

## Guide to Completing the University of Wisconsin-Madison Animal Use Protocol Application

To assist you in successfully completing the UW-Madison Animal Use protocol application, RARC has prepared this helpful guide. This guide addresses the most common pitfalls in completing the application by describing exactly the type of information that the Animal Care and Use Committees require in each of your responses to the questions on the application form. We believe that the use of this guide will dramatically improve the investigator's chances of getting the animal protocol approved at its first review by the Animal Care and Use Committees. Deadlines for submitting protocols for Committee review and RARC contacts can be found at the end of this guide.

Throughout this guide you are referred to consult with your Attending Veterinarian as a resource. A contact list of Attending Veterinarians and veterinary staff can be found at the end of this guide.

There is a statement after Question 23 that must be signed by the Investigator in order for the application to be considered complete. The animal protocol is a contract between the Investigator and the Animal Care and Use Committee, an agent of the University of Wisconsin-Madison, that ensures that animals will receive the highest standard of care both within the context of experiments and daily housing. The use of animals is a privilege, not a right. Abuse of this privilege and violations of the contractual nature of the protocol in any way will be investigated, and the Animal Care and Use Committees have the right and obligation to impose disciplinary action when appropriate. Thank you for your commitment to making the UW-Madison Animal Care Program a continuing success.

**Q8** – All areas where animals go for any length of time must be accounted for. Time less than 12 hours should be described here with the building and room numbers (if known) of labs, procedure rooms, and any other areas where animals are taken for less than 12 hours for procedures or observations including x-rays, MRIs, PET scans, and other manipulations. The method of transport should also be described. Any time over 12 hours that animals spend in an area is considered housing, and should be included in Question 10.

**Q9a** – A firm number (not a range) must be given for how many animals you anticipate using in a three-year period. You may list an upward maximum number, and it is recommended that you consider including a 5-10% overage to cover cases where animals must be removed from your studies for non-experimental reasons. Approved protocols may be easily amended to increase the number of animals if you find that you need to do so midway through your experiments. Sources can be defined in broad terms, such as “commercial” for Harlan, Covance, etc. There is no one source known as “the UW breeding colony” so do not use that as a source. If you plan to use animals from an existing campus source, including departmental- or college-owned resources (such as the Dairy Sciences dairy herd) list the investigator whose protocol covers that source and then answer Question 9c in full (see below).

**Q9c** – Your response should assure the Committee that if you are using animals from a previous protocol that you have considered two issues: (1) that the animals' previous experience will not affect the data you intend to collect on your protocol, and (2) that your proposed use of the animals will not aggravate any health conditions that the animals' previous use may have imposed. If your response does not show that you have considered these issues, the Committee may find that the animals could suffer undue pain or distress under the protocol and disprove your application.

**Q10** – You must list the specific animal housing facility or facilities where you will house your animals. If you are unsure where to house your animals, contact your Attending Veterinarian for suggestions.

**Q11a** – Please write your response so that it is understandable to a lay person, that is, a non-scientist, at the reading level of a high school senior or for an article in a local newspaper. Define all acronyms the first time you use them. For renewal protocols, it is recommended (and required for L&S and SVM investigators) that you provide some evidence of progress and productivity in the past three years, such as a citation to a publication generated from this research or new directions that will be pursued in the next three years. If a published manuscript is not yet available, a brief description (1-2 sentences) of any other progress should be provided, such as abstracts, oral presentations, or presentations at meetings.

**Q11c** – In Question 9a you requested the particular species you want to work with under this protocol. Here, you must explain why the particular species is most appropriate for your work. In some cases this is patently obvious, such as needing dairy cows to study milk production. Nonetheless, you must provide some explanation to the Committee.

**Q12** – Your response here should provide scientific justification for the number of animals you request in Question 9a. When possible, provide a statistical justification. You may indicate that the number of animals is based on your previous experience with the particular experimental model or course enrollment, in cases of protocols that cover teaching courses. For complex protocols with series of experiments, tables can be an invaluable way to show how you arrived at the numbers of animals you request. For protocols that cover teaching courses, you can indicate how often the course is offered, and the approximate number of students expected to enroll in the course over the next three years based on previous enrollment.

**Q15** – Please include each staff person's experience with the particular species with which they will work under this protocol. If all of the staff will be working with one species, you can provide a summary statement above the staff list such as “All animal experience is with

sheep.” For staff with less than 1 year of experience, you should indicate who will train and supervise those staff.

**Q16a** – If you use electronic database searches to stay current in the literature, you must include the databases you use, the date of your most recent literature search and the years of publication covered by that search. Include the key words used in your search strategy, making sure that you include key words that will assure the Animal Care and Use Committee that (a) no alternatives to the use of animals exist for your work, (b) that your proposed work is not duplicating existing knowledge, and (c) that you have investigated that your proposed procedures will cause the least possible stress to animals. This will satisfy the federal regulations in the Animal Welfare Act. An incomplete answer will result in the Committee withholding approval of your application. Campus librarians are an excellent resource for conducting these searches. Below are some suggested literature search engines:

PubMed	<a href="http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?otool=uwisclib">http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?otool=uwisclib</a>
Biosis	<a href="http://web5s.silverplatter.com/webspirs/start.ws?customer=c136775&amp;databases=(BXCD)">http://web5s.silverplatter.com/webspirs/start.ws?customer=c136775&amp;databases=(BXCD)</a>
Zoological Record	<a href="http://web5s.silverplatter.com/webspirs/start.ws?customer=c136775&amp;databases=(ZOOR)">http://web5s.silverplatter.com/webspirs/start.ws?customer=c136775&amp;databases=(ZOOR)</a>
Animal Welfare Information Center	<a href="http://www.nal.usda.gov/awic/databases/database.htm">http://www.nal.usda.gov/awic/databases/database.htm</a>
Scholar Google	<a href="http://scholar.google.com/">http://scholar.google.com/</a>

For non-electronic sources, you must provide a brief description of what you use as a basis for identifying information on alternatives to the use of live animals. For both electronic and non-electronic sources, please include in your response the frequency with which electronic and non-electronic sources are consulted (e.g. weekly, monthly).

**Q16b** – If you use biohazardous materials in live animals, please provide a description of the type of materials you use. In the Occupational Health and Safety section below the list, describe how you and your staff will prepare and store these materials. Describe the protective gear (lab coat, gloves, eye protection) that will be worn by staff who administer the materials to the animals and/or provide daily animal care. Include precautions that will be taken to dispose of contaminated bedding and carcasses. If you need guidance, call the Office of Biological Safety.

**Q17a** – This response should provide the Animal Care and Use Committee with a clear understanding of what specifically happens sequentially to each animal or group of animals, and over what time period the procedures occur. You may want to consider providing a summary table or a flow chart of procedures and experimental groups to make your proposed experimental design clearer to the Committee. Please provide dosages, volumes and routes of administration of all drugs and materials administered to animals. You may give an upward maximum dose that will be given to allow yourself some flexibility.

You may want to consider providing a summary table of all drugs to make your proposed regimen of treatments clearer to the Committee.

**Q17b** – Restraint methods that are regularly used in routine husbandry do not need to be included here. Neither does chemical restraint. Only physical restraint (e.g. primate chairs) should be described here.

**Q17c** – Food and water restriction or regulation are routinely used for pre-surgical preparations. Please indicate if you will restrict animals’ access to food or water for any reason. Be advised that restriction of water for more than three hours requires very strong justification.

**Q17d** – Non-standard husbandry includes late weaning of rodents and delayed cage washing. Non-standard housing should be addressed here as well, such as wire-bottom caging, metabolic chambers, smaller-than-standard caging, and other exceptions to normal housing. If you are unsure if the conditions under which your animals will be housed are considered by the Committee to be “non-standard,” call your Attending Veterinarian.

**Q18** –In your response describe all analgesics that you will give to animals if they may experience more than momentary pain or distress during your experiments. If you do not believe animals will experience any momentary or slight pain, indicate by writing “Animals will not experience more than momentary or slight pain as a result of the experimental procedures.” This way the Committee will know that you considered this possibility.

**Q19** – Your response must fully answer the question as it is asked on the form. If you are unsure of the criteria or clinical signs of pain or distress that would indicate that euthanasia may be necessary in the species with which you are working, contact your Attending Veterinarian.

**Q20** – Your response should clearly describe the criteria, or clinical signs, that you will use to determine if euthanasia is necessary if your experiments may induce chronic disease, tumors, or radiation sickness. Body scoring is highly recommended as a tool for assessing your animals. If you do not expect that your experiments will induce these outcomes, indicate by writing “Chronic disease, tumors, or radiation sickness is not anticipated.” This way the Committee will know that you considered these possibilities.

**Q21** – Include here all methods of euthanasia that you will employ throughout your experiments, planned and unplanned. You must include the criteria by which you will ensure that death has occurred. Euthanasia that is built into the experimental design may be discussed in your response to Questions 17a and 28a; however, please include that euthanasia description here as well. There are species-specific methods of euthanasia that UW investigators must follow. To ensure the method(s) of euthanasia you wish to use is compliant, call your Attending Veterinarian. Rodent users: According to NIH, all rodents that are euthanized by CO2 must be euthanized in the following manner: “Rodents will be placed in a non-precharged chamber and 100% CO2 will be introduced at the rate of 10-20% of the chamber volume per minute as regulated by a flow-meter attached to the CO2 canister. Death will be confirmed by verifying cardiac and respiratory arrest.”

**Q23** – Some animals involved in experiments covered by protocols will enter the food chain and be consumed by humans. Those animals may receive drugs as part of routine husbandry or for clinical treatment. To the best of your ability indicate the withdrawal times for the drugs that you know will be administered to animals if the animals will enter the food chain. For clinical treatments and extra-label drug use (ELDU), indicate that all ELDU will be documented per state and federal guidelines and withdrawal times will be monitored by the veterinarians and animal caretakers.

**Investigator Signature** – You may paste a digitized version of your personal signature here, or you must fax this page with your signature (with name printed below) to RARC at 265-9040. This is a requirement of the USDA.

**Q24** – Please include each staff person’s experience performing the surgical procedures on the particular species with which they will work under this protocol. If a staff person has no experience, indicate who will provide training and supervision.

**Q27** – In your response describe the anesthesia you will use, including all drugs, dosages, routes of administration and supplementation regimen. Describe the physiologic parameters, e.g. respiration, heart rate, etc., that you will monitor to ensure the anesthesia depth is

adequate to make sure the animal remains deeply anesthetized. *Documentation of the anesthesia used and the monitoring of anesthetic depth is required for all surgical procedures! Contact your Attending Veterinarian for guidance.*

**Q27a** – A ventilator is strongly recommended when using paralytic agents to better monitor the animals’ physiological condition.

**Q28a** – Remember that in your response you must discuss wound closure techniques and the estimated time that will be needed to perform each surgery. Also, if you may need to perform a repair or replacement surgery to correct instrumentation (pump, headcap, eye coil, etc.), you must include a full description of the repair/replacement surgery and the maximum number of times that a repair/replacement surgery will be performed on a single animal.

**Q29** – Remember that you must document all aspects of post-operative monitoring and care. This includes the times at which animals are observed, the analgesics that you administer to manage pain, nursing care such as changing bandages or wound drainage or using topical treatments, and all other special care that will be given to recovering animals after surgeries. Contact your Attending Veterinarian, or the trainers at RARC, for sample monitoring forms and guidance.

### **Protocol Preparation Assistance at RARC**

Animal protocols are assigned for review to the Animal Care and Use Committee(s) that provides oversight of the facility/ies where the animals assigned to this protocol will be housed. If you have questions about the form, please call Debbie (262-7109), Helen (265-2696), or Holly (265-9241) in the protocol division of RARC. Pre-review of protocols by the veterinarians is strongly encouraged and available. See the veterinary contacts listed below by school.

### **College/School Animal Care and Use Committee protocol submission deadlines:**

College of Agricultural and Life Sciences: 4:00 pm 1st of the month

Graduate School: 4:00 pm the 15th of the month

College of Letters and Science: 4:00 pm on the 15th of the month

School of Medicine and Public Health: 4:00 pm the 15th of the month

School of Veterinary Medicine: 4:00 pm 1<sup>st</sup> of the month

### **Attending Veterinarians and Veterinary Assistance by School/College**

#### **College of Agricultural and Life Sciences**

Agricultural species: Mike Maroney, DVM, 890-0412

Laboratory or biomedical species: Lisa Krugner-Higby, DVM, Ph.D., 5-5581, lisakh@rarc.wisc.edu

#### **Graduate School**

Laboratory species (non-primate): Lisa Krugner-Higby, DVM, Ph.D., 5-5581, lisakh@rarc.wisc.edu

Primate species: Kevin Brunner, DVM, 5-9069, kbrunner@primate.wisc.edu OR Buddy Capuano, DVM, 3-3571, capuano@primate.wisc.edu. Also Christina Clark, DVM, 5-0622, cclark@primate.wisc.edu and Michelle Harke, DVM, 5-3240, mharke@primate.wisc.edu

#### **College of Letters & Science**

All species: Evan Shukan, DVM, 5-3856 shukan@rarc.wisc.edu OR Lisa Krugner-Higby, DVM, Ph.D., 5-5581

#### **School of Medicine and Public Health**

All species: Janet Welter, DVM, Ph.D., 5-2695, welter@rarc.wisc.edu, Drew Jefcoat, DVM, 2-3009, jefcoat@rarc.wisc.edu, Calvin Patten, DVM, 1-1928

#### **School of Veterinary Medicine**

Agricultural species: Mike Maroney, DVM, 890-0412

Laboratory or biomedical species: Evan Shukan, DVM, 5-3856 shukan@rarc.wisc.edu

### **Training Resources at RARC**

The RARC trainers offer a wide selection of species-specific handling and procedure technique classes and one-on-one training. To learn more visit [www.rarc.wisc.edu](http://www.rarc.wisc.edu) and click on “Training,” or contact one of the trainers: Beth Schiffman, 262-1432, schiffman@rarc.wisc.edu; Scott Hubbard-Van Stelle, 265-6560, shvs@rarc.wisc.edu; John Bogdanske, 890-0345, bogdanske@rarc.wisc.edu; Margaret Riley, 890-0344, riley@rarc.wisc.edu.