressful procedures listed above.** The Narrative should be such that the Institutional Animal Care and Use Committee can readily assess whether the search topics were appropriate and whether the search was sufficiently thorough. The species potentially painful/distressful procedures must be included a keyword as well as the species and the word “alternative”.

Please Provide Your Narrative Below:

## 5. Results Of Search:

No alternatives were found.

Yes, alternatives were found. Explain why they cannot be used below:

# Statement E: Justification for Type E Animal Use

*(If this statement is blank, omit it)*

Attach a **separate** Statement E for each species

1. Species:

*Procedures that may cause more than momentary or slight pain or distress* ***must****, in their planning, involve consultation with a veterinarian trained in Laboratory Animal Medicine.*

*Dr. Greg Hanley may be reached by calling the Division of Laboratory Animal Resources 9-6783.*

2. Which Veterinarian Have You Consulted?

Date Consulted:

3. List Procedures That Will Cause Pain That You Propose To Use:

4. Alternatives To Painful or Distressful Procedures:

***(Refer to the* Instructions for Searching for Alternatives *above)***

**The minimal written narrative must include:**

**• Databases searched** or other sources consulted,

**• Date of the search,**

**• Years covered by the search**, and

**• Key words or search strategy** used by the Principal Investigator when considering *alternatives* to the above listed procedures or descriptions of other methods. **This information should provide assurance that there are no alternatives available to the painful or distressful procedures listed above.** The Narrative should be such that the Institutional Animal Care and Use Committee can readily assess whether the search topics were appropriate and whether the search was sufficiently thorough. The species potentially painful/distressful procedures must be included a keyword as well as the species and the word “alternative”.

Please Provide Your Narrative Below:

## 5. Results Of Search:

No alternatives were found.

Yes, alternatives were found. Explain why they cannot be used below:

6. Justify No Pain Relief:

*Provide a* ***scientific justification*** *for why drugs, which might alleviate pain or distress, will be withheld. Document the rationale for this decision and provide references, if possible. [Euthanasia employed prior to significant pain or distress would not be Type E.] This information is required in our annual USDA report and may be quoted directly from this protocol form*

7. Expected Clinical Signs Of Pain/Distress:

*Please describe clinical signs to be expected. Indicate the severity and duration of each clinical sign, the frequency the animal will be monitored and when the pain will be eliminated or managed (euthanasia, drugs or withdrawal of painful stimulus). The committee must understand that the pain is the minimum needed for the shortest time possible, consistent with the experimental goals.*

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