

**Program Description**  
**Animal Care and Use Program**

**Fairmount College of Liberal Arts & Sciences**  
**Unit 000896**

**Wichita State University**  
**1845 Fairmount Street**  
**Wichita, KS 67260-0026**

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**For**  
**AAALAC International**

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## Program Description

### Instructions for Completing and Submitting the Program Description for the Institutional Animal Care and Use Program

#### Section 1. Introduction

- A.** State the name of the program unit and, if applicable, its parent organization. List all organizations (schools, centers, etc.) included within the program unit.

Wichita State University's (WSU's) Fairmount College of Liberal Arts and Sciences (LAS) is the AAALAC International accredited unit. The Department of Biological Sciences (BS), which houses the Vivarium (also referred to as the Animal Care Facility (ACF)) is a part of LAS. The BS Chair, also the Vivarium Director, reports to the Dean of LAS. The Dean of LAS reports to the Vice President for Academic Affairs who reports to the President of WSU. The BS Chair and Vivarium Director is a member of the IACUC. The President of WSU has delegated the responsibility for appointing all IACUC members to the Institutional Official (IO).

- B.** Give a brief overview of the institution, its purpose and how the animal care and use program relates to the mission of the institution.

Wichita State University is committed to providing comprehensive educational opportunities in an urban setting. Through teaching, scholarship, and public service, the university seeks to equip both students and the larger community with the educational and cultural tools they need to thrive in a complex world, and to achieve both individual responsibility in their own lives and effective citizenship in the local, national, and global community.

High quality teaching and learning are fundamental goals in all undergraduate, graduate, and continuing education programs. Building on a strong tradition in the arts and sciences, the university offers programs in business, education, engineering, fine arts, and health professions, as well as in the liberal arts and sciences. Degree programs range from the associate to the doctoral level and encompass 75 fields of study; non-degree programs are designed to meet the specialized educational and training needs of individuals and organizations in south central Kansas.

The animal care and use program serves the mission of the institution by providing humane care for the use of laboratory animals in teaching and research. The care is based on the standards set forth in the "Guide for the Care and Use of Laboratory Animals" (Guide), and the regulations of the Animal Welfare Act.

- C. Note that [AAALAC International's three primary standards](#) are the *Guide for the Care and Use of Laboratory Animals (Guide)*, NRC, 2011; the *Guide for the Care and Use of Agricultural Animals in Research and Teaching (Ag Guide)*, FASS, 2010, and the European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purposes, Council of Europe (ETS 123). Other regulations and guidelines used (U.S. Department of Agriculture (USDA), Public Health Service (PHS) Policy, Good Laboratory Practice (GLP), Canadian Council on Animal Care (CCAC), etc.) may also apply. Describe which of the three primary standards and other regulations and guidelines are used as standards for the institutional animal care and use program and how they are applied. For example, an academic institution in the United States with an Office of Laboratory Animal Welfare (OLAW) Assurance may use the standards of the *Guide* and PHS Policy for all animals, the Animal Welfare Act regulations for covered species, and the *Ag Guide* for agricultural animals used in agricultural research and teaching (see also *Guide*, pp. 32-33). In the European Union, the standards applied might be the *Guide*, ETS 123, Directive 2010/63, and any country-specific regulations.

The WSU animal care and use program has a PHS/OLAW assurance and applies the standards, regulations, and guidelines found in the PHS policy, the NRC “Guide for the Care and Use of Laboratory Animals, 8th ed.”, and the USDA AWA regulations for applicable species.

- D. Describe the organization and include an accurate, current, and detailed organizational chart or charts (see **Appendix 4**) detailing the lines of authority from the Institutional Official to the Attending Veterinarian, the Institutional Animal Care and Use Committee/Oversight Body (IACUC/OB), and the personnel providing animal care. Please include the title, name (*Note: For individuals whose information is publically available, provide the titles and names; for individuals whose information is not publically available, you may provide titles only.*), and degree (if applicable) of each individual at the level of supervisor or above. Names of animal care staff below the title of supervisor need not be included, but the titles and number of animal care personnel under each supervisor should be included. If animal care responsibility is administratively decentralized, including the management of satellite housing areas/locations, the organizational chart or charts must include all animal care programs, indicating the relationship between each administrative unit and personnel, the Attending Veterinarian, and the Institutional Official.

WSU Interim President is Andy Tompkins, Ph.D. John Tomblin, Ph.D. is the Vice President of Research and Technology Transfer. Kerry Wilks, Ph.D. is the Interim Dean of the Graduate School and the Institutional Official (IO). In her role as the IO, Dr. Wilks appoints all members of the WSU Animal Care and Use Committee (IACUC). The IACUC reports to the IO.

The Provost and Professor of Academic Affairs is Richard Muma, Ph.D. Andrew Hippisley, PhD, Dean of the Fairmount College of Liberal Arts and Sciences (LAS), which is the

AAALAC accredited unit, reports to Dr. Muma. The Department of Biological Sciences, part of LAS, is chaired by William Hendry, Ph.D., who is also the Vivarium Director and a member of the IACUC. Dr. Hendry also oversees the animal care personnel which consist of a full-time Animal Care Technician (ACT), Ms. Sarah Catlin, and she supervises student employee(s).

**E. Identify the key institutional representatives (including, but not limited to, the Institutional Official; IACUC/OB Chairperson; Attending Veterinarian; animal program manager; individual(s) providing biosafety, chemical hazard, and radiation safety oversight; etc.); and individuals anticipated to participate in the site visit.**

1. Institutional Official – Dr. Kerry Wilks, Interim Dean of the Graduate School & Professor of Spanish
2. IACUC Chairperson – Dr. Kim Cluff, Scientific IACUC Member, and Associate Professor, Biomedical Engineering
3. Part-Time Attending Veterinarians – Dr. Karen Beetch, IACUC member, and the back-up, Dr. Heather Arens, Alternate IACUC member
4. Vivarium Director and Scientific IACUC Member – Dr. William Hendry, Department of Biological Sciences Chair and Professor
5. Animal Care Technician and IACUC Member – Sarah Catlin, Laboratory Technician III, Post Approval Monitoring
6. Remaining IACUC Members:
  - a. Moriah Beck – Scientific IACUC Member and Associate Professor, Chemistry
  - b. Jeffrey May – Scientific IACUC Member and Research Associate Professor, Biological Sciences
  - c. Becky Hundley – IACUC Nonscientific Member, Director - Intellectual Property/Research Compliance
  - d. Jana Henderson – Alternate IACUC Nonscientific Member, Senior Grant Research Coordinator
  - e. Sandra Wilson – Non-Affiliated IACUC Member and Veterinarian at Sedgwick County Zoo
  - f. Barbara Hoppins – Alternate Non-Affiliated IACUC Member and Veterinary Hospital Specialist at Sedgwick County Zoo

**F. Briefly describe the major types of research, testing, and teaching programs involving animals and note the approximate number of principal investigators and protocols involving the use of animals. As mentioned in the [instructions](#), please complete **Appendix 5** (Animal Usage) or provide the information requested in a similar format as**



an Appendix.

The animal facility houses animals involved in the following research areas: orthopedic studies, cancer studies including the use of biomaterials, atherosclerosis, arthritis, reproductive endocrinology, and nerve and spinal cord repair and regeneration. There are fifteen principal investigators (PIs) with approximately thirty-five active protocols.

The biology field stations are made up of the Gerber Reserve (157 acres near Waterloo, KS), the Ninnescah Reserve (330 acres including a building, near Viola, KS), and the Sellers Reserve (20 acres N. of the Ninnescah Reserve). They consist of native and restored prairie and riparian woodland. These unique habitats offer opportunities for studying restoration and river ecology and general wildlife biology. Current studies involve research in the areas of mammal herbivory and the behavioral ecology and conservation of birds. There are two PIs with two active protocols.

**G. Note the source(s) of research funding (grants, contracts, etc.) involving the use of animals.**

The current sources of research funding involving the use of animals are:

14 protocols funded by the state

6 protocols funded by private funds

7 protocols funded by federal funds

**H. List other units (divisions, institutes, areas, departments, colleges, etc.) of your organization that house and/or use animals that are not included in this Description. If any of these are contiguous, physically or operationally (e.g., same IACUC/OB, same animal care staff), with the applicant unit, describe the association. Explain why such units are not part of this program application.**

*Note: Questions regarding this section should be forwarded to the AAALAC Office.*

None

**I. [Contract Facilities](#): If the institution contracts for animal care facilities or services for animals owned by the institution, the contractor and its AAALAC International accreditation status must be identified. If a contractor's animal care and use program is not accredited by AAALAC International, a brief description, following this Program Description outline, of the relevant contractor's programs and facilities must be provided. In addition, the species and approximate average number of animals housed in the contract facilities and the approximate distance between the institution's animal facility and the contract facility must be noted. Incorporation of the contractor program into the site visit schedule will be discussed with institutional representatives. If the institution does not contract for animal care facilities or services, so note.**

None

**J.** Note other relevant background that will assist reviewers of this report.

None

## Section 2. Description

### I. Animal Care and Use Program

#### A. Program Management

##### 1. Program Management Responsibility [Guide, pp. 13-15]

###### a. The Institutional Official [Guide pp. 13-14]

Describe how program needs are clearly and regularly communicated to the Institutional Official by the Attending Veterinarian, IACUC/OB, and others associated with the program.

The IO receives a copy of each semiannual report, which contains a comprehensive evaluation of the animal care program and facilities inspection, identifies program deficiencies and needs, and makes recommendations for program enhancements. The semiannual report is developed by the IACUC as they conduct their review during a monthly IACUC meeting, so all members have input. The AV, IACUC Chair, and the Vivarium Director can also individually access the IO as needed.

###### b. Role of the Attending Veterinarian [Guide, p. 14]

###### i. Describe the institutional arrangement for providing adequate veterinary care. Although individual name(s) and qualifications will be described below, identify by title the veterinarian(s) responsible for the veterinary care program, including:

- a list of responsibilities
- a description of the veterinarian's involvement in monitoring the care and use of laboratory animals
- the percentage of time devoted to supporting the animal care and use program of the institution if full-time; or the frequency and duration of visits if employed part-time or as a consultant.

*Note:* If preferred, this information may be provided in a Table or additional Appendix.

WSU has contracted a part-time AV, Karen Beetch, DVM and a back-up for her, Heather Arens, DVM. Dr. Arens joined our program on 12/6/18. Dr. Beetch has provided veterinary care and oversight for our Program for eighteen years and has attended an AALAS meeting at our request. She regularly attends monthly IACUC meetings and is present for each semi-annual review. She communicates with PIs during the development of their protocols and visits the ACF regularly to discharge the duties described in our Program of Veterinary Care which has been signed by both Dr. Beetch and Dr. Arens. The Program of Veterinary Care states “Regularly scheduled visits by the veterinarian will occur at the following

frequency: Monthly or more frequently, as needed.” It also states, “The attending veterinarian is available by phone, text, or email daily.”

- ii. List others (e.g., Principal Investigators, veterinarians serving as Principal Investigators, veterinary faculty/staff, technical staff, farm managers) who have a *direct role in the provision of veterinary care* and describe their responsibilities. The Organizational Chart(s) provided in **Appendix 4** must depict the reporting relationship between these individuals and the Attending Veterinarian.

*Note:* If preferred, this information may be provided in a Table or additional Appendix.

There are no others who have a direct role in the provision of veterinary care. Therefore, PIs and their staff, as well as the ACTs, have access by phone or email to AV and/or the Back-Up AV to report any injuries, illnesses, or death. Most often the ACTs will report any illness to the PI’s staff who determines if the animal should be sacrificed or the AV will be contacted for treatment and/or advice.

**c. Interinstitutional Collaborations** [Guide, p. 15]

Describe processes for assigning animal care and use responsibility, animal ownership and IACUC/OB oversight responsibilities at off-site locations for interinstitutional collaborations.

There are no inter-institutional collaborations in place. If the need arises, the IACUC would develop an SOP that defines the roles and responsibilities for oversight of animal care in that specific instance.

## **2. Personnel Management**

**a. Training, Education, and Continuing Educational Opportunities**

Describe *how* the IACUC/OB provides *oversight* and *evaluates the effectiveness* of training programs and the assessment of personnel competencies. Describe how training is documented.

*Note:* Do not include details about the training program, which should be described in the following sections.

The IACUC utilizes the Collaborative Institute Training Initiative (CITI) training modules for instructional purposes. All IACUC members must satisfactorily complete IACUC Chairs, Members and Coordinators, Aseptic Surgery, Reducing Pain and Distress in Laboratory Mice and Rats, Working with Animals in Biomedical Research and the specific courses for each species for which we have an active protocol; PIs, staff and students must complete Researchers course, and modules relating to the species they will be doing research on as well as Aseptic Surgery and Reducing Pain and Distress in

Laboratory Mice and Rats if applicable to their protocols. The IACUC Administrator has access to the CITI training records (by person) and verifies training is current before protocols are approved. She also tracks the training that is scheduled during the monthly IACUC meetings (including who attended and what was covered). Additionally, the Chair may request the IACUC Administrator email out training items as necessary.

Oversight of training and evaluation of effectiveness is provided by the IACUC protocol review and approval process and also by post-approval monitoring (PAM). PAM is provided by Sarah Catlin, who has been our ACT for 10 years.

**i. Veterinary and Other Professional Staff** [*Guide*, pp. 15-16]

For the Attending Veterinarian and other individuals having a direct role in providing veterinary medical care (veterinarians, other professional staff listed above, private practitioners, etc.), provide: name, credentials (including degrees), and a description of their qualifications, training, and continuing education opportunities.

*Note:* Please do not provide curriculum vitae of personnel; if preferred, this information may be presented in a Table or additional Appendix.

Part-Time Attending Veterinarian:

Karen S. Beetch, DVM

Veterinary Medical Practitioner, 23 years

Contract Lab Animal Veterinarian at WSU, 18 years

Annual continuing education to maintain state licensing requirements

Currently hold active license in the state of Kansas

Serve on WSU IACUC committee as attending veterinarian, 18 years

Attended the PRIM&R conference in Boston, 2012

Worked with Dr. Krukenberg at the laboratory animal facility at KSU and had exotic animal rotation at KSU, 1994-1996

Back-up Part-Time Attending Veterinarian:

Heather Arens, DVM, B.S.

Veterinary Zoological Medical Practitioner, 6 years

Adjunct professor, Zoo Animal Health, 2 years

Veterinary Medical Practitioner, 1 year

Annual continuing education in Zoological Medicine to maintain State licensing requirements

**ii. Animal Care Personnel** [*Guide*, p. 16]

1) Indicate the number of animal care personnel.

1 full-time ACT and 2 student-employees

- 2) Summarize their training, certification level and type, experience, and continuing education opportunities provided.

*Note:* If preferred, this information may be provided in a Table or additional Appendix.

ACT- Sarah Catlin has been employed by WSU Biology department for 10 years. Sarah obtained a degree in Animal Sciences from Kansas State University and obtained her ALAT Certification during her employment at the KSU-CVM Animal Resource Facility. She has attended the PRIM&R IACUC 101/201 Plus Workshop in 2010, attended AALAS in 2017, and recently attended PRIM&R IACUC Conference in April of 2019. Sarah maintains her CITI training as the ACT technician as well as her role as the Post-Approval Monitor. Sarah is responsible for training the student employee(s) to work as needed for weekends and holidays to perform animal health monitoring, provide food/water, and emergency notifications for the PI and AV if needed.

Back-Up for the ACT – This is typically a student hired to work as needed (weekends, holidays). The ACT will provide the appropriate training to perform animal health monitoring and emergency notifications for the PI and AV.

### iii. The Research Team [Guide, pp. 16-17; 115-116; 122; 124]

- 1) Describe the *general mechanisms* by which the institution or IACUC/OB ensures that research personnel have the necessary knowledge and expertise in the animal procedures proposed and the species used.

All personnel listed as animal manipulators on a protocol must complete online CITI training modules and ACF training for the species to be used. All training is listed on a new protocol, evaluated by the IACUC, and must be completed to secure approval. Other training and qualifications of research personnel are listed on the protocol and evaluated by the IACUC during protocol reviews. Based on the activities described in the protocol, the IACUC may request additional information about personnel qualifications, such as surgical training and experience. The IACUC visits all animal use areas at least twice per year during the semi-annual inspection and randomly assess personnel training and competence in a variety of ongoing procedures during these inspections.

- a) Briefly describe the content of any required training.

Required training includes CITI modules and animal care facility training for the species to be used.

- b) Describe the timing of training requirements relative to the commencement of work.**

All training requirements must be completed prior to commencement of work.

- c) Describe continuing education opportunities offered.**

CITI modules are required to be updated every 3 years.

- 2) Describe the process(es) to ensure surgical and related procedures are performed by qualified and trained personnel, including:**
- who determines that personnel are qualified and trained for surgical procedures
  - the roles that the Attending Veterinarian and IACUC/OB have in this determination [*Guide*, pp. 115-116]

Qualifications to perform surgical procedures are determined by the AV. She may require a pilot study or attend a surgical procedure to verify readiness. The IACUC's role is to verify appropriate CITI modules have been completed and verify the AV has given them authorization to proceed. The IACUC supports the evaluations made by the AV and will not authorize any surgery without that approval.

- 3) Describe the training and experience required to perform anesthesia. [*Guide*, p. 122]**

In order to perform anesthesia, the appropriate CITI modules must be completed. Also, they must be trained to use the specific anesthetic required by the protocol by the PI and/or the AV. The qualifications and experience of all personnel performing anesthesia on any animal are reviewed as part of the protocol/modification approval process. There is also monitoring by the ACT of personnel performing anesthesia.

- 4) Describe how the proficiency of personnel conducting euthanasia is ensured (especially physical methods of euthanasia). [*Guide*, p. 124]**

The proficiency of euthanasia is ensured via the AV and/or the ACT. The ACT reviews euthanasia method(s) with the new PI(s) during orientation and she can assist with the procedure to ensure proficiency if needed. The

qualifications and experience of all personnel performing euthanasia on any animal are reviewed as part of the protocol/modification approval process.

**b. Occupational Health and Safety of Personnel** [*Guide*, pp. 17-23]

**i. Institutional Oversight** [*Guide*, pp. 17-19]

- 1) List the institutional entities (units, departments, personnel, *etc.*) that are involved in the planning, oversight, and operation of the institutional occupational health and safety program related to animal care and use (e.g., office(s) of environmental health, institutional health services or clinics (*including contracted health services*), industrial hygienists, Institutional Biosafety Committee(s) and/or Officer(s), Radiation Safety Committee(s) and/or Officer(s).
- Include a brief description of their responsibilities and qualifications.
  - If contracted services are used, also include their location (e.g., remote offices to which personnel must report).

The Occupational Health and Safety program at WSU is administered by EHS with cooperation from the Human Resources Office, Student Health Clinic, and Ascension Via Christi Wichita. Mike Strickland is the Director of Environmental Health and Safety. EHS evaluates experimental and other potential hazards including ionizing and non-ionizing radiation, chemical cleaning agents, chemicals, animal bites, allergens, zoonoses and toxins inherent or intrinsic to the use of animals by our institution. Risks are assessed in consultation with PIs and procedures are developed to manage the risks on a case-by-case basis based on the nature of the agent(s) involved. Agents of concern are identified on the animal use protocol form. The Student Health Clinic is staffed by several full-time APRNs and RNs and a part-time physician. Clinic hours are 8AM-5PM. Students with acute care injuries that are not work-related are welcome to use the Student Health Clinic. If a WSU employee has a workplace accident or has an occupational illness, they are to notify their Supervisor and Human Resources as soon as possible. If there is a life-threatening injury, they are to seek treatment from the closest available health care provider. If it is a minor injury, they are to contact their supervisor or Human Resources to file a claim. The ACT meets with the PI's and students to go over the program. New and established IACUC investigators need to fill out a Preplacement and/or Annual Health Risk Assessment. These are self-reported forms. The form is then submitted by the investigator to be reviewed by Larry K. Wilkinson, MD at Ascension Via Christi, Wichita. All individuals with the potential for animal contact are covered by our occupational health and safety program. This includes employees, students,



the IACUC committee and observers/visitors. Dr. George Bousfield is the Radiation Safety Officer.

- 2) Describe methods to identify work-related hazards and the processes used to evaluate the significance of those hazards in the context of duties and tasks. Describe both common approaches and differences, if applicable, for categories of personnel such as, but not limited to, researchers, veterinarians, husbandry staff, cage-washing staff, students, housekeeping, physical plant staff, security personnel, IACUC/OB members (including non-affiliated members), contractors, visitors, etc. [*Guide*, pp. 18-19; see also Chapters 2 and 3 in *Occupational Health and Safety in the Care and Use of Research Animals*, NRC 1997.].

Work-related hazards are evaluated based on assigned duties. Animal care staff are responsible for the daily care of the animals, cage washing, and sanitation so the individual hazards for these jobs include chemical cleaning agents, wet floors, and waste disposal. Potential hazards for the Research staff, and the AV include sharps, use of chemical or biological agents, and/or x-rays depending on the protocol. Common to all of the above job categories include allergen exposure, and animal bites. IACUC members not involved directly with the research or care of animals, visitors, and physical plant staff have in common that they enter the Animal Facility less than monthly and do not have direct contact with the animals, so their hazards are limited.

- 3) Describe methods and frequency of reassessing work-related hazards.

The methods and frequency of reassessing work-related hazards are based on the individual protocols being used and/or job duties. EHS assesses the hazards involved with biological or chemical agents being used on a protocol at the time of protocol approval which could be reassessed if any incidents occur related to the use of these agents. Physical safety hazards such as trip hazards, lifting, and wet floors are also assessed by job duties and if incidents were to occur EHS and the ACT would take immediate steps to ensure safety was improved.

- 4) Describe institutional programs or methods used to track and evaluate safety-related workplace incidents, including injuries, exposures, accidents, etc. Include the frequency of such assessments. [*Guide*, pp. 18-19]

Safety-related workplace incidents, etc. are extremely rare in our program. If an incident were to occur to an employee, they fill out an incident report which is sent to HR and then HR will report it to EHS to assess if safety needs to be addressed to prevent further incidents. If a student is injured, student health services will report the incident to EHS.

**ii. Standard Working Conditions and Baseline Precautions**

The following section pertains to the Occupational Health and Safety Program for all personnel associated with the animal care and use program. Specific information regarding the use of hazardous agents is included in **subsection iii** below.

**1) Medical Evaluation and Preventive Medicine for Personnel** [*Guide*, pp. 22-23] *Note:* Include blank forms used for individual health assessment as **Appendix 6**.

- a) Describe who (e.g., personnel assigned to job/task categories in I.A.2.b.i.2) above) receives personal medical evaluation as a component of individual risk assessment. Describe who are **not** included and/or exempted from personal medical evaluation. *Note:* Do not include the names of personnel.

Animal care staff (ACT and student employees) and Research Staff (PIs and assistants) are all included in the OHSP. IACUC members (who are not researchers), facilities services (physical plant), and other visitors who do not enter the ACF more than once a month and have no contact with the animals, are exempt from personal medical evaluation. However, they review and sign the OHSP brochure, described below.

- b) Describe provisions for allowing an individual to decline participation in all or parts of the medical evaluation and preventive medicine programs (if applicable). Provide an estimate (percentage) of personnel associated with the animal care and use program that have declined participation in the medical evaluation program.

All individuals involved with the Animal Use Program at WSU are required to comply with the OHSP. No personnel have declined to comply.

- c) Describe provisions for assuring confidentiality of medical information.

Medical information is assured to be confidential by only being collected and retained by the medical staff at either student health services or the contract physician with Ascension Via Christi Health.

- d) Describe safety considerations for individuals with incidental exposure to animal care and use (e.g., contractors, personnel working in open laboratories).

Individuals that contact animals less than once a month are asked to read and sign the Occupational Health Program Brochure upon entering the Animal Facility. The brochure notifies them that they could be exposed to animal dander and that they should wear the appropriate PPE if needed and have the appropriate hygiene procedures.

- e) Describe general features of the medical evaluation and preventive medicine programs, within the context of work duties, including:
- pre-employment/pre-assignment health evaluation,
  - medical evaluations (including periodicity),
  - diagnostic tests (e.g., for tuberculosis),
  - precautions for working with potentially hazardous species (e.g., nonhuman primates, sheep, venomous species)
  - immunization programs, and
  - procedures for communicating health related issues.

A pre-employment evaluation is completed by the employee and submitted directly to the contracted OHP Physician. Re-evaluations are done annually. Tetanus vaccinations are to be kept current. Precautions for working with potentially hazardous field species (catch and release only) involve knowledge of risks and the appropriate PPE.

- f) Describe any other entities that provide medical services (e.g., emergency care, after-hours care, special medical evaluation, contracted services). Include a brief description of their credentials and/or qualifications, and how these entities remain knowledgeable about animal- or institution-related hazards and risks.

See b. i. 1 above

## **2) Personnel Training Regarding Occupational Health and Safety** [Guide, p. 20]

Describe general educational program(s) to inform personnel about:

- allergies,
- zoonoses,
- personal hygiene,
- physical injuries in animal facilities (e.g., noisy areas, large quantities of chemicals such as disinfectants, ergonomics) or species used (e.g., nonhuman primates, agricultural animals),
- other considerations regarding occupational health and safety.

Include in the description a summary of the topics covered, including:

- Entities responsible for providing the training

- Frequency of training or refresher training

**Note:** Do not include special or agent-specific training for personnel exposed to experiment-related hazardous agents; this will be provided in **Section iii.3** below.

PIs and/or ACT are responsible for instructing their staff in proper occupational safety and health procedures. Assistance is available from EHS when requested. The WSU Occupational Health Program for Personnel with Substantial Laboratory Animal Contact includes education regarding allergies, zoonoses, personal hygiene, and physical injuries. All new faculty/staff, and students working with animals receive this information, and self-report pre-employment medical evaluation forms to the Occupational Health Physician prior to any work with animals. Annual re-evaluations will also be done. CITI training is required prior to protocol approval and then updated every 3 years.

### **3) Personal Hygiene** [*Guide*, p. 20; *Ag Guide* pp. 4-5]

- a) List routine personal protective equipment and work clothing provided and/or required for animal care personnel, research and technical staff, farm employees, etc.

ACF employees- scrubs and/or lab coats, latex gloves, N95 masks, designated shoes, rubber gloves, goggles  
Research staff- latex gloves, lab coats

- b) Describe arrangements for laundering work clothing.

Scrubs and lab coats are laundered in the washer and dryer housed in Hubbard Hall. PPE items are not worn outside of the building.

- c) Describe provisions and expected practices for washing hands, showering, and changing clothes, including instances where work clothes may be worn outside the animal facility.

It is expected that all personnel wear disposable gloves when handling animals to be changed frequently and wash their hands using the sink and provided hand soap in each animal room. Clothes are changed in the ACF restroom. Showers are provided, used on as needed basis. Work clothes (scrubs/shoes) are not worn outside of the ACF. Sticky door mats are at each entrance to the ACF to remove debris/excess dirt from street shoes.

- d) Describe policies regarding eating, drinking, and smoking in animal facilities.

No eating, drinking, or smoking is permitted in the animal facility.

#### 4) **Standard Personnel Protection** [*Guide*, pp. 21-22]

- a) Describe facility design features, equipment and procedures employed to reduce potential for physical injury inherent to animal facilities (e.g., noisy areas, large quantities of chemicals such as disinfectants, ergonomics) or species used (e.g., nonhuman primates, agricultural animals).

The Animal Care Facility is designed with 100% outside air exchanges, and doors to separate areas to reduce potential contamination from noise or allergens. Only rodents are housed in the ACF. Disinfectants and cleaning agents used are stored, usually in 1 gallon containers, on shelving within easy reach to reduce employee strain.

- b) Describe likely sources of allergens and facility design features, equipment, and procedures employed to reduce the potential for developing Laboratory Animal Allergies (LAA).

Likely sources of allergens are due to rodent dander, especially when handling animals and changing cages. To reduce the exposure to dander, gloves and N95 masks are worn during cage changes, and hands are washed frequently.

- c) Describe likely sources of zoonoses and facility design features, equipment, and procedures employed to reduce potential exposure to zoonoses.

A source of zoonoses could be from an animal bite. All personnel handling animals are trained how to properly handle them to reduce stress and the potential for biting to occur.

- d) Describe the procedures for the maintenance of protective equipment and how its function is periodically assessed.

Any PPE that is damaged is replaced. Disposable items are thrown out after use and items that can be laundered are done so after each use. Disposable N95 masks require an annual fit-test done by EHS.

- e) Respiratory Protection

Disposable N95 masks are required for changing cages.

- ii) Describe programs of medical clearance, fit-testing, and training in the proper use and maintenance of respirators.

Fit-testing is done by EHS. Special requirements for medical clearance would be determined by the OHP review in conjunction with EHS.

- iii) Describe how such respiratory protective equipment is selected and its function periodically assessed.

Disposable N95 masks have been selected for the ease of use, low-volume, and low-risk environment. Respirators would be considered if needed for a higher-risk protocol.

**f) Heavy Equipment and Motorized Vehicles**

- i) Provide a general list of the types of cage-processing equipment used, such as rack/cage washers, tunnel washers, robotics, and bulk autoclaves. Describe training programs, informational signage, and other program policies designed to ensure personnel safety when working with such equipment.

*Note:* Details of specific equipment installed in animal facility(ies) are to be provided in **Appendix 15** (Facilities and Equipment for Sanitizing Materials).

Only a hand-washing tub is used for cage-processing. SOPs are available and only trained personnel use the tub. A bulk autoclave is available for use in the department. Training for the autoclave is provided before use, and the autoclaves have signs and safety features to protect personnel.

- ii) List other heavy equipment such as scrapers, tractors, and farm machinery (manufacturer name, model numbers, etc. are not necessary). Describe training programs, informational signage, and other program policies designed to ensure personnel safety when working with such equipment.

*Note:* If preferred, this information may be provided in a Table or additional Appendix.

N/A

- iii) If motorized vehicles are used for animal transport, describe how the driver is protected from exposure to hazards such as allergens

or zoonoses and decontamination methods employed. Also describe instances where vehicles may be shared between animal and passenger transport.

N/A

- g)** Describe safety procedures for using medical gases and volatile anesthetics, including how waste anesthetic gases are scavenged.

Waste anesthetic gases, from the use of the isoflurane machine, are scavenged with carbon filter canisters. The canisters are replaced when they are deemed too heavy. Quick-sorb is available in case of a spill.

**iii. Animal Experimentation Involving Hazards** [*Guide*, pp. 20-21]

- 1)** List, according to each of the categories noted below, hazardous or potentially hazardous agents currently approved to be used in animals that are or will be maintained for more than a few hours following exposure. If the hazardous agent cannot be listed by name for security/proprietary reasons, identify it by the general category of agent and level of hazard. *Note:* If preferred, this information may be provided in a Table or additional Appendix.

- a)** Biological agents, *noting hazard level* (CDC Biohazard Level, Directive 93/88 EEC, CDC or USDA/DHHS Select Agent, etc.). Examples may include bacteria, viruses, viral vectors, parasites, human-origin tissues, etc.

Head and neck squamous cells

- b)** Chemical agents, *noting general category* of hazard (toxicant, toxin, irritant, carcinogen, etc.). Examples may include streptozotocin, BrdU, anti-neoplastic drugs, formalin, etc.

DES; carcinogen

Freund's Complete adjuvant; pharmacological agent

125I-FSH, -FSH21, -FSH24; radioisotope

- c)** Physical agents (radiation, UV light, magnetic fields, lasers, noise, etc.).

x-ray

- 2) Experiment-Related Hazard Use** [*Guide*, pp. 18-19; See also Chapters 2 and 3 in *Occupational Health and Safety in the Care and Use of Research*

*Animals*, NRC 1997].

*Note:* Written policies and standard operating procedures (SOPs) governing experimentation with hazardous biological, chemical, and physical agents should be available during the site visit.

- a)** Describe the process used to identify and evaluate experimental hazards. Describe or identify the institutional entity(ies) responsible for ensuring appropriate safety review prior to study initiation.

It is an Institutional guideline that use of hazardous biological, chemical, and physical agents be approved by both the IACUC and EHS. Mike Strickland, the Director of EHS, and Andrew Clem EHS manger, are consulted during protocol review. Guidance is provided for identification and use of personal protective equipment, handling, storage, and disposal of materials.

- b)** Describe how risks of these hazards are assessed and how procedures are developed to manage the risks. Identify the institutional entity(ies) responsible for reviewing and implementing appropriate safety or containment procedures.

EHS uses 29 CFR, 40 CFR, adopted fire code standards, and various other methods to assess hazards on campus. If they see something out of compliance or notice anything that our work experience deems unsafe or questionable, then we will work with the department to find a solution to eliminate the hazard. Safety assessments are done approximately once a year or more if requested. PPE for x-ray use includes lead vests and dosimetry badges are worn and replaced monthly.

- c)** Describe the handling, storage, method and frequency of disposal, and final disposal location for hazardous wastes, including infectious, toxic, radioactive carcasses, bedding, cages, medical sharps, and glass.

Hazardous wastes are rarely generated in the facility. Any hazardous waste, such as sharps, are autoclaved and disposed of appropriately.

- d)** Describe aspects of the medical evaluation and preventive health program specifically for personnel potentially exposed to hazardous agents.

- 1) Personnel potentially exposed to hazardous agents are required to read the WSU Occupational Health Program for Personnel with Substantial Laboratory Animal Contact. PIs are responsible for alerting their personnel to the potential hazards of chemical, biological, and physical agents. EHS also provides guidelines for specific hazardous



agents which includes PPE requirements, Safety Data Sheet (SDS) info, safe handling practices, incompatibility, waste disposal, etc.

**3) Hazardous Agent Training for Personnel** [*Guide*, p. 20]

Describe special qualifications and training of staff involved with the use of hazardous agents in animals.

Personnel potentially exposed to hazardous agents are required to read the WSU Occupational Health Program document. EHS is also consulted during protocol review. PIs are responsible for ensuring their staff has the appropriate safety training.

**4) Facilities, Equipment and Monitoring** [*Guide*, pp. 19-20]

- a) Describe locations, rooms, or facilities used to house animals exposed to hazardous agents. Identify each facility according to the hazard(s) and containment levels (if appropriate).

*Note:* If preferred, information may be provided in a Table or additional Appendix.

Any animals that would be exposed to hazardous agents are housed in a separate room to reduce contamination risks to the other animals.

- b) Describe circumstances and conditions where animals are housed in rooms outside of dedicated containment facilities (i.e., in standard animal holding rooms). Include practices and procedures used to ensure hazard containment.

N/A

- c) Describe special equipment related to hazard containment; include methods, frequency, and entity(ies) responsible for assessing proper function of such equipment.

Biological safety cabinets and laminar flow hoods are certified annually.

- d) Describe the husbandry practices in place to ensure personnel safety, including any additional personnel protective equipment used when work assignment involves hazardous agents.

If any husbandry involves hazardous agents, the proper PPE worn is gloves, gowns, shoe covers, and masks. All PPE worn would be autoclaved before disposal. Dosimetry badges and lead vests are worn while using x-ray equipment.

e) Incidental Animal Contact and Patient Areas

- i) List and describe facilities that may be used for both animal- and human-based research or patient areas, including the policies and procedures for human patient protection, facility decontamination, animal transport through common corridors or elevators, and other personnel protection procedures.

N/A

- ii) Describe any *other* circumstances in which animals or caging equipment are transported in common use corridors or elevators (e.g., have the potential to come in contact with individuals not associated with the animal care and use program), and measures taken to mitigate risks associated with such use.

If animals or caging equipment were transported in common areas such as the hallway, they would be covered from sight and kept away from individuals as best as possible. Animals would not be transported on an elevator with anyone else aside from animal care personnel.

## B. Program Oversight

### 1. The Role of the IACUC/OB [Guide, pp. 24-40]

#### a. IACUC/OB Composition and Function [Guide, pp. 17; 24-25]

Please provide a Committee roster, indicating names, degrees, membership role, and affiliation (e.g., Department/Division) as **Appendix 7**.

- i. Describe Committee membership appointment procedures.

The President of WSU has delegated the authority to appoint IACUC members to the Institutional Official

- ii. Describe frequency of Committee meetings. Note that **Appendix 8** should contain the last two IACUC/OB meeting minutes.

The IACUC meets once a month. A special additional meeting can be called if warranted.

- iii. Describe the orientation, training, and continuing education opportunities for IACUC/OB members. [Guide, p. 17]

WSU's IACUC provides the following orientation and training program for IACUC members:

- 1) Provision of copies of relevant federal and state laws and regulations, guidelines, and institutional specific policies.
- 2) Registration with the Collaborative Institute Training Initiative (CITI) Program provides research ethics education to all members of our IACUC
- 3) Encouraged to attend IACUC-focused conferences such as AALAS and PRIM&R if funding is available.
- 4) Views videos and auto-tutorial training materials
- 5) Attends didactic or interactive inter- or intra-net based programs
- 6) Attends IACUC meetings which include continuing education

**b. Protocol Review** [*Guide*, pp. 25-27]

A blank copy of your institution's protocol review form should be provided as **Appendix 9**. Also include forms used for annual renewal, modifications, amendments, etc., as applicable.

- i. Describe the process for reviewing and approving animal use. Include descriptions of how:
  - the IACUC/OB weighs the potential adverse effects of the study against the potential benefits that may result from the use ("harm-benefit analysis"),
  - protocols that have the potential to cause pain or distress to animals are reviewed and alternative methodologies reviewed,
  - veterinary input is provided, and
  - the use of animals and experimental group sizes are justified.

*Note:* Make sure you address each of the items above.

Full committee review (FCR) is conducted by a quorum of the IACUC at a regularly scheduled or specifically convened meeting for all new protocols, amendments to currently approved protocols, annual reviews, de novo reviews and final reports. The same method is used for research and teaching proposals regardless of funding source.

Under rare special circumstances, the IACIC may conduct a review via an expedited procedure, instead of waiting for a full committee meeting, if animal welfare is at state. Each member of the committee is given the opportunity to

review the protocol and the opportunity to request FCR before approval can be granted.

Both the PHS policy and AWAR recognize a method of “designated member review” (DMR). When a PI is required by the committee during a convened meeting to make a modification in a protocol in order to receive full committee approval, the IACUC may vote to designate an IACUC member such as the Chair or the AV, or both, as DMRs to confirm that the modification has been made and the protocol is thus granted approval. If approval is granted in this manner it is reported back to the full committee at the next convened meeting. If the modifications needed are extensive the committee may vote for the revisions to be reviewed by the full committee at the next convened meeting.

The IACUC uses standards set forth in the “Guide” and the regulations of the Animal Welfare Act when reviewing animal care and use protocols.

The Veterinarian reviews all protocols and consults with the investigators when needed.

The following items are considered and discussed during the convened meeting:

- Rationale and purpose of the proposed use of animals.
  - Justification of the species and number of animals requested. Whenever possible, the number of animals requested should be justified statistically.
  - Availability or appropriateness of the use of less-invasive procedures, other species, isolated organ preparation, cell or tissue culture, or computer simulation.
  - Adequacy of training and experience of personnel with the procedures used.
  - Unusual housing and husbandry requirements.
  - Appropriate sedation, analgesia, and anesthesia paying attention to scales of pain and invasiveness.
  - Unnecessary duplication of experiments.
  - Conduct of multiple major operative procedures.
  - Criteria and process for timely intervention, removal of animals from a study, or euthanasia if painful or stressful outcomes are anticipated.
  - Post-procedure care.
  - Method of euthanasia or disposition of animal.
  - Safety of working environment for personnel.
- ii. Describe the process for reviewing and approving amendments, modifications, and revised protocols. If applicable, include a description/definition of “major” vs. “minor” amendments.  
*Note:* If preferred, this information may be provided in a Table or additional Appendix.

Amendments, modifications, and revised protocols are reviewed in the same manner as described for a new protocol. A major amendment would be a change in a member of the PIs staff who had been previously approved being deleted or replaced with a different person. A minor amendment might be a statement that a required license renewal has been received by the PI.

**c. Special Considerations for IACUC/OB Review** [*Guide*, pp. 5; 27-33]

**i. Experimental and Humane Endpoints** [*Guide*, pp. 27-28]

- 1) Describe the IACUC/OB's review of "humane endpoints," i.e., alternatives to experimental endpoints to prevent or in response to unrelieved animal pain and distress.

The question of humane endpoints begins with the PI responding to a series of questions in their request to use animals in a research protocol. The questions address how the animals will be restrained, the type of experimental procedures proposed and how such procedures are terminated. Also, how the PI will monitor the animals and determine when the animal is moribund and how often this monitoring will occur. All animal use protocols undergo review by the AV. Veterinary recommendations for alternative experimental endpoints are included in the IACUC communications with the PI. Responses to these questions are reviewed and discussed with the PI until the IACUC determines that the experimental endpoints are appropriate.

The PI, ACT, and AV monitor the animals and determines when the animal is moribund. If the animal is deemed to be suffering, they are euthanized.

- 2) For studies in which humane alternative endpoints are not available, describe the IACUC/OB's consideration of animal monitoring and other means used to minimize pain and distress (e.g., pilot studies, special monitoring, other alternatives).

When novel experiments are proposed or the IACUC determines that greater monitoring of the experimental procedures and the related endpoint is needed, the IACUC will approve the procedures as a pilot study. The procedure will be closely monitored by the AV. Pain would be assessed, and pain medication administered if needed. The results are provided to the IACUC.

- 3) Identify personnel responsible for monitoring animals for potential pain and distress and describe any mechanisms in place to ensure that the personnel have received appropriate species- and study-specific training.

The ACT and/or student employees monitor the animals daily, but the PI and staff are also responsible for monitoring of pain and distress when their study

could have induced pain. The AV has trained all of the above to know the signs of distress for rodents. In addition, CITI training is required.

**ii. Unexpected Outcomes that Affect Animal Well-being** [*Guide*, pp. 28-29]

Describe how unexpected outcomes of experimental procedures (e.g., unexpected morbidity or mortality, unanticipated phenotypes in genetically-modified animals) are identified, interpreted, and reported to the IACUC/OB.

There is an expectation that all individuals associated with animals involved in scientific research to report any unexpected outcomes. The PI and/or ACT would report this to the AV to discuss animal welfare concerns. In addition, unexpected outcomes would be reported on the annual protocol report to the IACUC.

**iii. Physical Restraint** [*Guide*, pp. 29-30]

*Note:* This section is to include only those protocols that require prolonged restraint. Brief restraint for the purpose of performing routine clinical or experimental procedures need not be described.

- 1) Briefly describe the policies for the use of physical restraint procedures or devices. Include, if applicable, the IACUC/OB definition of “prolonged.”

No protocols have been established to include prolonged restraint. If there were, the guidelines for the IACUC would be followed as outlined in the *Guide*.

- 2) Describe animal restraint devices that are used or have been used within the last three years. For each device, briefly describe
  - the duration of confinement
  - acclimation procedures
  - monitoring procedures
  - criteria for removing animals that do not adapt or acclimate, and
  - provision of veterinary care for animals with adverse clinical consequences.

*Note:* If preferred, this information may be provided in a Table or additional Appendix.

In the past three years, no protocols have required the use of prolonged restraint.

**iv. Multiple Survival Surgical Procedures** [*Guide*, p. 30]

*Note:* One survival surgical procedure followed by a non-survival procedure is not included in this category.

- 1) Describe the IACUC/OB's expectations regarding multiple survival surgery (major or minor) on a single animal.

If multiple minor survival surgeries were a component of a protocol, prior to the first surgery, the protocol, the PI and all persons who may perform the surgeries would be closely monitored by both the AV as well as the ACT. The animal would be removed from the study if the animal was no longer deemed healthy. No multiple major survival surgery protocols have been approved by the IACUC.

- 2) Summarize the types of protocols currently approved that involve multiple major survival surgical procedures

*Note:* If preferred, this information may be provided in a Table or additional Appendix.

No multiple major survival surgery protocols have been approved by the IACUC.

- v. **Food and Fluid Regulation** [*Guide*, pp. 30-31]. *Note:* This does not include pre-surgical fast.

Summarize the types of protocols that require food and/or fluid regulation or restriction, including:

- justification
- species involved
- length and type of food/fluid regulation
- animal health monitoring procedures and frequency (e.g., body weight, blood urea nitrogen, urine/fecal output, food/fluid consumption)
- methods of ensuring adequate nutrition and hydration during the regulated period

*Note:* If preferred, this information may be provided in a Table or additional Appendix.

No protocols have been approved that involve food or fluid restrictions.

- vi. **Use of Non-Pharmaceutical-Grade Drugs and Other Substances** [*Guide*, p. 31]

Describe the IACUC/OB's expectations regarding the justification for using non-pharmaceutical-grade drugs or other substances, if applicable.

Not applicable

**vii. Field Investigations** [*Guide*, p. 32]

Describe any additional considerations used by the IACUC/OB when reviewing field investigations of animals (non-domesticated vertebrate species), if applicable.

Applicable wildlife permits are issued by the related agencies, and EHS is consulted during the protocol review. PIs and their staff sign a field study waiver. PIs and their staff also participate in the OHSP and any concerns would be reviewed with the physician.

**viii. Animal Reuse** [*Guide*, p. 5]

- 1) Describe institutional policies regarding, and oversight of, animal reuse (i.e., on multiple teaching or research protocols).

Animals are not reused on multiple procedures. Only animals that have not had procedures done on them for the intended protocol can be moved to a different protocol to avoid purchasing more animals.

- 2) Briefly describe the types of activities currently approved that involve the reuse of individual animals.

*Note:* A list of specific protocols involving reuse of animals should be available during the site visit.

None.

- 3) Describe other instances where the final disposition of animals following study does not involve euthanasia, including adoption, re-homing, rehabilitation, etc.

*Note:* A list of specific protocols involving reuse of animals should be available during the site visit.

N/A

**2. Post-Approval Monitoring** [*Guide*, pp. 33-34]

- a. Describe mechanisms for IACUC/OB review of ongoing studies and periodic proposal/protocol reviews (e.g., annual, biennial, triennial, or other frequency).

The IACUC reviews approved protocols annually for two years and then requires the de novo protocol at the end of the third year if they wish to continue their protocol. After the third year of the protocol a final report is required to close out the study.



- b. Describe the process and frequency with which the IACUC/OB reviews the program of animal care and use.

Members of the IACUC perform a semi-annual review of the program and inspection of the ACF. The ACT also provides post-approval monitoring continuously. She makes sure all protocols are being followed as approved and if changes need to be made that amendments are submitted.

- c. Describe the process and frequency with which the IACUC/OB conducts facility and laboratory inspections.
- Describe the rationale or criteria used for exempting or varying the frequency of reviewing satellite holding facilities and/or animal use areas.
  - If contract facilities or contractor-provided personnel are used, describe procedures used by the IACUC/OB to review such programs and facilities.
- Note:* A copy of the last report of these reviews should be included as **Appendix 10**.

The ACF is inspected every 6 months without exception. No contract facilities/personnel are used. If there were satellite holding/animal use areas where animals remained for more than 12 hours, they would be inspected every 6 months, also.

- d. If applicable, summarize deficiencies noted during external regulatory inspections within the past three years (e.g., funding agencies, government, or other regulatory agencies) and describe institutional responses to those deficiencies.
- Note:* Copies of all such inspection reports (if available) should be available for review by the site visitors.

The USDA inspects our facility annually. During the last three years, there were no cited deficiencies.

- e. Describe any other monitoring mechanisms or procedures used to facilitate ongoing protocol assessment and compliance, if applicable.

The ACT acts as the PAM and monitors PIs for compliance. She and/or the AV report concerns to the PI and the IACUC if necessary.

**3. Investigating and Reporting Animal Welfare Concerns** [Guide, pp. 23-24]  
Describe institutional methods for reporting and investigating animal welfare concerns.

The process for reporting animal welfare concerns is posted at the entrance to the ACF. Any employee or visitor can report concerns confidentially and anonymously to the designated personnel or any supervisory personnel that they feel is appropriate. Any

concern may also be expressed anonymously to the Research and Technology Transfer Office, 316-978-3285. All matters are investigated by the IACUC.

WSU has a “Whistleblower Program” so that concerns can be reported anonymously.

#### **4. Disaster Planning and Emergency Preparedness** [Guide p. 35]

Briefly describe the plan for responding to a disaster potentially impacting the animal care and use program:

- Identify those institutional components and personnel which would participate in the response.
- Briefly describe provisions for addressing animal needs and minimizing impact to animal welfare.

*Note:* A copy of disaster plan(s) impacting the animal care and use program must be available for review by the site visitors.

WSU Policies and Procedures Crisis Management Plan states the University shall have an Executive Policy and Decision Team made up of the President, the Provost and Senior Vice President, the Vice President for Administration and Finance, the Vice President for Student Affairs and the General Counsel. The General Counsel shall serve as primary coordinator of Team activities with each member being responsible, during a declared crisis situation, for arranging communication with, and facilitating operations by, their particular division. The Executive Policy and Decision Team shall, to the extent reasonably possible, establish and maintain communications with the President during any period when the President is away from campus or Wichita. Only the President or an officially designated member of the Crisis Management Committee shall have the authority to declare a University crisis situation. Police, fire, and other emergency responders should be informed as to the types of hazards in use in the animal facility and they should receive assistance in planning their responses to emergencies in the animal facility. The Executive Policy and Decision Team will remain active and operational until the crisis situation is declared to be ended by the President of the University, or the President's designee.

The facility shall not be reentered until notified by the Executive Policy and Decision Team that it is safe. Upon reentry, the Animal Care Technician shall assess the health of the animals and the condition of the facility and in consultation with the Attending Veterinarian, provide the appropriate care or euthanasia.

The disaster plan is discussed annually by the IACUC. Animals cannot be removed from the facility, therefore if the facility is uninhabitable or the animals are injured, they will be euthanized promptly.

## **II. Animal Environment, Housing and Management**

*Note:* Complete each section including, where applicable, procedures performed in farm settings, field studies, aquatic environments, etc.

## A. Animal Environment

*Note:* Facility-specific details regarding mechanical system construction and operation is requested in Section IV.B.5. and **Appendix 11**; current (measured ***within the last 12 months***), detailed (by room) performance data must also be provided as indicated in **Appendix 11**.

### 1. Temperature and Humidity [*Guide*, pp. 43-45]

- a. Describe the methods and frequencies of assessing, monitoring, and documenting that animal room or housing area temperature and humidity is appropriate for each species.

*Note:* If preferred, this information may be provided in a Table or additional Appendix.

Animal room temperature and humidity are monitored daily by animal caretakers. Physical Plant personnel monitor the temperature within the facility via a computerized sensor. An alarm in the control room at the Physical Plant is triggered when the temperature goes above 78 or below 68 degrees. The Physical Plant notifies the campus police who contact the ACF staff. However, if there is a power outage, no alarm will sound so we will rely upon the daily monitoring by the animal caretakers. Our humidity averages 30% in winter and 50% in summer.

- b. List, by species, set-points and daily fluctuations considered acceptable for animal holding room temperature and relative humidity.

*Note:* If preferred, this information may be provided in a Table or additional Appendix. [*Guide*, pp. 44 and 139-140]

30-70% is acceptable humidity range for rats, mice, hamsters, and rabbits.  
Temperature set-points for hamsters, mice, and rats are 68-79F  
Rabbits (if housed in future) is 61-72F

- c. Temperature set-points in animal housing rooms and/or environmental conditions are often outside of the species-specific thermoneutral zone. Describe the process for enabling behavioral thermoregulation (e.g., nesting material, shelter, etc.) or other means used to ensure that animals can control their thermoregulatory environment. Include a description of IACUC/OB approved exceptions, if applicable. [*Guide*, p. 43]

Animals have red transparent tubes for resting together to maintain body warmth, group housing, and bedding material allows them to maintain comfortable body temperatures.

### 2. Ventilation and Air Quality [*Guide*, pp. 45-47]

- a. Describe the methods and frequencies of assessing, monitoring, and documenting the animal room ventilation rates and pressure gradients (with respect to adjacent areas).

*Note:* If preferred, this information may be provided in a Table or additional Appendix.

HVAC technicians do routine maintenance in the animal facility. Air exchange rates are tested annually by an engineer. He will notify HVAC if any further maintenance needs to be done at that time. His report includes pressure gradients, air circulation rates, and air exchanges per hour. Ventilation can be affected in the micro-environment with micro-isolator tops which are normally used for mice in our facility. These cages are monitored for humidity levels and more frequent cage changes are done if needed.

- b. Describe ventilation aspects of any special primary enclosures using forced ventilation.

N/A

- c. If any supply air used in a room or primary enclosure is [recycled](#), describe the percent and source of the air and how gaseous and particulate contaminants are removed.

No air is recycled in the ACF.

### 3. Life Support Systems for Aquatic Species [Guide, pp. 84-87]

- a. Provide a general description of institutional requirements for enclosures using water as the primary environmental medium for a species (e.g., aquatics).

N/A

- b. Provide a general description of overall system(s) design, housing densities, and water treatment, maintenance, and quality assurance that are used to ensure species appropriateness.

*Note:* Facility-specific tank design and parameter monitoring frequencies should be summarized in **Appendix 12** (Aquatic Systems Summary).

N/A

### 4. Noise and [Vibration](#) [Guide, pp. 49-50]

Describe facility design features and other methods used to control, reduce, or prevent excessive noise and vibration in the animal facility.

Noise reduction is based on keeping all doors closed between noise sources and animals. Personnel are not permitted to play music in the animal rooms. If any equipment is being used that might affect the noise level in the ACF, the animals are moved as far away from the noise as possible.

## **B. Animal Housing** (all terrestrial, flighted, and aquatic species)

### **1. Primary Enclosures**

*Note:* A description of primary enclosures used (e.g., cages (conventional, individually-ventilated cage systems (IVCS), etc.), pens, stalls, pastures, aviaries, tanks) should be included in **Appendix 13**.

- a. Describe considerations, performance criteria and guiding documents (e.g. *Guide*, *Ag Guide*, ETS 123 and/or other applicable standards) used by the IACUC/OB to verify adequacy of space provided for all research animals, including traditional laboratory animal species, agricultural animals, aquatic species, and wildlife when reviewing biomedical, field and agricultural research studies.

The IACUC uses the *Guide* (8th ed) and USDA AWA regulations to determine the adequacy of space.

- b. Describe space [exceptions](#) to the guiding documents (*Guide*, *Ag Guide*, ETS 123, and/or applicable standards), indicating the references, considerations and performance criteria used (e.g., by the IACUC/OB) to verify adequacy of space provided for all animal species covered by the program. [*Guide*, pp. 55-63]

We have no space exceptions. All animals are housed according to the *GUIDE*.

### **2. Environmental Enrichment, Social, and Behavioral Management** [*Guide*, pp. 52-55; 63-65; *Ag Guide*, Chapter 4]

#### **a. Environmental Enrichment**

- i. Describe the structural elements of the environment of primary enclosures that may enhance the well-being of animals housed (e.g., resting boards, privacy areas, shelves/perches, swings, hammocks).

Mice, rats, and hamsters have red translucent plastic tubes are provided for enrichment and privacy. Mice also have trapeze swings.

- ii. Describe nonstructural provisions to encourage animals to exhibit species typical activity patterns (e.g., exercise, gnawing, access to pens, opportunity

for exploration, control over environment, foraging, denning, burrowing, nesting materials, toys/manipulanda, browsing, grazing, rooting, climbing).

Breeding animals receive nestlets or other nesting materials. Hamsters have feed in the bottom of their caging for their cheek pouches as well as a paper towel for shredding. Rats receive tongue depressors or Nyla bones for chewing.

**b. Social Environment** [*Guide*, p. 64]

- i. Describe institutional expectations or strategies for [social housing](#) of animals.

All rodents are group housed whenever possible.

- ii. Describe exceptions to these expectations (e.g., veterinary care, social incompatibility) and other typical justification approved by the IACUC/OB for housing animals individually.

The IACUC has approved protocols where animals are singly housed for post-op recovery and breeding.

- iii. Describe steps taken with isolated or individually housed animals to compensate for the absence of other animals (interaction with humans, environmental enrichment, etc.).

Singly housed (post-op) and/or aggressive rodents are given tongue depressors to chew on to prevent boredom as well as diversion from chewing on stitches.

**c. Enrichment, Social and Behavioral Management Program Review** [*Guide*, pp. 58, 69]

Describe how enrichment programs and exceptions to social housing of social species are regularly reviewed to ensure that they are beneficial to animal well-being and consistent with the goals of animal use.

All Animal Care SOPs including the enrichment program is reviewed by the IACUC during semi-annual review. Individual changes in housing are monitored by the ACT/PAM and the AV.

**d. Procedural Habituation and Training of Animals** [*Guide*, pp. 64-65]

Describe how animals are habituated to routine husbandry or experimental procedures, when possible, to assist animals to better cope with their environment by reducing stress associated with novel procedures or people.

Generally, daily animal care is provided by the same personnel each day, so the animals become familiar with their caretaker and husbandry routine. When larger

groups of people are in the facility, it is requested that they keep noise to a minimum by not having conversations in the animal rooms to avoid stress to the animals.

**e. Sheltered or Outdoor Housing** [*Guide*, pp. 54-55]

- i. Describe the environment (e.g., barn, corral, pasture, field enclosure, flight cage, pond, or island).

N/A

- ii. Describe methods used to protect animals from weather extremes, predators, and escape (windbreaks, shelters, shaded areas, areas with forced ventilation, heat radiating structures, access to conditioned spaces, etc.).

N/A

- iii. Describe protective or escape mechanisms for submissive animals, how access to food and water is assured, provisions for enrichment, and efforts to group compatible animals.

N/A

**f. Naturalistic Environments** [*Guide*, p. 55]

- i. Describe types of naturalistic environments (forests, islands) and how animals are monitored for animal well-being (e.g., overall health, protection from predation).

N/A

- ii. Describe how food, water, and shelter are provided.

N/A

- iii. Describe how animals are captured.

N/A

**C. Animal Facility Management**

**1. Husbandry**

**a. Food** [*Guide*, pp. 65-67]

i. List type and source of food stuffs.

Purina ration 5001 for general use and Purina ration 5015 for breeding animals can be used. All standard feed is purchased directly from a local Purina dealer in Wichita, Kansas.

ii. Describe feed storage facilities, noting temperature, relative humidity, and vermin control measures, and container (e.g., bag) handling practices, for each of the following:

- vendors (if more than one source, describe each)
- centralized or bulk food storage facilities if applicable
- animal facility or vivarium feed storage rooms
- storage containers within animal holding rooms

All Purina feed is purchased from one local Purina dealer in Wichita, Valley Feed and Seed.

Once received by the ACF, the bag(s) of feed are stored in plastic bins with airtight lids, in the feed storage room. The bags are placed upside down so the mill date is easily visible. Sticky insect traps are placed in the storage room and monitored to ensure sanitation practices. The feed storage room has the same temperature control as the rest of the ACF and temperatures range from 69-74F and humidity is typically 30-48% depending on the season.

Smaller bins are kept in animal rooms that hold 1-2 weeks supply. They are airtight bins labeled with appropriate feed type and expiration.

iii. Describe special food preparation areas, such as feedmills and locations where special diets are formulated, if applicable. Include in the description sanitation and personnel safety practices (noting that respiratory protection is described in Section 2.I.A.2.b. ii. Standard Working Conditions and Baseline Precautions above).

No food is prepared on site.

iv. Describe how food is provided to various species (*ad libitum*, limited amounts, types of feeders).

All species are provided feed *ad libitum* via metal feeders.

v. Describe special food quality control procedures including procedures for rotating stock, monitoring milling dates, nutritional quality, bio load, chemical contaminants, etc.



The ACT purchases only enough feed to be used by the expiration date which is calculated by the mill date on the bag and the expiration date (six months past mill date) is clearly labeled on the feed bins in the animal rooms. The AV also monitors expiration dates during her monthly inspection.

**b. Drinking Water** [*Guide*, pp. 67-68]

- i. Describe the water source, treatment or purification process, and how it is provided to the animals (e.g., bowls, bottles with sipper tubes, automatic watering, troughs, ponds, streams).

Water is from the Wichita municipal water supply and is provided to all the animals through bottles with sipper tubes

- ii. Describe methods of quality control, including monitoring for contaminants.

The City of Wichita's Water Department collects and tests water monthly and the results are available annually.

- iii. If automatic water delivery systems are used, describe how they are maintained and sanitized.

N/A – no automatic water systems are used.

**c. Bedding and Nesting Materials** [*Guide*, pp. 68-69]

- i. Describe type(s) and how used for various species.

Contact bedding is used for hamsters, mice and rats. The mice use bed-o' cobs, and the hamsters and rats use aspen chip bedding.

- ii. Describe bulk bedding storage facilities, if applicable, including vermin control measures.

All bedding bags are stored on pallets in Room 544. The same vermin control measures apply. Sticky traps are dated and placed on the floor for insects.

- iii. Describe quality control procedures, including monitoring for contaminants.

The vendor guarantees the bedding to be free from specific contaminants. After a bag is opened the bedding is poured out of the bag into a plastic container. The bedding is inspected for mold and other obvious impurities when poured into the container.

#### d. Miscellaneous Animal Care and Use Equipment

- i. Describe motorized vehicles and other equipment (e.g., trailers) used for transporting animals, noting the type and how the cargo compartment is environmentally controlled, if applicable.

N/A – no motorized vehicles are utilized.

- ii. Describe other animal care related equipment used in the animal care program (specialized equipment for exercise or enrichment, high pressure sprayers, vacuum cleaners, tractors, trailers, spreaders, etc.).

Squeegees, hose-end sprayer, wet-dry vac, mop/bucket.

#### e. Sanitation [Guide, pp. 69-73]

##### i. Bedding/Substrate Change

- 1) Describe frequency of contact and non-contact bedding change for each species and enclosure type (solid-bottom or suspended) or pen.

The rodent cages are changed one to two times each week.

- 2) Describe any IACUC/OB approved [exceptions](#) to frequencies recommended in the *Guide* or applicable regulations and the criteria used to justify those exceptions.

None.

- 3) Note the location where soiled bedding is removed from the cages/enclosures and where clean bedding is placed into the cages/enclosures.

Soiled bedding is removed from cages in Room 510 and put into plastic bags which are sealed and boxed, then placed in the hallway inside the ACF door for daily pick up and disposal. Clean cages are bedded in Room 504.

##### ii. Cleaning and Disinfection of the Micro- and Macro-Environments

*Note:* A description of the washing/sanitizing frequency, methods, and equipment used should be included in **Appendix 14** (Cleaning and Disinfection of the Micro- and Macro-Environment) and **Appendix 15** (Facilities and Equipment for Sanitizing Materials).

- 1) Describe any IACUC/OB approved [exceptions](#) to the *Guide* (or applicable regulations) recommended sanitation intervals.

None.

- 2) Assessing the Effectiveness of Sanitation and Mechanical Washer Function

- a) Describe how the effectiveness of sanitation procedures is monitored (e.g., water temperature monitoring, microbiological monitoring, visual inspections).

Sodium hypochlorite and a detergent are used during the washing process. Equipment is checked for visual cleanliness before being stored for re-use. The temperature of water in the wash tub is monitored by the ACT and quarterly the ACT prepares petri plates to test for the growth of bacteria (CFU'S). Swabs are done on cage racks, caging, floors, and equipment before and after sanitization to ensure cleanliness of the facility.

- b) Describe preventive maintenance programs for mechanical washers.

No mechanical washers.

**f. Conventional Waste Disposal** [*Guide*, pp. 73-74]

Describe the handling, storage, method and frequency of disposal, and final disposal location for each of the following:

- i. Soiled bedding and refuse.

Soiled bedding and refuse are bagged in 55 gal. plastic bags, tied shut, and placed in compactor boxes. The boxes are sealed with tape and set outside on the loading dock to be picked up daily and taken to the county landfill.

- ii. Animal carcasses.

Animal carcasses are bagged and stored in a freezer in the surgery room in the facility until removed by physical plant personnel for incineration.

**g. Pest Control** [*Guide*, p. 74]

- i. Describe the program for monitoring and controlling pests (insects, rodents, predators, etc.). Include a description of:
- monitoring devices and the frequency with which devices are checked
  - control agent(s) used and where applied, and

- who oversees the program, monitors devices, and/or applies the agent(s).

Sticky traps are used in each room. Traps are to collect insects. No other pests have been found within the ACF. The ACT monitors the insect population and changes the sticky traps as needed (or every 6 months). Sanitation and storage practices keep the insects to a minimum.

- ii. Describe the use of natural predators (e.g., barn cats) or guard animals (e.g., dogs, donkeys) used for pest and predator control, if applicable.

N/A

- iii. Note how animal users are informed of pesticide use and how animal users may opt out of such use in specific areas.

N/A – There is no spray insecticide used in the facility.

#### **h. Weekend and Holiday Animal Care** [*Guide*, pp. 74-75]

- i. Describe procedures for providing weekend and holiday care. Indicate who (regular animal care staff, students, part-time staff, etc.) provides and oversees care and what procedures are performed.

The ACT's student employee(s) comes in on weekends/holidays to observe the animals and ensure they have food, water, and are otherwise healthy. The full-time ACT will notify the student employees of any changes in procedure each week. No cleaning or other usual weekday chores are done on the weekend, unless necessary.

- ii. Indicate qualifications of weekend/holiday staff if not regular staff.

The student employees have been trained by the full-time ACT in all the required duties such as: cage changing and cleaning, weaning, water bottle changes and cleaning, room sanitation, record keeping, and animal monitoring.

- iii. Describe procedures for contacting responsible animal care and/or veterinary personnel in case of an emergency.

Emergency contact information is provided in the ACF. Everyone can contact the AV or ACF or PI if needed. The primary concern is to ensure the animal is cared for in a timely manner. If the ACT observes an animal in distress, she has the authority by the AV to verify with the PI that it is not as result of a procedure and euthanize the animal if necessary.

## 2. Population Management [Guide, pp. 75-77]

### a. Identification

Describe animal identification methods for each species (e.g., microchips, cage/tank cards, collars, leg bands, tattoo, ear tags, brands).

Mice – cage card, and electronic ID chips (if designated in protocol)

Rats – cage card

Hamsters - cage card, and electronic ID chips (if designated in protocol)

Cage cards contain the PI, protocol number, birth date, arrival date, species, sex, and strain.

### b. Breeding, Genetics, and Nomenclature

- i. Describe the program for advising investigators on the selection of animals based on genetic characteristics.

The animal use protocol asks for the strain of animals to be used. This enables the IACUC to provide oversight that a PI is selecting a specific strain of animals. Further selection for genetic purity is based on selection of vendors that monitor the genetic quality of their production animals.

- ii. Describe the program for advising investigators on using standardized nomenclature to ensure proper reporting of the identification of the research animals with regard to both the strain and substrain or the genetic background of all animals used in a study.

The ACT enters all information on the cage cards. The information is taken from the strain identification on the shipping labels when received from the approved vendor. Common strains used are balb/c mice, golden Syrian hamsters, and Lewis and SD rats.

- iii. Describe genetic management techniques used to assess and maintain genetic variability and authenticity of breeding colonies, including recordkeeping practices (Guide, pp. 75-76).

N/A

- iv. For newly generated genotypes, describe how animals are monitored to detect phenotypes that may negatively impact health and well-being. Note that the methods used to report unexpected phenotypes to the IACUC/OB should be described in section 2.1.B.1.c.ii, “Unexpected Outcomes that Affect Animal Well-Being.”

N/A

### III. **Veterinary Care** [*Guide*, pp. 105-132]

*Note:* Complete each section, including, where applicable, procedures performed in farm settings, field studies, aquatic environments, etc.

#### A. **Animal Procurement and Transportation** [*Guide*, pp. 106-109; *Ag Guide*, pp. 8; 45; 50-57]

##### 1. **Animal Procurement**

Describe the method for evaluating the quality of animals supplied to the institution (from commercial vendors, other institutions, etc.).

All animals are ordered by Sarah Catlin, the ACT, she only purchases from an approved list of commercial dealers from whom a health report is provided. Dealers used include Charles River, Jackson Laboratories, and Envigo. Any health concerns noted when animals are received is reported to the vendor, the AV, and the PI.

##### 2. **Transportation of Animals**

Describe how animals are transported between outside sources and the institution and within the institution, including loading, unloading, level of biosecurity, immune status and specific pathogen status (consider all species, including aquatic and semi-aquatic species).

Animals are transported via temperature-controlled vehicles from the courier directly to Hubbard Hall. They bring them up the elevator on a cart. The animals are taken into the ACF by the ACT. She sprays the outside of the container with Process NPD before taking it into the animal holding room.

#### B. **Preventive Medicine**

##### 1. **Animal Biosecurity** [*Guide*, pp. 109-110]

- a. Describe methods used to monitor for known or unknown infectious agents. Note that if sentinel animals are used, specific information regarding that program is to be provided below.

Sentinel animals are used for longer-term studies. A sentinel animal receives dirty bedding from the other animals to gain exposure. The AV sends serum samples to IDEXX for testing.

- b. Describe methods used to control, contain, or eliminate infectious agents.

If an animal is determined to be infectious, immediate separation would occur. The animal would be handled last along with proper PPE and sanitation. The animal may undergo treatment and/or euthanasia if warranted.

## 2. Quarantine and Stabilization [*Guide*, pp. 110-111]

### a. Describe the initial animal evaluation procedures for each species.

Upon arrival, the animals in the shipping carton are temporarily held in the hallway. At this time, the health surveillance report is examined to determine the health quality of the animals based on their room source from the vendor. The carton can be sprayed with Process NPD to reduce contamination risk. Then the shipping carton is taken to the room in which the animals are to be housed. The animals are visually observed as they are placed in their cages.

### b. Describe quarantine facilities and procedures for each species. For each species, indicate whether these practices are used for purpose-bred animals, random-source animals, or both.

All rodents are purpose-bred animals. Newly arrived animals are kept under visual observation and have their cages changed after all extant animals have been changed.

### c. Describe the required/recommended stabilization period for each species.

Standard procedure is to give all animals arriving at the facility a one-week period to stabilize before introducing them into the study for which they were obtained.

## 3. Separation by Health Status and Species [*Guide*, pp. 111-112]

### a. Describe the program for the separation of animals by species, source, and health status. If the animals in different status are not maintained separately, describe circumstances in which mixing occurs and explain the rationale for mixing.

Each species is always housed separately. Only purpose-bred rodents from known vendors with health reports are used. The newest arrivals are cleaned last and monitored closely after arrival for their health status.

### b. Describe situations where multiple species may be housed in the same room, area, or enclosure.

N/A

### c. Describe isolation procedures and related facilities for animals.

If animals need to be isolated due to health status or arrival, they are placed on a separate rack, and cage changes are done last. The cages can be marked to identify ill animals. Mice have micro-isolator lids.

## **C. Clinical Care and Management** [*Guide*, pp. 112-115]

### **1. Surveillance, Diagnosis, Treatment and Control of Disease** [*Guide*, pp. 112-113]

- a. Describe the procedure(s) for daily observation of animals for illness or abnormal behavior, including:
- the observers' training for this responsibility
  - method(s) for reporting observations (written or verbal)
  - method(s) for ensuring that reported cases are appropriately managed in a timely manner.

The ACT has received her ALAT Certification and is experienced in observing abnormal behavior. If illness is observed, the PI is notified. If the animal needs euthanized the PI or ACT handles it immediately. The AV is available for consultation via phone or email and may follow up with observation and examination, including necropsy. If the student employee observes an ill animal, they contact the ACT and/or the AV for advice.

- b. Describe methods of communication between the animal care staff and veterinary staff and the researcher(s) regarding ill animals.

PIs and their staff, as well as the ACTs, have access by phone or email to the AV and/or the Back-Up AV to report any injuries, illnesses, or death. Most often the ACTs will report any illness to the PI's staff who determines if the animal should be sacrificed or the AV will be contacted for treatment and/or advice

- c. Describe the preventive medicine and health management/monitoring programs (e.g., physical examination, TB testing, vaccination, hoof/nail trimming, teeth cleaning/floating, vendor surveillance, use of sentinel animals) for each species.

Sentinels can be used for rats, mice, and/or hamsters if needed for longer-term studies. Monitoring of the health status of animals in this facility occurs mostly through daily observation. The AV inspects each animal 1-2 times per month.

### **2. Emergency Care** [*Guide*, p. 114]

- a. Describe the procedures to ensure that emergency veterinary care is continuously available for animals during and outside of regular work hours, including access to drugs or other therapeutics and equipment.



Emergency phone numbers are posted in three conspicuous places within the animal facility. The ACT and/or AV should be contacted first and if unavailable the PI. Access to drugs is available to the ACT, AV, and the PI's at all times.

- b.** Describe the authority of the Attending Veterinarian or his/her designee relative to the emergency treatment of animals in the program.

The AV determines a course of emergency treatment and/or euthanasia and has the authority to treat and/or euthanize animals based on her professional judgment. Most often ill rodents are euthanized, and a necropsy done if necessary. If the AV is not available, the PI or the ACT will euthanize the animal.

**3. Clinical Record Keeping** [*Guide*, p. 115]

- a.** Describe the procedure for maintaining medical records and documenting treatment of ill animals including: clinical laboratory findings, diagnoses, treatments, medical progress records, etc. Identify the species for which individual records are maintained and where such records are kept.

The AV is responsible for ensuring effective systems exist for documentation of animal medical records. The AV monitors animal health during her inspections and makes notations as necessary. Most often, ill animals are euthanized. Notations are made on the cage cards as well as the animal room inventory sheets which are kept on the room door.

- b.** Identify individual(s) (titles, not necessarily names) responsible for maintaining such records and identify where the records are maintained and who, including the IACUC/OB has access to the records.

The ACT maintains the records. After the current month has passed, she maintains them in her office which is available to the IACUC, USDA, or AV if needed.

- c.** Describe the role of the Attending Veterinarian in recordkeeping.

The AV makes notations during her monthly inspections which are included in the report that goes to the ACT and is maintained in the ACT's office.

**4. Diagnostic Resources.** Describe available diagnostic methods used in the program including:

- a.** In-house diagnostic laboratory capabilities.

N/A

- b. Commercially provided diagnostic laboratory services.

IDEXX BioResearch

- c. Necropsy facilities and histopathology capabilities.

There are no histopathology capabilities in this facility. Necropsies are conducted in Room 509, typically by the PI.

- d. Radiology and other imaging capabilities.

x-ray is available

## 5. Drug Storage and Control

- a. Describe the purchase and storage of controlled and non-controlled drugs.

Controlled drugs are kept in a locked drawer in the surgery room and only the full-time ACT, AV, and PIs holding an approved protocol have access to the key. Non-controlled drugs are maintained in the Animal Facility, in the designated refrigerator if needed.

- b. Describe record keeping procedures for controlled substances.

For controlled drugs, a usage log is maintained in the storage drawer and users are instructed to enter the amount used as it is administered. The full-time ACT and AV monitors the compliance of this record keeping. Individual records are also kept in a log in the surgery room for live surgeries. This log is reviewed by the AV during her inspections.

## D. Surgery [Guide, pp. 115-123]

### 1. Pre-Surgical Planning [Guide, p. 116]

Describe the process(es) used to ensure adequate pre-surgical planning, including: identifying personnel; locating equipment, supplies, veterinary involvement for selecting analgesic and anesthetic agents and facilities; planning; and pre- and post-operative care.

PIs consult with AV during the protocol preparation and may also be advised on the proper means of surgery (including both pre- and post-operative features) by the IACUC during the review process of their protocols. The AV may observe a surgical procedure to ensure proper surgical procedures are in place. Also, the PI works with the ACT to ensure supplies are available, including equipment and facilities, etc. The ACT purchases all

controlled drugs to be used and she only purchases the controlled drugs approved by the AV and the IACUC protocol.

## 2. **Surgical Facilities** [*Guide*, pp. 116-117, 144-145]

List building name(s) and room number(s) or other locations (coded, if confidential) where surgical procedures are performed. For each, describe:

- the type of species (including rodents, fish, agricultural species, etc.)
- nature of procedure(s) (major/minor/emergency, survival and non-survival, etc.)
- the amount of use [heavy (daily), moderate (weekly), or light]
- major surgical support equipment available (gas anesthesia machines, respirators, surgical lights, etc.)
- facilities for aseptic surgery, surgical support, animal preparation, surgeon's scrub, operating room, and postoperative recovery
- construction features of the operating room(s), including interior surfaces, ventilation, lighting, and fixed equipment used to support surgical procedures and other means of enhancing contamination control

*Note:* If preferred, the information requested in this section may be provided in Table.

Surgical Room 509:

-all major/minor surgeries. Rodents only.

-moderate to light use.

-surgical light, isoflurane gas, heating pads/light available. Also, surgical scrub and aseptic supplies are available as needed.

-the surgery room has a stainless-steel surgery table. The prep and post-op area is a laminate countertop adjoining a hands-free sink.

## 3. **Surgical Procedures** [*Guide*, pp. 117-118]

- a. Describe the criteria used to differentiate major from minor survival surgery, including classification for certain procedures (e.g., laparoscopic technique).

A major surgical procedure is one that penetrates and exposes a body cavity or may produce substantial impairment of physical or physiological function. A minor surgical procedure is any surgical procedure to which the definition for a major procedure does not apply. Survival procedures are those in which the animal is allowed to recover from surgical anesthesia following completion of the procedure. An example of major survival surgery in rodents would be intracranial implantation of guide screws. An example of minor surgery in rodents would include incision of skin to facilitate mammary fat pad injections.

**b. How is non-survival surgery defined?**

Non-survival surgery is a surgical procedure performed under appropriate general anesthesia, after which the animal is euthanized while still anesthetized.

**4. Aseptic Technique** [Guide, pp. 118-119]

**a. Describe procedures, equipment, and protective clothing used for aseptic surgery. Include patient and surgeon preparation.**

Instruments and drapes are sterilized by autoclaving. The incision site is clipped to remove hair and the site swabbed with betadine solution to disinfect. Also, appropriate PPE is worn per protocol such as latex gloves, gowns, and masks.

**b. Describe methods used to sterilize instruments and protective clothing, including a description of approved [liquid sterilants](#) and instrument exposure time(s) required for each, if applicable.**

Instruments and drapes are sterilized by autoclaving.

**c. Describe methods for instrument re-sterilization between serial surgeries.**

Re-sterilization by liquid chemical sterilants (chlorhexidine) can be used.

**d. Indicate how effectiveness of sterilization is monitored.**

Autoclave tape is used in sterile packs.

**e. Describe surgical support functions provided by the program to investigators.**

The AV can provide surgical support to PI's when requested or deemed necessary. Otherwise, the PIs are responsible for training their staff to assist them appropriately.

**5. Intraoperative Monitoring** [Guide, p. 119]

Describe monitoring and recording requirements for each species, including the type of record(s) maintained. Also note monitoring of anesthesia during non-survival procedures.

Intraoperative monitoring of rodents is generally conducted by the PI performing the procedure and consists of visual monitoring of respiration and anesthetic depth as judged by reflexes and response to stimuli. This also applies to non-survival surgeries.

**6. Postoperative Care** [Guide, pp. 119-120]

Describe the postoperative care program, including who is responsible for overseeing and providing the care, types of records maintained (e.g., perioperative), where the records are maintained, etc.

Research personnel and or the ACT or AV monitor animals post-surgery and maintain records in the ACF. Animals recovering from anesthesia are placed in a clean cage to prevent infection of the surgical wound, provided with supplemental warmth, and kept under continuous observation. Observation continues until animals are sternal and clearly beginning to wake up. They are individually housed until they are ambulatory to prevent cannibalism or suffocation. A member of the PI's staff observes post-surgical animals daily until all sutures, wound clips, or other implanted devices have been removed.

Analgesia is required for any survival surgeries. The plan for providing postoperative analgesia must be described in the animal protocol and include agent, dose, and administration schedule.

#### **E. Pain and Distress** [*Guide*, pp. 120-121]

1. Describe how and by whom pain and distress are assessed.

Potential pain and distress are assessed by the AV in consultation with the PI during protocol review. Each protocol is assessed for degree of pain, adequate anesthetic depth necessary and duration to complete the procedure. If the PI is inexperienced in pain monitoring, the AV can choose to attend surgical procedure(s) to ensure the animals are being managed properly. Post-op the animals are monitored by the PI, their staff, and the ACT.

2. Describe training programs for personnel responsible for monitoring animal well-being, including species-specific behavioral manifestations as indicators of pain and distress.

Training for personnel responsible for monitoring animal well-being is handled by the AV. The AV ensures the PI and their staff knows the behaviors that painful rodents may express relative to their study procedures. Rodent manifestations of pain include hunched appearance, increased respiration, lack of mobility, porphyrin staining, and lack of grooming. The ACT also monitors the animals on a daily basis.

#### **F. Anesthesia and Analgesia** [*Guide*, pp. 121-123]

1. List the agents used for each species.

*Note:* If preferred, this information may be provided in Table or additional Appendix.

Agents most frequently used on rodents include ketamine, xylazine, isoflurane, and pentobarbital.

2. Describe how the veterinarian provides guidance and advice to researchers concerning choice and use of anesthetics, analgesics or other pain moderating methods.

The AV consults with individual PIs to determine the appropriate agents for any particular process. The AV pre-reviews animal care and use forms and provides advice about anesthesia and analgesia.

3. Describe the monitoring of the effectiveness of analgesics, including who does the monitoring. Include in the description any non-pharmacologic means used to diminish pain and distress.

Rodents are monitored during anesthesia for presence of pedal reflexes, and rate and depth of respiration. Intraoperative monitoring is generally performed by research personnel. Post-surgical monitoring includes keeping the animal warm with heat lamp or heat pad and keeping them isolated to reduce stress from other animals.

4. Describe how the veterinarian(s) and the IACUC/OB evaluate the proposed use of neuromuscular blocking agent to ensure the well-being of the animal.

Neuromuscular blocking agents must be approved by the IACUC and can only be used in anesthetized animals with appropriate anesthetic monitoring and mechanical ventilation. Use of NMB agents in un-anesthetized animals is not permitted.

5. Describe policies and practices for maintaining and ensuring function of equipment used for anesthesia.

The isoflurane machine receives annual servicing. Functionality and integrity of the isoflurane set up is verified by the technologist prior to use. This includes oxygen, checking the isoflurane level, pop-off valve setting, tubing attachments and carbon scavenging canisters. A maintenance log is kept updated.

## **G. Euthanasia** [Guide, pp. 123-124]

1. Describe approved methods of euthanasia, including humane slaughter (for additional guidance, see pertinent [AAALAC Reference Resources](#)). Include:
  - consideration of species, age, condition (e.g., gestational period, or neonatal) and
  - location(s) for the conduct of the procedure.

*Note:* If preferred, this information may be provided in Table or additional Appendix.

Animals are euthanized in compliance with the 2013 AVMA Guideline on Euthanasia.

Hamsters are euthanized by an overdose of pentobarbital, by decapitation, or cervical dislocation after being rendered unconscious with carbon dioxide.

Rats are euthanized by carbon dioxide inhalation, followed by cervical dislocation.

Mice are euthanized by an overdose of pentobarbital or inhalation of carbon dioxide followed by cervical dislocation.

2. Describe policies and practices for maintaining and ensuring function of equipment used for euthanasia.

The ACT monitors the system used to ensure efficacy. In the event of an equipment malfunction, a trained operator will perform a second physical method of euthanasia.

3. Describe the methods used to confirm death of an animal.

No respiration, lack of auscultable heartbeat, absence of corneal reflex, lowering body temperature, rigor.

#### IV. Physical Plant [Guide, pp. 133-155]

##### A. Facilities Overview

Provide a brief introduction to the animal housing and use facilities. Note that this overview should augment the information provided in **Appendix 2** (Summary of Animal Housing and Support Sites), which includes area, average daily census, and person responsible for each site. Please use consistent terminology for the buildings/areas/sites described in the Location section of the Appendix. Please do not repeat information, but supplement the descriptions provided elsewhere to assist the reviewers understanding of the interaction between facilities, special housing locations, and separate procedural areas.

The animal facility is located on the fifth floor of R. Dee Hubbard Hall and occupies a suite of ten rooms numbered 501 through 510. The ACF Director is Dr. William Hendry. The research laboratories are located in R. Dee Hubbard Hall on the fourth and fifth floors.

##### B. Centralized (Centrally-Managed) Animal Facility(ies)

In this section, describe each centralized or centrally-managed animal housing and use facility. Include in **Appendix 3** the floor plans of each on 8.5" x 11" or A4 paper. Ensure that the drawings are legible and the use of each room is indicated (animal housing, procedure room, clean cage storage, hazardous waste storage, etc.). Note that a separate section for describing "satellite housing areas" is included below.



Separately describe **each** Location or Animal Facility, addressing each of the features outlined below (1-8). A complete description of each must be provided; however, common features among locations or facilities may be indicated as such and do not need to be repeated.

1. General arrangement of the animal facilities (conventional, clean/dirty corridor, etc.).
2. Physical relationship of the animal facilities to the research laboratories where animals may be used.
3. Types of available animal housing spaces used, such as conventional, barrier, isolation/quarantine, hazard containment (infectious, radioactive, chemical), "animal cubicles" or facilities specifically designed for housing certain species such as ponds, pastures, feedlots, etc.
4. Finishes used throughout the animal facility for floors, walls, ceilings, doors, alleyways, gates, etc. (note any areas that are not easily sanitized and describe how these are maintained).
5. Engineering features (design, layout, special HVAC systems, noting exhaust air treatment, if applicable) used in hazardous agent containment.
6. Security features, such as control of entry, perimeter fences, gates, entryways, cameras, guards; identify and describe exceptions for individual facilities or areas incorporating fewer or additional security features than the general features described.
7. Consideration for facilities with exterior windows, if applicable, including management of environmental conditions (i.e., temperature and photoperiod control) and potential security risks.
8. Storage areas for flammable or hazardous agents and materials (e.g., disinfectants, cage-washing chemicals, pesticides, fuel).

1. The Animal Care Facility (ACF) is a compact conventional housing unit with a single U-shaped corridor.
2. The ACF is located on the 5<sup>th</sup> floor of Hubbard Hall. The research laboratories are on the 4<sup>th</sup> and 5<sup>th</sup> floors of Hubbard Hall. Most often, animals are used in the ACF only. If animals leave the facility they cannot return to an animal room to prevent exposure to contamination.
3. Conventional housing spaces are all that is available at this time. If animals are exposed to hazardous materials or had compromised health, they can be maintained in a separate room in most cases.
4. The floors throughout the facility hallways and most animal rooms are monolithic hard surface, non-slip plastic. Some rooms have been re-sealed or patched with water-safe flooring paint. Walls are cinder block sealed by painting and ceilings are painted cement. Doors are wood with painted metal frames.
5. Each room in the ACF has 100% outside air exchanges to reduce hazardous agent contamination. The hallway has 2 doors that are kept shut to prevent further air-flow to various spaces in the facility.
6. Security features include only 2-entry/exit doors that are secured with electronic locks. A key-card must be activated by the ACT to gain access and the card must be swiped to enter the facility. A key is available to the ACT and the AV in case of emergency/power failure.



7. No exterior windows.
8. Cage-washing chemicals and disinfectants are stored either in the cleaning room or dirty room in their original containers or in labeled spray-bottles. Quick-sorb is available in case of a spill.

### C. Satellite Animal Housing Facilities

In addition to the Appendices summarizing Heating, Ventilation, and Air-Conditioning (**Appendix 11**) and Lighting Systems (**Appendix 16**), summarize animal housing areas that are not centrally-managed or maintained in (**Appendix 17**), "Satellite Animal Housing Areas."

1. Describe the criteria used to determine/define a "Satellite Animal Housing Area," which may include remote housing facilities or laboratories temporarily or consistently housing animals.

N/A

2. Describe the process used by the IACUC/OB to authorize, provide oversight of, and ensure compliance with *Guide* standards for the housing of animals outside of centrally-maintained facilities. Include a description of Attending Veterinarian access and physical security.

N/A

### D. Emergency Power and Life Support Systems

*Note:* Complete a Heating, Ventilation, and Air-Conditioning (HVAC) Summary (**Appendix 11**) and Lighting Summary (**Appendix 16**) for each Location described in the Summary of Animal Housing and Support Sites (**Appendix 2**).

#### 1. Power [*Guide*, p. 141]

For each Location, Centralized Animal Facility, and Satellite Housing Facility, provide a brief description of the following:

- Availability of [emergency power](#) and if so, what electrical services and equipment are maintained in the event the primary power source fails.
- History of power failures, noting frequency, duration, and, if emergency power was not available, steps taken to ensure the comfort and well-being of the animals present and the temperature extremes reached in animal rooms during the failure.

Emergency power is provided for egress only via an on-site generator in an emergency. Power failures are rare and of short duration. Facilities services have generators that can be used to plug-in space heaters, de-humidifiers, and/or fans if needed. The only power-outage in the last 3-5 years was due to scheduled change of equipment in the building. The

outage lasted approx. 4 hours and no temperature extremes occurred, but space heaters were provided if needed.

- 2. Other System Malfunctions.** If not previously reported, describe animal losses or health problems resulting from power, HVAC, or other life support system (e.g., individually ventilated cages) failures, and mechanisms for reporting such incidences. [AAALAC International Rules of Accreditation](#) (Section 2.f).

None to report

**E. Other Facilities** [*Guide*, pp. 144, 150]

**1. Other Animal Use Facilities** [*Guide*, pp. 146-150]

Describe other facilities such as imaging, irradiation, and core/shared behavioral laboratories or rooms. Include a description of decontamination and methods for preventing cross-contamination in multi-species facilities.

N/A

**2. Other Animal Program Support Facilities**

Describe other facilities providing animal care and use support, such as feedmills, diagnostic laboratories, abattoirs, etc.

N/A

## Appendix 1: Glossary of Abbreviations and Acronyms

Please provide a Table defining abbreviations and acronyms used in this Program Description.

Abbreviation/Acronym	Definition
ACF	Animal Care Facility
ACT	Animal Care Technician
AV	Attending Veterinarian
CITI	Collaborative Institute Training Initiative
DMR	Designated Member Review
FCR	Full Committee Review
LAS	Liberal Arts & Sciences
OHP	Occupational Health Program
OHS	Occupational Health & Safety
OHSP	Occupational Health & Safety Program
PAM	Post Approval Monitoring
PPE	Personal Protective Equipment
SOP	Standard Operating Procedures
WSU	Wichita State University

## Appendix 2: Summary of Animal Housing and Support Sites

Briefly summarize in the following Table the animal facility or facilities, noting the number of areas in which animals are housed (buildings, floors, farms, etc.), the total square footage/metres (or acreage) for animal care and use, and the total square footage/metres (or acreage) for necessary support of the animal care and use program covered by this Description (water treatment plant/area if housing aquatic or amphibian species, cagewashing facilities, service corridors, etc. and additional areas to be considered are enumerated in the *Guide*). If more than one facility/site, note the approximate distance (yards/miles or meters/kilometers) to each facility from a reference point such as from the largest animal facility. A campus/site map (with a distance scale) may be included as an additional Appendix (Appendix 2.1) to provide this information. See [Instructions, Addendum A - Animal Facility Square Footage/Meters Compilation Form](#) for guidance in calculating the size of your animal care and use program.

Animal Housing and Support Sites						
Location (building, site, farm name, etc. <sup>a</sup> )	Distance from main facility <sup>b</sup>	Approx. ft <sup>2</sup> , m <sup>2</sup> , or acreage for animal housing	Approx. ft <sup>2</sup> , m <sup>2</sup> , or acreage for support or procedures	Species housed	Approx. Daily Animal Census by species	Person in charge of site
Hubbard Hall	One site only	1,000	778	Mice, rats, hamsters	Mice-50 Rat-4 Hamster-4	Dr. Hendry

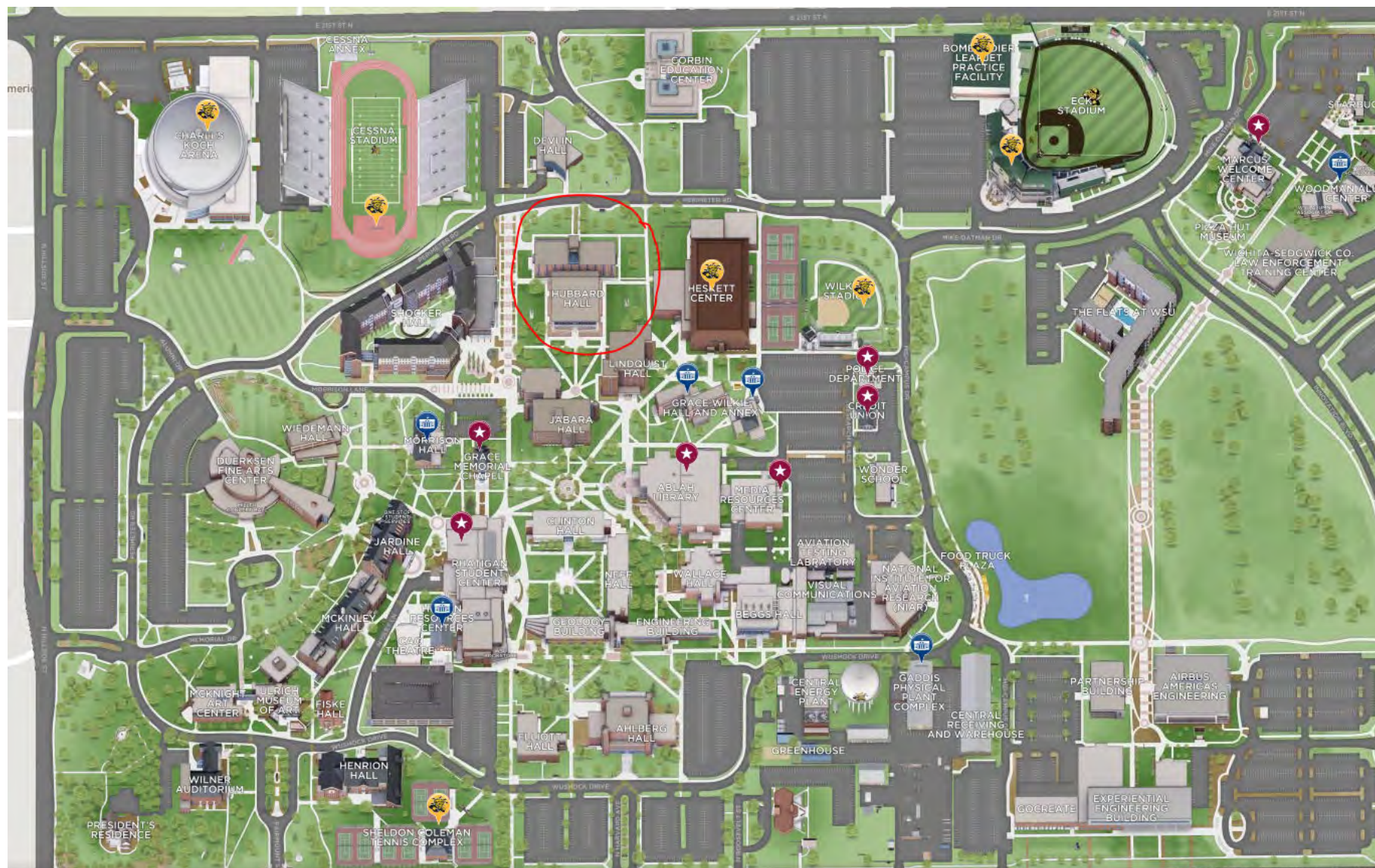
<b>Totals:</b>	<b>1,000 sf</b>	<b>778sf</b>	
<b>Total animal housing and support space:</b>	<b>1,778 s.f.</b>		
	<b>(please specify ft<sup>2</sup> or m<sup>2</sup>)</b>		



## Appendix 2: Summary of Animal Housing and Support Sites

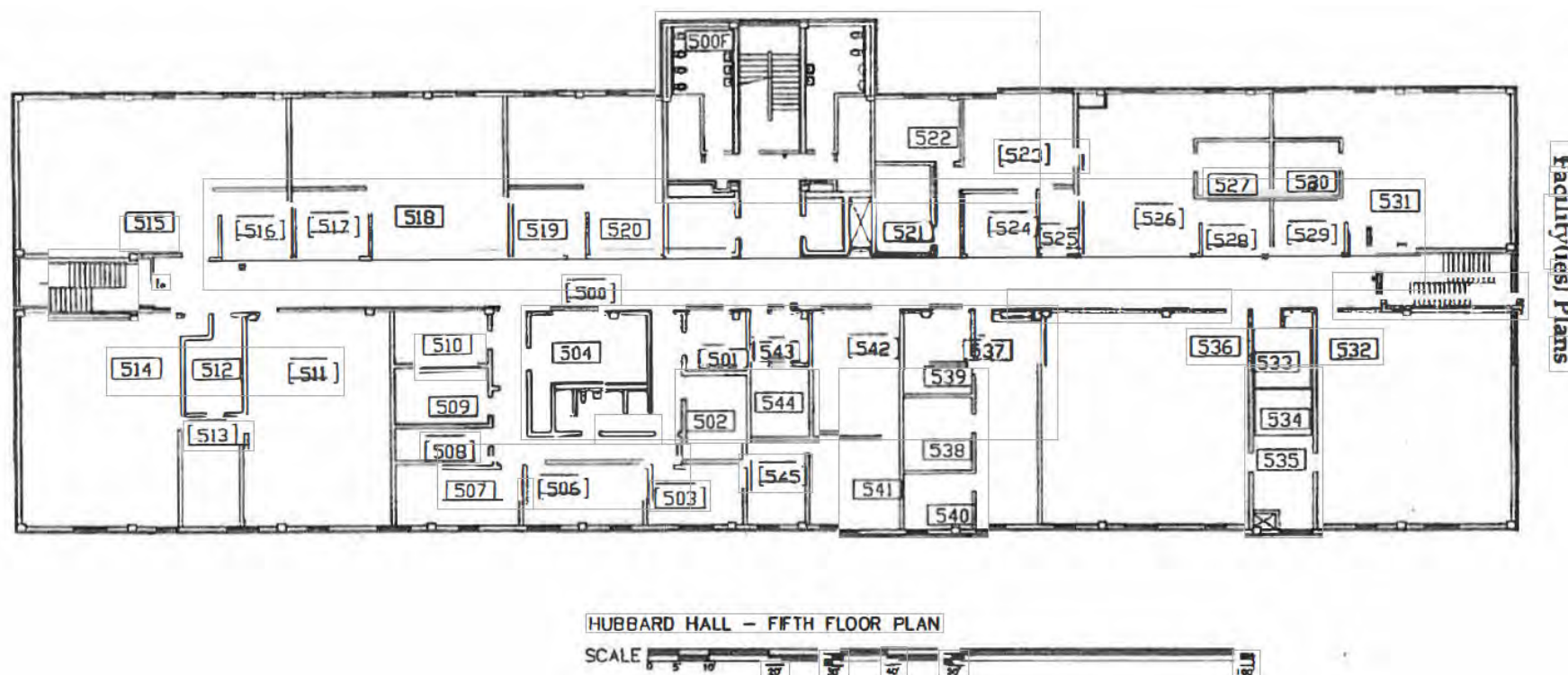
<sup>a</sup>Please state name and/or use acronyms described in **Appendix 1** for building names, if not coded for confidentiality.

<sup>b</sup>Campus or site map(s) may also be provided in lieu of this information.



## Appendix 3: Line Drawings

Provide floor plans of each centralized animal housing facility. Plans should be provided on 8.5" x 11" or A4 paper. Ensure that the drawings are legible, including room numbers if used, and the use of each room is indicated (animal housing, procedure room, clean cage storage, hazardous waste storage, etc.) either directly on the drawing or in a Key/Table.



### Animal Care Facility floor plan key:

501: clean storage	504: 'clean' (cage washing) room	508: feed storage room
502: rat room	506: empty animal room (rabbit room, if housed)	509: surgery room
503: hamster room	507: mouse room	510: 'dirty' (cage dumping) room

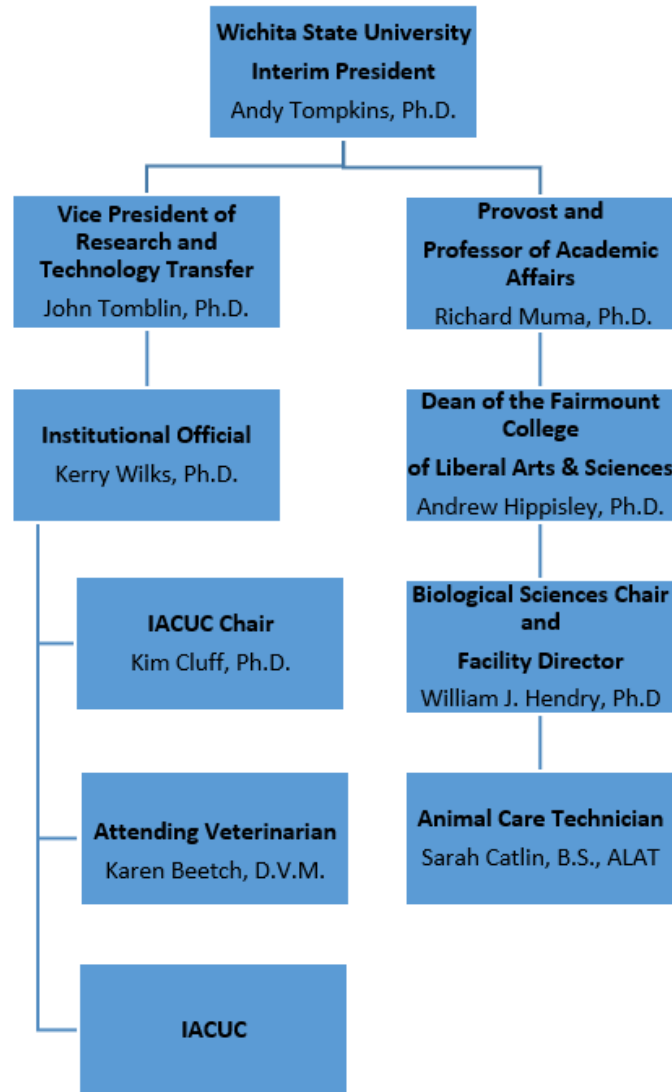
### Rooms outside of ACF to note:

543: ACF technician office
544: bedding storage room



## Appendix 4: Organizational Chart(s)

Provide an accurate, current, and detailed organization chart or charts that detail the lines of authority from the Institutional Official to the Attending Veterinarian, the IACUC/OB, and personnel providing animal care. If applicable, include personnel responsible for managing satellite housing areas/locations and depict the reporting relationship between the Attending Veterinarian and other(s) having a direct role in providing veterinary care.



## Appendix 5: Animal Usage

In order to assist the site visitors in their evaluation of the animal care and use program, please provide the information requested below. Information should be provided for all animals approved for use in research, teaching or testing, including those which may be used or housed in laboratories outside the animal care facility. Of particular interest is information on those animals which are used in research projects involving recovery surgical procedures, behavioral or other testing requiring chairing or other forms of restraint, or exposure to potentially hazardous materials. An alternate format is acceptable as long as the information requested is provided.

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	Pain & Distress Category (1)	Special Considerations (use checkmark if applicable)					
						SS (2)	MSS (3)	FFR (4)	PR (5)	HAU (6)	NCA (7)
Age-related Changes in Gonadotropin Glycosylation and Function	155	George Bousfield	Mouse	150	D						
Age-related Changes in Gonadotrophin Glycosylation and Function	165	George Bousfield	Rat	483	D						
Porcine LH and FSH	169	George Bousfield	Rat	450	C						
In Vitro Study of Axon Growth and Mylenation Using Dorsal Root Ganglion Cells	183	Li Yao	Rat	315	C						
Breeding Colony	198	Li Yao	Rat	342	C						
Age-related Changes in Gonadotrophin Glycosylation and Function	211	George Bousfield	Hamster	990	C						
Sentinel Animals	230	Karen Beetch	Mouse, rat, hamster	4	C						



## Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	Pain & Distress Category (1)	Special Considerations (use checkmark if applicable)					
						SS (2)	MSS (3)	FFR (4)	PR (5)	HAU (6)	NCA (7)
Production of Murine Neuronal Stem Cells	234	Michael Heggeness	Mouse	240	D	x					
Production of Rat Neuronal Stem Cells	237	Michael Heggeness	Rat	90	D	x					
FSH Glycoform Assay Kit	241	George Bousfield	Mouse	210	D					x	
Small Herbivore Impacts on Grassland Plant Communities	242	Greg Houseman	Various herbivores	Catch and release	C						
IL-21 Gene-Tethering Nanofiber Mesh for Osteosarcoma	246	Shang-You Yang	Mouse	75	D	x					
NEDAPS Cells and Their Differentiated Fibroblasts for Skin Wound Healing	255	Michael Heggeness	Mouse	120	D	x					
Holding Protocol	257	Karen Beetch	Mouse, rat, hamster	As needed	C						
Differentiating NEDAPS Cells into Cardiomyocytes	258	Mohinder Vindhyal	Rabbit	2	D						
Developing a Human Patient "Avatar" System Particularly Relevant in Head and Neck Squamous Cell Cancer	260	William Hendry	Hamster	80	D	x					

## Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	Pain & Distress Category (1)	Special Considerations (use checkmark if applicable)					
						SS (2)	MSS (3)	FFR (4)	PR (5)	HAU (6)	NCA (7)
Repair of Wounded Spinal Cord	262	Li Yao	Rat	Pilot; 4	D	x					
Age-related Changes in FSH Glycosylation and Function	264	George Bousfield	Mouse	130	D					x	
The Investigation of the Repair of a Wounded Nerve	265	Li Yao	Rat	168	D	x					
Herpetofaunal Diversity Assemblages of WSU Field Station	266	Dexter Mardis	Reptiles, amphibians	Catch and release	C						
Measurement of Compound Muscle Action Potential Using a Electromyography Machine	269	Li Yao	Rat	4	C						
Bone Formation Potentials of Peripheral Nerve-Derived Pluripotent Stem Cells on a Mouse Fibular Fracture Model	271	Shang-You Yang	Mouse	70	D	x					
Nerve-Derived Pluripotent Stem Cells for Intervertebral Disc Degeneration in a Rat-tail Puncture Model	272	Shang-You Yang	Rat	30	D						

## Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	Pain & Distress Category (1)	Special Considerations (use checkmark if applicable)					
						SS (2)	MSS (3)	FFR (4)	PR (5)	HAU (6)	NCA (7)
Bird Strike Testing	273	Billy Martin	Chicken *animals not housed.	144	C						
Classifying Benign and Malignant Melanoma in Genetically Engineered Mouse Model using a Radio Frequency Resonator	274	Kim Cluff	Mouse	2	D	x					
Animal Amphibian Production in Seasonal Wetlands	275	Tom Luhning	Anurans, Caudates	Catch and release	C						

(1) If applicable, please provide a description / definition of any pain/distress classification used within this Appendix in the space below. If pain/distress categories are not used, leave blank.

(2) Survival Surgery (SS)

(3) Multiple Survival Surgery (MSS)

(4) Food or Fluid Regulation (FFR)

(5) Prolonged Restraint (PR)

(6) Hazardous Agent Use (HAU)

(7) Non-Centralized Housing and/or Procedural Areas (NCA), i.e., use of live animals in any facility, room, or area that is not directly maintained or managed by the animal resources program, such as investigator laboratories, department-managed areas, teaching laboratories, etc.

Pain/Distress Classification Description/Definition, if applicable:

Category C: Involves procedures that cause no pain or no more pain than momentary or slight pain and no pain-relieving drugs are used.

Category D: Involves procedures that may cause more than momentary or slight pain or distress for which appropriate sedatives, analgesics, or anesthetics will be administered.

Note that, although these are USDA pain categories, we use them for all species including mice and rats.

Appendix 5: Animal Usage

In the Table below, provide an approximate annual usage for all species:

Animal Type or Species	Approximate Annual Use	Animal Type or Species	Approximate Annual Use
Rats	8		
Mice	50		
Hamsters	4		

[Create additional rows by pressing TAB in the bottom-right box.]

## Appendix 6: Personnel Medical Evaluation Form

Provide a **blank** copy of form(s) used by medically-trained personnel to review individual health assessment, individual risk assessment, health history evaluation, health questionnaire, periodic medical evaluation, etc. If form(s) are not used, include a description of how such evaluations are performed in the Program Description (Section 2.I.A.2.b.ii.1).d), Section 2 (Description). I (Animal Care and Use Program). A (Program Management). 2 (Personnel Management). b (Occupational Health and Safety or Personnel). ii (Standard Working Conditions and Baseline Precautions). 1) (Medical Evaluation and Preventive Medicine for Personnel). d).

**(See the following pages)**

## Appendix 6: Personnel Medical Evaluation Form

### Health Risk Assessment Form 1 – Preplacement medical evaluation:

Every employee/student who is identified to participate in the animal care and use program at Wichita State University must enroll in the Occupational Health and Safety Program and undergo a preplacement medical evaluation. This form is used to establish baseline health information on employees/students before exposure to the risks associated with animal-related research. Pre-existing conditions that can affect an employee's capability to perform the essential functions of his or her position without risk of substantial harm might be identified. This form must be completed as part of the OHS program. This form requests personal health information. Because this information may be sensitive, send this OHSP Form directly to Via Christi Occupational Health at [REDACTED] or at the fax or physical address below. Do not send a copy to your supervisor or the IACUC since this personal health information is meant solely for the occupational health professional. **Please type or print CLEARLY.**

Date: \_\_\_\_\_ Protocol Number (if appropriate): \_\_\_\_\_ Faculty ☐, Staff ☐, Student ☐  
Name: \_\_\_\_\_ DOB (dd/mm/yyyy): \_\_\_\_\_ Male ☐, Female ☐  
Department: \_\_\_\_\_ Work Phone: \_\_\_\_\_ Email: \_\_\_\_\_  
Position/Title: \_\_\_\_\_ Supervisor/ PI (required): \_\_\_\_\_

1. I have previously completed this form for another protocol: NO ☐, YES ☐, if yes, Protocol# \_\_\_\_\_
2. List **ALL** species of animals you work with at WSU: \_\_\_\_\_
3. Describe your work with animals (i.e. feed & water, perform surgery, clean cages, restrain animals, etc.):  
\_\_\_\_\_  
\_\_\_\_\_
4. Will you work with wild animals? NO ☐, YES ☐, If yes, what species? \_\_\_\_\_
5. Do you work with sick animals? NO ☐, YES ☐, If yes, explain: \_\_\_\_\_
6. Have you had a **tetanus vaccination** in the last 10 years? NO ☐, YES ☐ if yes, approximate date:  
\_\_\_\_\_
7. Are you under the care of a physician for a medical condition that has lasted or will last longer than 6 weeks?  
NO ☐, YES ☐  
a. If yes, please list the condition and medications taken, if any: \_\_\_\_\_  
\_\_\_\_\_
8. Do you have any respiratory conditions (examples: asthma, emphysema, chronic bronchitis)? NO ☐, YES ☐,  
a. If yes, please list:  
\_\_\_\_\_
9. Do you have any allergies (hayfever, asthma, hives, eczema, allergic skin rashes) or are you allergic to animals, plants, molds, pollens, latex, or other substances? NO ☐, YES ☐, If yes, please list:  
\_\_\_\_\_  
\_\_\_\_\_
10. Do you have clinical symptoms of allergies in the workplace? NO ☐, YES ☐,  
a. If yes, would you describe your symptoms as: Mild ☐, Moderate ☐, Severe ☐,
11. Do you have any medical or physical conditions that might affect your ability to work around animals, or health concerns about working with animals? NO ☐, YES ☐, If yes, please explain:  
\_\_\_\_\_  
\_\_\_\_\_

## Appendix 6: Personnel Medical Evaluation Form

12. Are you pregnant or planning to become pregnant? NO ☐, YES ☐, N/A ☐,

13. Do you have a medical condition or take any medication that might affect your ability to resist infections associated with working with animals (such as diabetic hypoglycemia and epileptic seizures)? NO ☐, YES

☐, If yes, please explain:

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

- Based on your answers to the above questions and if needed, an occupational health professional may contact you to discuss your pre-medical evaluation and risks associated to working with animals and provide further recommendations.
- The OHS program will require an annual update of your occupational risk/health status. Be sure to update your status annually (Form2 – periodic health status evaluation).
- If you have any change in activities using animals that might affect your occupational risk, contact the OHS program to determine the appropriate course of action a [REDACTED].
- If have a change in health status that might affect your occupational risk with animals, it is your responsibility to contact the Via Christi Occupational Health Service.
- Remember that if you are injured or become ill working with animals, it is your responsibility to inform your supervisor and take appropriate action.

Please email this form to: [REDACTED] or fax to: Via Christi Occupational Health Service, Fax: Fax # [REDACTED], Phone: [REDACTED]

Below is to be filled out by Via Christi Occupational Health Care Professional and signed and returned to the WSU IACUC [REDACTED]

## Appendix 6: Personnel Medical Evaluation Form

### Health Risk Assessment Form 1 – Preplacement medical evaluation:

This form is used to establish baseline health information on employees/students before exposure to the risks associated with animal-related research. Pre-existing conditions that can affect an employee's capability to perform the essential functions of his or her position without risk of substantial harm might be identified.

Below is to be filled out by Via Christi Occupational Health Care Professional and signed and returned to the WSU IACUC a [REDACTED]

The following employee/student's pre-placement medical evaluation form has been reviewed:

Name of employee/student evaluated: \_\_\_\_\_

Please check all that apply:

1. Were any pre-existing conditions that can affect the employee/student's capability to work with animals identified? NO ☐ (skip to 3) ; YES ☐ (answer question 2)
2. If Yes, please confirm that these health risks were discussed with the person and appropriate recommendations for pre-cautions were given. NO ☐, YES ☐,
3. This person is able to perform the animal-related research without substantial risk of harm. NO ☐, YES ☐,

Comments:

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Name of signing official: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



# Appendix 6: Personnel Medical Evaluation Form

## OHSP Form 2 - Annual Reassessment

Our records indicate that you are enrolled in the WSU Occupational Health and Safety Program. There is an annual requirement for reassessment of hazards and risks for animal care and use activities. Please complete this form and return it to the IACUC at [REDACTED]

As indicated on this form, if you have a change in occupational risks using animals in the past year you will also need to complete OHSP Form #3 and email or send to Via Christi Occupational Health Services (information below and also on Form #3).

Date: \_\_\_\_\_ Protocol Number (if appropriate): \_\_\_\_\_ ☐ Faculty, ☐ Staff, ☐ Student,

Name: \_\_\_\_\_ Work Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Department: \_\_\_\_\_ Supervisor/ PI (required): \_\_\_\_\_

Position/Title: \_\_\_\_\_ ☐ Male, ☐ Female

1. I am still involved in occupational activities associated with the animal care and use program:  
☐ YES- if yes, complete the rest of the form and return to the WSU IACUC  
☐ NO - If no, sign the form and return it to the WSU IACUC and your file will be deactivated in the OHSP database
2. To the best of my knowledge, my occupation risks using animals have remained the same during the past year:  
☐ YES  
☐ NO – If no, please complete OHSP Form #3 - Health Risk Reassessment Follow-up
  - a. List **ALL** species of animals you work with at WSU:  
Has this list changed ☐ YES If yes, please complete OHSP Form #3 - Health Risk Reassessment Follow-up  
☐ NO
4. Describe your work with animals (i.e. feed & water, perform surgery, clean cages, restrain animals, etc.):
5. Will you work with wild animals? ☐ NO, ☐ YES If yes, what species?
6. Do you work with sick animals? ☐ NO, ☐ YES If yes, explain:
7. Have you had a **tetanus vaccination** in the last 10 years?  
☐ NO If no, please complete OHSP Form #3 - Health Risk Reassessment Follow-up  
☐ YES if yes, approximate date: \_\_\_\_\_
8. Have you had the 3 shot pre-exposure series or the 5 shot post-exposure rabies vaccination? ☐ NO , ☐ YES
  - a. If yes, approximate date: \_\_\_\_\_
  - b. Have you had an antibody titer run? ☐ NO , ☐ YES if yes, approximate date: \_\_\_\_\_ Titer: \_\_\_\_\_
9. Have you had a change in your **personal health status** during the last year that might affect your level of risk in working with animals? Examples might include pregnancy, chronic illness, development of allergies, etc.  
☐ NO, ☐ YES If yes, please complete OHSP Form #3 - Health Risk Reassessment Follow-up

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

- If you have a change in health status that might affect your occupational risk with animals, it is your responsibility to fill out OHSP Form #3 and send it to Via Christi Occupational Health Service [REDACTED]
- If you are injured or become ill working with animals, it is your responsibility to inform your supervisor and take appropriate action.

Please return this form to: WSU IACUC [REDACTED]

## Appendix 6: Personnel Medical Evaluation Form

### OHSP Form 3 – Health Risk Reassessment Follow-up

Our records indicate that you noted a change in your personal health status on the OHSP Form 2 – Annual Reassessment. In order to reassess your occupational risks please complete this form and return it to Via Christi Occupational Health at [REDACTED]. This information will be reviewed by an occupational health professional in order to determine if further follow-up is needed.

Date: \_\_\_\_\_ Protocol Number (if appropriate): \_\_\_\_\_ ☐ Faculty, ☐ Staff, ☐ Student  
Name: \_\_\_\_\_ Work Phone: \_\_\_\_\_ Email: \_\_\_\_\_  
Department: \_\_\_\_\_ Supervisor/ PI (required): \_\_\_\_\_  
Position/Title: \_\_\_\_\_ ☐ Male, ☐ Female

1. List **ALL** species of animals you work with at WSU: \_\_\_\_\_
  2. Describe your work with animals (i.e. feed & water, perform surgery, clean cages, restrain animals, etc.):  
\_\_\_\_\_
  3. Will you work with wild animals? ☐ NO, ☐ YES If yes, what species? \_\_\_\_\_
  4. Do you work with sick animals? ☐ NO, ☐ YES If yes, explain: \_\_\_\_\_
  5. Have you had a **tetanus vaccination** in the last 10 years? ☐ NO, ☐ YES if yes, approximate date: \_\_\_\_\_
  6. Have you had the 3 shot pre-exposure series or the 5 shot post-exposure rabies vaccination? ☐ NO, ☐ YES
    - a. If yes, approximate date: \_\_\_\_\_
    - b. Have you had an antibody titer test? ☐ NO, ☐ YES if yes, approximate date: \_\_\_\_\_ Titer: \_\_\_\_\_
  7. You indicated on the annual reassessment form (OHSP Form 2 – Annual Reassessment) that you have had a change in your personal health status (i.e. pregnancy, chronic illness, allergies) **and/or** that you are working with different species of animals. Please describe your change here:  
\_\_\_\_\_
  8. Are you under the care of a physician for a medical condition that has lasted or will last longer than 6 weeks?  
☐ NO, ☐ YES  
If yes, please list the condition and medications taken, if any: \_\_\_\_\_
  9. Do you have any respiratory conditions (examples: asthma, emphysema, chronic bronchitis)? ☐ NO, ☐ YES  
If yes, please list: \_\_\_\_\_
  10. Do you have any allergies (hayfever, asthma, hives, eczema, allergic skin rashes) or are you allergic to animals, plants, molds, pollens, latex, or other substances? ☐ NO, ☐ YES If yes, please list: \_\_\_\_\_
  11. Do you have clinical symptoms of allergies in the workplace? ☐ NO, ☐ YES  
If yes, would you describe your symptoms as: ☐ Mild, ☐ Moderate, ☐ Severe
  12. Do you have any medical or physical conditions that might affect your ability to work around animals, or health concerns about working with animals? ☐ NO, ☐ YES If yes, please explain: \_\_\_\_\_
  13. Do you have a medical condition or take any medication that might affect your ability to resist infections associated with working with animals? ☐ NO, ☐ YES If yes, please explain: \_\_\_\_\_
- Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please send this form to: Via Christi Occupational Health, [REDACTED]

## Appendix 6: Personnel Medical Evaluation Form

### OHSP Form 3 – Health Risk Reassessment Follow-up

This form is used to as a Health Risk Reassessment Follow-up on employees/students who are associated with animal-related research.

Below is to be filled out by Via Christi Occupational Health Care Professional and signed and returned to the WSU IACUC at [REDACTED]

The following employee/student's pre-placement medical evaluation form has been reviewed:

Name of employee/student evaluated: \_\_\_\_\_

Please check all that apply:

4. Were any conditions identified that can affect the employee/student's capability to work with animals?  
NO ☐ (skip to 3) ; YES ☐ (answer question 2)
5. If Yes, please confirm that these health risks were discussed with the person and appropriate recommendations for pre-cautions were given. NO ☐, YES ☐,
6. This person is able to perform the animal-related research without substantial risk of harm. NO ☐, YES ☐,

Comments:

---

---

---

---

Name of signing official: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Appendix 6: Personnel Medical Evaluation Form

**WICHITA STATE UNIVERSITY  
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)  
Field Study Occupational Health Assessment**

Principal Investigator:

Protocol Title:

Protocol Number:

The above referenced protocol has been reviewed for occupational health and safety issues, including zoonoses.

The following changes are required:

This field study does not compromise the health and safety of either animals or persons in the field.

Occupational Health & Safety Representative

Date

## Appendix 6: Personnel Medical Evaluation Form

### Field Activities Liability Waiver

I, \_\_\_\_\_ (state your full name), understand that field activities have inherent risks to my health and safety. I understand that I could be working with small mammals, and terrestrial and/or aquatic vertebrates that are capable of causing bodily harm to humans including but not limited to the transmission of diseases such as hanta virus, rabies, or salmonella. I may also be bitten by mosquitoes or ticks. While the risk is low, I understand that if I contract these or any other disease, I may become sick or die. In addition, I will be exposing myself to risks from weather events, travel, and other potential health hazards associated with field work including but not limited to heat/cold extremes, sunstroke, dehydration, drowning, and poison ivy. This statement indicates that I am willing to participate in these activities and have not been pressured to sign this agreement against my judgement. I agree that I will not hold the State of Kansas, Wichita State University, The Wichita State Biological Sciences Department, or any of the personnel associated with these institutions liable for changes in my health that may be associated with my activities for the WSU Department of Biological Sciences.

Signature \_\_\_\_\_

Date \_\_\_\_\_

## Appendix 7: IACUC/OB Membership Roster

Please provide a Committee roster, indicating names, degrees, membership role, and affiliation (e.g., Department/Division).

Name of Member/ Code*	Degree/ Credential	Position Title/ Occupational Background**	PHS Policy Membership Requirements***
M1. Kim Cluff	PhD	Associate Professor, Biomedical Engineering	Scientist, IACUC Chair
M2. William Hendry	PhD	Vivarium Dir, Biological Sciences Chair, Professor	Scientist
M3. Jeffrey May	PhD	Research Associate Professor	Scientist
M4. Karen Beetch	DVM	Veterinarian	Veterinarian
M5. Becky Hundley	MBA	Director Intellectual Property and Research Compliance	Nonscientist
M6. Sandra Wilson <sup>1</sup>	DVM	Associate Veterinarian (Zoo)	Nonaffiliated
M7. Sarah Catlin	BS	Animal Care Technician	Post-Approval Monitoring
M8. Moriah Beck	PhD	Associate Professor, Chemistry	Scientist
A1. Jana Henderson	BBA	Senior Grant Research Coordinator	Alternate for M5
A2. Heather Arens	DVM	Associate Veterinarian (Zoo)	Alternate for M4
A3. Barbara Hoppins <sup>1</sup>	MSE	Veterinary Hospital Specialist (Zoo)	Alternate for M6

## Appendix 8: IACUC/OB Minutes

Please provide the latest two Minutes of the IACUC/OB meetings.

### MINUTES

#### WSU IACUC

Thursday, June 6, 2019 - 9:30 a.m.

Sedgwick County Zoo

**Voting Members Present (5):** Karen Beetch, Sarah Catlin, Jana Henderson, Jeff May, and Sandra Wilson

**Alternates Present (non-voting today):** N/A

**Voting Members Absent:** Heather Arens (alternate), Moriah Beck, Kim Cluff, William Hendry, Barbara Hoppins (alternate) and Becky Hundley

**Others present:** Linda Steinacher, Kendra Nguyen Tatiana Henderson and Dr. Kerry Wilks

#### General Quorum Information

Number of voting IACUC members on the roster: 8

Number required for quorum: 5

*All members present and voting at this meeting received all pertinent material before the meeting and were able to actively and equally participate in all discussions.*

### 1. Approval of Minutes from the last meeting

The IACUC reviewed the minutes from the May meeting. Dr. Beetch had a couple questions. She wondered if on page 3 we ever received an answer from Dr. Yao on how the embryos were euthanized/terminated. Linda stated she did not ask and will get an answer on that. Dr. Beetch also asked if we ever approved Dr. Cluff's protocol #274a from last month. Linda explained that was approved with a DMR review, however, Dr. Cluff has not submitted the revisions so it is still pending. After these questions were answered, Dr. Beetch motioned to approve the minutes. Dr. Wilson seconded the motion and the motion carried unanimously.

### 2. Protocols

#### a. Amendments

- i. None

#### b. Renewals

- i. **#234b – Heggeness – Production of Murine Neuronal Stem Cells**  
**Species: Mouse**

The committee discussed this renewal. Dr. Beetch asked if there was truly no funding on this as indicated on page 2#5 of the protocol. Linda will check with the PI and get that change added if needed. Other than that, the renewal looks good.

Dr. Wilson motioned to approve the protocol with an administrative DMR if funding is attached to this. Dr. May seconded the motion and it carried unanimously.

- ii. **#270a – Yang - Re-mineralizing Tooth Cavities through Antibacterial Nanocomposite Materials**  
**Species: Rat**

The committee discussed this renewal. The study is currently inactive but anticipates starting in the fall. Dr. Beetch moved to approve and Dr. Wilson seconded. The motion passed unanimously.

## Appendix 8: IACUC/OB Minutes

### iii. **#265a – Yao – The investigation of the repair of wounded nerve** **Species: Rat**

The committee discussed this renewal. It is an ongoing study. The PI submitted an Amendment last year and the changes that were requested on that were never received. Linda explained she asked for the Amendment changes to be submitted along with this renewal but those have not been received yet. There was frustration expressed among the IACUC members as to his continued refusal to submit to the authority of the IACUC and requests that are being made of him. We just continue to go in circles.

Sarah Catlin moved to disapprove the renewal. Dr. Wilson seconded, and the motion carried unanimously.

### iv. **#242b – Houseman – Small herbivore impacts on grassland plant communities** **Species: Multiple species**

The committee discussed this renewal. Dr. Beetch moved to approve the renewal. Ms. Catlin seconded, and the motion carried unanimously.

### c. **Final Reports**

#### i. **none**

### d. **New/DeNovo**

#### i. **#275a – Luhring– Annual amphibian production in seasonal wetlands** **Species: Anurans, Caudates**

The committee reviewed this new study. The following revisions are needed:

1. Page 1 there needs to be an end date rather than just stating ongoing.
2. Page 5#15 state “various field sites in Sedgwick County, Kansas”
3. Page 7#36 needs to state Dr. Beetch rather than TBD.
4. The CITI training states, “Care must be taken to avoid removal of the protective mucus layer covering the skin of amphibians. If nets are used, they should be made of soft cloth materials.” Please specify if the net materials are soft.
5. The CITI training states “If amphibians are handled using bare hands it is extremely important for investigators to ensure that they have not applied insect repellents, perfumes, lotions, or other potentially toxic substances that might be absorbed through highly permeable amphibian skin.” If gloves are used “Gloves should either be ‘talc-free’ or rinsed in warm water prior to use.” Please specify how you will be handling the amphibians.

Dr. May moved to approve the renewal with the above changes needed via Administrative DMR. Dr. Beetch seconded the motion and it carried unanimously.

### 3. **Animal Care Facility Issues**

- a. Biggest thing with the facility is just preparing for the AALAC visit. She is reviewing lab rates. The HVAC grant was awarded and that will cause some issues with trying to figure out how that will get done with the animals, etc.

### 4. **Active Protocol List – protocols expiring before/near the next meeting**

- a. #262a – Yao – pending
- b. #265a – Yao – reviewed today and pending
- c. #270a – Yang – reviewed today

### 5. **Approved protocols and/or amendments since last meeting via DMR**

- Approved
- a. N/A



## Appendix 8: IACUC/OB Minutes

Pending

- a. 274a – Cluff – waiting on changes

### 6. Important Dates and IACUC Information

- a. Attending Vet Contract Renewal – Dr. Beetch – expires June 30
- b. USDA Registration – Due July 1. Dr. Wilks just signed the paperwork and will get it mailed in
- c. AAALAC reaccreditation site visit paperwork – due August 1

### 7. Standard Operating Procedures of Vivarium

- a. Sarah provided these for review. Dr. Beetch did have some suggestions. They were as follows:
  - 1. Environment – Perhaps need to revise this section since changing the humidity is not under our control.
  - 2. Husbandry – How do you observe and record behaviors? Where is it recorded if there are health issues? Is there a way to put that on the cage card to alert the cage? If the animal is found dead, there might need to be some wording added in this section about putting in cold storage rather than the freezer depending on the study.
  - 3. Regarding food, add a line that says, “unless specified otherwise per protocol”
  - 4. Weekly Tasks-Enrichment – On #2, suggest changing water bottles and feeders at a minimum 1x a week as opposed to bi-weekly.
  - 5. Rabbits Husbandry – Is it ok to bring the rabbits fruit and veggie scraps?
  - 6. Monthly Tasks #1 regarding petri plate, is that being done?
  - 7. Surgery Room #5 – Is it ok to dispose of the autoclaved sharps container in the trash?
- b. Sarah said she and Dr. Beetch could work together on some of these items outside of the meeting to bring resolution.

### 8. Semi-Annual Review Follow-Up

- a. Reviewed finalized report and signed sheet to send to IO. Dr. May noted on page 8#6a there was not a check mark on n/a. That will be corrected, and the finalized report sent to the IO.

### 9. As May Arise

- a. Reminder to complete CITI training as prepare for AALAC site visit. Make sure all are up to date.
- b. AAALAC site visit dates will be coming. The committee decided Wednesday's or Thursday's would be best to meet.
- c. DMR Policy – The document was provided to obtain updated signatures.
- d. Dr. Yao to go on Sabbatical in the fall - FYI
- e. Discussed next meeting dates. It was agreed to meet on July 11<sup>th</sup> and August 8<sup>th</sup> and then we will go back to the 1<sup>st</sup> Tuesday of the month starting in September.

### 10. Adjournment – The meeting adjourned at 10:50am.

## Appendix 8: IACUC/OB Minutes

### MINUTES

#### WSU IACUC

Thursday, July 11, 2019 - 9:30 a.m.

343 HH

**Voting Members Present (8):** Moriah Beck, Karen Beetch, Sarah Catlin, Kim Cluff, William Hendry, Barbara Hoppins, Becky Hundley, and Jeff May

**Alternates Present (non-voting today):** N/A

**Voting Members Absent:** Heather Arens (alternate) and Jana Henderson (alternate)

**Others present:** Linda Steinacher and Kendra Nguyen

#### General Quorum Information

Number of voting IACUC members on the roster: 8

Number required for quorum: 5

*All members present and voting at this meeting received all pertinent material before the meeting and were able to actively and equally participate in all discussions.*

### 3. Approval of Minutes from the last meeting

There were a few typos noted as follows:

- Page 1 after Voting Members Present it says (7) but should instead say (5)
- Page 3 #3 says, "Biggest think with the facility..." and should say, "Biggest thing with the facility...".
- Page 4 at top after 7 says, "Is it ok to dispose of the sharps in the trash?" and should instead say, "Is it ok to dispose of the autoclaved sharps container in the trash?"

Dr. Beck motioned to approve the minutes with the corrected typos. Dr. May seconded the motion and the motion carried unanimously.

### 4. Protocols

#### a. Amendments

- v. **#265a – Yao – The investigation of the repair of wounded nerve**  
**Species: Rat**

The committee discussed this amendment. There were several revisions that are needed on this as follows:

1. Please revise the wording on #4 as follows: "Since isoflurane will be used, the animals will be monitored with a pulse oximeter. The pulse oximeter will have a rectal probe which will be used to monitor the temperature. The measurements that are monitored under anesthesia (breathing rate, mucous membrane color, temperature changes, heart rate fluctuations, toe pinch response) will be documented every 15 minutes. Isoflurane will be adjusted according to changes in the monitoring parameters."
2. Is Ashley Debrot still being added to the protocol? Are there any other students that need added?
3. The original protocol needs revised as follows:
  - a. Pg2#2 1st sentence should read "After adequate anesthetic induction"
  - b. Pg3#7a should read "assist" Dr. Yao instead of 'help'. And after the "orientation with Sarah" this should include 'and anesthesia and patient monitoring training with Dr. Beetch' for the assistants.
  - c. Pg4#10 - Regarding your animal numbers, it should be noted that "Only after the successful initial study of 4 animals with training from Dr. Beetch, Sarah and either Dr. Cluff or Dr. Hendry, will the remaining animals be ordered."
  - d. Pg9#1 are you still adding Lactate into the water? I think that needs to be removed.

## Appendix 8: IACUC/OB Minutes

- e. Pg13 - 1st sentence. Instead of "hair should be clipped" this should read 'hair will be shaved'; 2nd sentence should state "sterile" drape; 3rd sentence omit the word "then" from the sentence 'Then the sciatic nerve'. Towards the end where you discuss the 'nerve is fixed for 30 minutes', the animal is alive/anesthetized for this time frame?
- f. Pg13#3 Also check the box that says "scrub site"
- g. Pg13#4 Add Carprofen to the table for pre-anesthetic medications. (Carprofen and Baytril can be given Subcutaneously to make it easier on the animals.)
- h. Pg15#12 should be answered YES since you are doing the CMAP this would be considered a minor surgery since you are inserting probes under anesthesia and explain.
- i. Pg15#14 Instead of listing "twice a day" or "once a day" you need to list these in time frames such as "every 12 hours" or "every 24 hours". Again, Buprenorphine and Carprofen can be given subcutaneously. Do you see a need to continue subcutaneous fluids every 12 hours for 7 days? Or are the longer sipper tubes adequate for hydration? Lastly do you see a need to give the Baytril for a full 7 days? Do you need it to be every 12 hours? It is approved at a higher dose as an every 24 hour dosing which may be better.
- j. Pg15#14a this is a good place to list that water bottles with long sipper tubes will be used to allow easier access to water for 7 days or however long you see they will need them.

Dr. Hendry motioned to disapprove this study and see it back next month after the above changes have been made. Dr. Beetch seconded the motion and it carried unanimously.

### b. Renewals

#### i. **#265a – Yao – The investigation of the repair of wounded nerve**

**Species: Rat**

The committee discussed this renewal. The Amendment (above) still needs to be finalized prior to approving the Renewal. Dr. Hendry motioned to disapprove this renewal. Dr. Beetch seconded and it carried unanimously.

#### ii. **#269a – Yao - Measurement of compound muscle action potential using electromyography machine**

**Species: Rat**

The committee discussed this renewal. Really this looks good. There is one change needed as follows: On page 3#9 the second sentence needs to be revised to say, "The method will be used to test nerve function recovery for the animals after future approved nerve repair surgeries."

Dr. Beetch motioned to conditionally approve after DMR changes are reviewed by Dr. Cluff. Dr. Hendry seconded the motion and it carried unanimously.

#### iii. **#230c – Beetch – Sentinel Animals**

**Species: Hamster, Mouse, Rabbit, Rat**

The committee discussed this renewal. It looks good and no changes are required.

Dr. Beetch and Sarah Catlin recused themselves. There was still a quorum of 6 and Dr. May moved to approve the renewal. Barb Hoppins seconded, and the motion carried unanimously.

#### iv. **#266a – Mardis – Herpetofaunal Diversity Assemblages of WSU Field Station**

**Species: Various reptiles, amphibians**

The committee discussed this renewal. It looks good and no changes are required.

Dr. Hendry moved to approve the renewal. Dr. Beck seconded, and the motion carried unanimously.

### c. Final Reports

#### ii. **none**

## Appendix 8: IACUC/OB Minutes

- d. New/DeNovo  
none

### 11. Animal Care Facility Issues

- b. Sarah has been working with Linda on the Program Description. The lab rate issues have been resolved (per diem). The money for the HVAC grant has been received and they will be working this to figure out details.

### 12. Active Protocol List – protocols expiring before/near the next meeting

- d. #262a – Yao – pending  
e. #265a – Yao – reviewing today  
f. #230c – Beetch – reviewing today - expires 8/1/19  
g. #258 – Vindhya – expires today 7/11/19. This will be administratively closed since no renewal has been received  
h. #266 – Mardis – reviewing today - due 7/29/19  
i. #269a – Yao – reviewing today – due 7/29/19

### 13. Approved protocols and/or amendments since last meeting via DMR

Approved

- b. #275 – Luhning – New Study

Pending

- b. 274a – Cluff – waiting on minor changes in order to process approval

### 14. Important Dates and IACUC Information

- d. Attending Vet Contract Renewal – Dr. Beetch – in process  
e. USDA Registration – This was completed, and a new certificate was received  
f. AAALAC reaccreditation site visit paperwork – due August 1  
g. Semi-Annual Vet Program Review. Dr. Beetch said this looked good and will sign.

### 15. As May Arise

- f. Dr. Cluff will be sending a memo to Dr. Yao advising him he needs to make the recommended changes and work with Dr. Beetch. She has reviewed his concerns and stated her recommendation and now he needs to comply. He also will need to make those changes within 60 days of Dr. Cluff's letter otherwise all of his studies which involve anesthesia and/or pain medication are in jeopardy of being administratively withdrawn. Dr. Yao has used up an extensive amount of the IACUC's time as this issue has been ongoing for over a year. Dr. Cluff will also discuss this matter with Dr. Wilks (the IO) regarding this.  
g. CITI training – please make sure you are up to date on these courses for the AALAC site visit.  
h. Next meeting is scheduled August 8<sup>th</sup>. That would be the 2<sup>nd</sup> Thursday of the month. Starting in September, we will resume our regular meeting times to the 1<sup>st</sup> Thursday of the month.

### 16. Adjournment – The meeting adjourned at 10:50am.

## Appendix 9: IACUC/OB Protocol Form

Please attach a **blank** copy of form(s) used by the IACUC/OB to review and approve studies. Include forms used for annual (or other periodic) renewal, modifications, amendments, etc., as applicable.

### WICHITA STATE UNIVERSITY INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC) ANIMAL TISSUE FORM

This abbreviated form is to be complete for research projects that utilize animal parts but do not actually require the use of "live" animals. For example, projects that utilize material from slaughterhouses or local farms would employ this article. This exercise is intended to allow the WSU IACUC to maintain knowledge of all animal-related research on the campus.

**Date:**

**Principal Investigator:**

**Co-Investigator Name(s) and Titles (faculty, grad student, etc):**

**Project Title:**

**Protocol #:**

**Funding source:**

**Anticipated Start Date:**

**Anticipated End Date:**

**1. Species and tissue(s) to be utilized:**

**2. Source of animal material: (List the name(s) of the sources of the animal tissues, for example Yoder Meats, Yoder, KS. If coming from another approved protocol, please list the protocol number.)**

**3. Provide brief description of disposal methods for animal tissues.**

## Appendix 9: IACUC/OB Protocol Form

4. Provide a description of the use of the material in your research:

**CERTIFICATION OF THE PRINCIPAL INVESTIGATOR.** Signature certifies that the Principal Investigator understands the requirements of the PHS Policy on Humane Care and Use of Laboratory Animals, applicable USDA regulations and the Institution's policies governing the use of vertebrate animals for research, testing, teaching or demonstration purposes. Signature further certifies that the investigator will continue to conduct the project in full compliance with the aforementioned requirements.

Signature of the Principal Investigator

Date

Signature of IACUC Representative

Date

# Appendix 9: IACUC/OB Protocol Form

**WICHITA STATE UNIVERSITY  
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)  
ANNUAL ANIMAL TISSUE REVIEW FORM**  
Project Description Utilizing Animal Tissues but Not Live Animals

**Date:**

**Principal Investigator:**

**Protocol Title:**

**Protocol #:**

**Funding Source:**

**Date of Initial Approval:**

**Expiration Date (for this reporting period):**

**Animal species tissue(s) to be utilized:**

**1. Protocol Status**

- A. Active - project ongoing
- B. Currently inactive - project was initiated but is presently inactive.
- C. Inactive - project never initiated but anticipated start date is:

2. **Source of animal material:** (List the name(s) of the sources of the animal tissues, for example Yoder Meats, Yoder, KS. If coming from another approved protocol, please list the protocol #.)

3. **Project Personnel:** Please list all personnel working on this project

Name and Highest Degree	Role/Responsibility for Project

- 3a. **Are you requesting to add any new personnel at this time?**

No, skip to #4.

Yes, please complete the below box.

## Appendix 9: IACUC/OB Protocol Form

Name and Highest Degree	Title (Faculty, Student)	Relevant Experience	Role/Responsibility for this project

4. **Progress Report.** If the status of this project is 1.A. (Active; project ongoing) or 1.B. (Project was initiated, but is presently inactive), provide a brief update on the progress made in achieving the specific aims of the protocol.

### 5. Future Plans

No changes are planned; the project will continue as previously approved by the IACUC.

Changes are planned. *(Submit an amendment describing proposed changes. Please note that if the modifications are significant, you may be required to complete a new application. If you have questions or require assistance in making this determination, please contact the IACUC Chairperson and/or the Attending Veterinarian.)*

Other, explain:

**CERTIFICATION OF THE PRINCIPAL INVESTIGATOR.** Signature certifies that the Principal Investigator understands the requirements of the PHS Policy on Humane Care and Use of Laboratory Animals, applicable USDA regulations and the Institution's policies governing the use of vertebrate animals for research, testing, teaching or demonstration purposes. Signature further certifies that the investigator will continue to conduct the project in full compliance with the aforementioned requirements.

Signature of the Principal Investigator

Date

Signature of IACUC Representative

Date



# Appendix 9: IACUC/OB Protocol Form

## WICHITA STATE UNIVERSITY INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC) ANIMAL PROTOCOL FORM

Date:

Principal Investigator:

Title of Project:

Protocol #:

Animal Species:

Anticipated Start Date:

Anticipated End Date:

Funding source:

RTT grant/proposal #:

**You must submit a copy of the project summary and the animal section submitted with your proposal.**

### OVERVIEW

1. Briefly describe the purpose of the study, experimental procedures and manipulations of the animals, and the expected outcome in lay terms. Include a justification of what you want to do and how it contributes to your work. If this is a de novo submission, provide a justification or rationale for continuing this protocol and explain any changes from the previous iteration of the study.

## Appendix 9: IACUC/OB Protocol Form

2. Describe the sequence and rationale of the manipulations and procedures. DO NOT DESCRIBE DETAILS OF SURGICAL PROCEDURES HERE.

3. PROPOSED ANIMAL USAGE:

SPECIES	Total # Requested For Protocol	Total # Anticipated For Year 1	Total # Anticipated For Year 2	Total # Anticipated For Year 3

4. NATURE OF THE PROTOCOL/STUDY:

Survival (Chronic) Study	Prolonged Restraint	Inducement of a Disease State
Terminal (Acute) Study	Neuromuscular Blockers	Inducement of Behavioral Stress
Multiple Surgeries	Antibody Production	Administration of Test Substances
Multiple Procedures	Blood/Tissue Collection	Transgenic Breeding
Other:		

5. (USDA) PROJECT (Pain) CATEGORY: C D E

**Category C:** Involves *procedures that cause no pain or no more than momentary or slight pain* and no pain-relieving drugs are used.

**Category D:** Involves *procedures that may cause more than momentary or slight pain or distress* for which appropriate sedatives, analgesics, or anesthetics will be administered.

**Category E:** Involves *procedures that may cause more than momentary or slight pain or distress* for which sedatives, analgesics, or anesthetics cannot/will not be administered due to scientific considerations/requirements.

## Appendix 9: IACUC/OB Protocol Form

6. Describe the characteristics of the animal selected that justify its use in the proposed study. [Consider such characteristics as body size, species, strain, breed, data from previous studies or unique anatomic or physiologic features.]

7. Give the names of all individuals who will work with the animals in this study. **All personnel are required to complete CITI training every 3 years.** *If additional space is needed, submit a separate word document.*

Name and highest degree	Department	Email Address	Faculty, student, etc	Years & Relevant Experience	Role/Responsibility for this project

7a. If personnel do not have experience, how will they be trained?

7b. Have all Wichita State University faculty and unclassified staff listed as personnel completed a disclosure of conflict of interest and time commitment for WSU within the last 12 months?

Yes

No - contact Compliance a [REDACTED].

N/A

## Appendix 9: IACUC/OB Protocol Form

7c. Do any of the personnel (including students or their immediate family members and those unaffiliated with WSU) on the project have financial arrangements with the sponsoring company or the products or services being evaluated which may include consulting agreements, management responsibilities or equity holdings in the sponsoring company?

Yes - contact Compliance at [REDACTED]

No

N/A

### ANIMAL SUBJECT DESCRIPTION

8. Strain/Stock/Mutant/Breed:

Sex:

Age/Size:

9. Source:

Microbial Status (Check one):

SPF

Conventional

Axenic

Feral

Other:

10. Describe how the number of animals needed for the study was determined. [The specific statistical methods or a clear rationale used to determine the numbers of animals needed MUST be provided.]

### ANIMAL HUSBANDRY AND CARE

11. Are animal husbandry and routine handling practices and procedures for this study, including animal health monitoring, diet, cage, environmental control, exercise (where required), environmental enrichment (where required), and means of identification, described in the Wichita State University (WSU) standard operating procedures manual?

YES - PROCEED TO ITEM 12.

NO - ATTACH APPENDIX 1, SPECIAL HUSBANDRY PRACTICES. [All husbandry and care practices must meet standards described in the Animal Welfare Regulations and the Guide for the Care and Use of Laboratory Animals unless they have been specifically excepted in Appendix 1 by the WSU IACUC for scientific reasons.]

12. Animal housing location:

Room Number:

Name of institution, if not WSU:

13. The current AAALAC accreditation status of the facility where animals will be housed:

ACCREDITED

NON-ACCREDITED - If Non-Accredited, attach a copy of the OLAW Assurance Statement, and a copy of the latest USDA site visit report for the Non-Accredited facility.

## Appendix 9: IACUC/OB Protocol Form

14. Give the name of the veterinarian, or the institutional resource, that is responsible for providing adequate veterinary care to the animals:

### EXPERIMENTAL PROCEDURES

15. Location where experimental procedures will be performed including building name and room number:

16. Will test substances be administered? [Radioisotopes, toxic, antigenic, pharmacologic, infectious, carcinogenic, or other types of substances, biomaterials or cells administered to live animals are considered to be test substances.]

NO, PROCEED TO ITEM 17. YES, ATTACH APPENDIX 2 - TEST SUBSTANCES.

17. Will specimens be collected prior to euthanasia? [All body fluids and tissues are considered specimens.]

NO, PROCEED TO ITEM 18. YES, ATTACH APPENDIX 3 - SPECIMEN COLLECTION.

18. Will SURGERY be performed as part of the experimental protocol?

NO, PROCEED TO ITEM 19. YES, ATTACH APPENDIX 4 - SURGERY

19. Is death an endpoint in this study?

NO, PROCEED TO ITEM 20. YES, Explain why an earlier endpoint is not acceptable:

20. Will animals be subject to experimental procedures that are not noted elsewhere in ITEMS 16-19?

NO - PROCEED TO ITEM 28.

YES - Check the following applicable procedures and answer questions 21-27.

Physical restraint  
Other:

Noxious stimuli

Forced exercise

Behavioral manipulations

21. Describe each procedure and the expected outcome. Include the chemical, physical, or behavior modifying characteristics of the stimulus or material administered or withdrawn.

## Appendix 9: IACUC/OB Protocol Form

22. Who will perform the procedure?

23. Describe the length of time each procedure will last.

24. Will the procedure cause more than momentary pain or discomfort?

NO - PROCEED TO ITEM 25.

YES - Describe the procedures or methods that will be used to minimize pain and discomfort:

25. Describe the methods for monitoring the condition of the animal during the length of the procedure and during the post-procedure period:

26. Provide the name(s) of the person(s) responsible for monitoring the condition of the animals:

27. You must provide to the WSU Staff the phone numbers where they can be reached during and after work hours. Check here to indicate this has been done.

### EUTHANASIA OR OTHER DISPOSITION OF ANIMALS

28. Are animals euthanized for tissue collection or at the completion of this study?

NO - PROCEED TO ITEM 34.

YES - ANSWER QUESTIONS 29-33. [For guidance on acceptable methods of euthanasia, reference should be made to the 2013 AVMA Guidelines on Euthanasia located at:

<https://www.avma.org/KB/Policies/Documents/euthanasia.pdf>

29. Two methods of euthanasia must be used - a chemical method and a physical method are recommended.

A. Name of the chemical agent(s) that will be used:

Dose:

Route:

B. Name the physical method that will be used:

## Appendix 9: IACUC/OB Protocol Form

30. Justify any method of euthanasia that is NOT recommended by the AVMA Guidelines on Euthanasia or state N/A.

31. Give the name(s) of the person(s) who will perform the euthanasia:

32. Are these persons experienced with this method of euthanasia?

NO - Name the experienced person who will train them:

YES - PROCEED TO ITEM 33.

33. Describe the fate of experimental animals, other than euthanasia, after completion of the study:

### MANDATORY CONSIDERATIONS

34. Do the procedures to be employed have the potential to cause more than momentary or slight pain or distress (Category D or E)? [The United States Department of Agriculture has determined that surgery conducted under anesthesia is a potentially painful procedure.]

NO - PROCEED DIRECTLY TO ITEM 36.

YES - ANSWER QUESTION 35.

35. Provide a narrative description of the methods and sources used to determine that suitable alternatives were not available or applicable to this study such as less sentient animal models, computer models, and tissue culture. The following are examples of relevant methods that may be supportive of your effort: AGRICOLA database, MEDLINE database, CAB Abstracts database, AWIC TOXLINE database, BIOSIS database, scientific journals, scientific meetings, and/or scientific discussions.

When a database search is the primary means of meeting this requirement, the narrative must, at a minimum, include:

- a. the name of the database(s) searched:
- b. the date the search was performed:
- c. the period covered by the search:
- d. the key word and/or the search strategy used:

36. Provide the name of the veterinarian who has been involved in planning this experiment:



# Appendix 9: IACUC/OB Protocol Form

## MISCELLANEOUS FEDERAL REQUIREMENTS

All drugs classified by the DEA as controlled substances that will be used in this study must be stored in a locked cabinet and accessible only to authorized persons in accordance with DEA regulations.

37. Will a flammable anesthetic agent be used in *ANY PORTION OF* these animal studies?

NO - PROCEED TO ITEM 38.

YES - A COPY OF AN APPROVED "REQUEST TO USE EXPLOSIVE ANESTHETICS" must be on file with the Environmental Health and Safety Fire Safety Chief.

## SIGNATURES

38. Certification by Principal Investigator.

I certify that these studies do not unnecessarily duplicate previous experiments. I further affirm that, to the best of my knowledge, information provided in this Animal Component of Research Protocol is complete and accurate and that no significant changes will be made without advance approval of the IACUC. I agree to provide records of personnel training when requested by USDA inspectors.

Principal Investigator Signature

Date

39. Approval Signatures

The undersigned have evaluated the care and use of animals described in this protocol in accordance with provisions of the Animal Welfare Act, the PHS *Guide for the Care and Use of Laboratory Animals*, and find that the procedures described are appropriate and acceptable.

Attending Veterinarian    Signature

Date

IACUC Chair Signature

Date

40. APPENDICES ATTACHED:

None    Special Husbandry (Appendix 1)

Test Substances (Appendix 2)

Specimen Collection (Appendix 3)

Live Surgery (Appendix 4)

# Appendix 9: IACUC/OB Protocol Form

## SPECIAL HUSBANDRY PRACTICES

(Complete only if applicable or mark N/A here )

1. Describe non-standard practices or procedures: [Examples include: close confinement, temperature extremes, food or water deprivation, dietary manipulations, special housing, modified light cycle, restricted observation, restricted enrichment, etc.]

2. Justification:

3. Who will perform the procedure?

4. Describe the length of time each procedure will last:

5. Will the procedure cause more than momentary pain or discomfort?

NO - PROCEED TO ITEM 6.

YES - Describe the procedures or methods that will be used to minimize pain and discomfort.

6. Describe the methods for monitoring the condition of the animal during the length of the procedure and during the post-procedure period:

7. Provide the name(s) of the person(s) responsible for monitoring the condition of the animals:

You must provide to the WSU Staff the phone numbers where they can be reached during and after work hours. Check here to indicate this has been done.

# Appendix 9: IACUC/OB Protocol Form

## APPENDIX 2

### TEST SUBSTANCES

(Complete only if applicable or mark N/A here )

1. Class of the test substances or other material:

- |                     |                          |                           |
|---------------------|--------------------------|---------------------------|
| A. Radioisotope     | E. Tissues/Cells         | I. Biomaterial            |
| B. Infectious Agent | F. Pharmacological Agent | J. Excreta or Body Fluids |
| C. Carcinogen       | G. Adjuvants             | K. Other:                 |
| D. Toxic Chemical   | H. Antigenic substance   |                           |

2. Identify the test substances or other material that will be administered to the animals:

SUBSTANCE NAME	CLASS	DOSE	FREQUENCY	ROUTE	DURATION

3. Will the test substance(s) cause pain or distress to the animal?

NO - PROCEED TO ITEM 4.

YES - Describe the measures that will be taken to alleviate or minimize these effects.

4. Is the test substance considered to be a hazardous material?

NO - STOP HERE.

YES - Give names of personnel who will work with hazardous material then proceed to ITEM 5:

5. If you are using any radio-isotope, or hazardous material of any type, you must have authorization to work with these materials by the Director of Environmental Health and Safety. The Director's signature indicates that he has consulted with the Attending Veterinarian, and that adequate precautions, containment facilities, protective devices, carcass and waste disposal, cleanup procedures, and other necessary safety procedures are in place to protect personnel and prevent accidental animal exposure to the hazardous material. Please provide a letter documenting the safety precautions that will be used.

Director, Environmental Health & Safety

Date

## Appendix 9: IACUC/OB Protocol Form

### APPENDIX 3

#### SPECIMEN COLLECTION PRIOR TO EUTHANASIA

(Complete only if applicable or mark N/A here )

1. Will invasive procedures be employed to collect tissue or body fluids from live animals during this experimentation?

NO - PROCEED TO ITEM 2.

YES - Characterize the procedure in the box below. [Any procedure that penetrates a body orifice, the integument, or a hollow visceral organ is invasive.]

Tissue Or Fluid Collected	Method Of Collection	Amount	Frequency

2. Will the procedure cause more than momentary pain or distress?

NO - PROCEED TO ITEMS 4 & 5.

YES - Give the anesthetic agent, sedative, or tranquilizing agent that will be used. *IF NONE IS TO BE USED, PROCEED TO ITEM 3.*

Agent	Dose	Frequency	Route

## Appendix 9: IACUC/OB Protocol Form

### APPENDIX 3 (continued)

3. Justification for omission of pain relieving agents:

4. Describe the method of restraint used to execute this task for all procedures where surgical plans of general anesthesia are not detailed in number 2 above:

5. Briefly describe the non-invasive procedure and how the specimens will be collected:

## Appendix 9: IACUC/OB Protocol Form

### APPENDIX 4

#### LIVE SURGERY

(Complete only if applicable or mark N/A here )

1. Describe the surgical procedures in enough detail so that reviewers will be able to determine what is actually being done to the animal.

2. Who will do the surgery?

3. Pre-operative procedures:

<b>Fasting - Length:</b>	<b>Clip Hair</b>	<b>Disinfect Site</b>
<b>Withhold Water - Length:</b>	<b>Scrub Site</b>	<b>Place Catheter</b>
<b>Other:</b>		

4. Preoperative medications: *Include sedatives/tranquilizers/other pre-anesthetic medications here.*

<b>Drug</b>	<b>Dose</b>	<b>Route</b>

## Appendix 9: IACUC/OB Protocol Form

### APPENDIX 4 (continued)

5. Intraoperative medications and support: *Include anesthetic agents/paralyzing agents/fluids/ pharmaceuticals essential to support the surgical procedure.*

Drug	Dose	Route

6. Federal regulations prohibit the use of paralyzing agents without general anesthesia. Will you use paralyzing agents?

NO – PROCEED TO ITEM 7

YES - Why is it necessary to use these agents?

7. Describe the methods used to monitor the state of anesthesia and general well-being:

8. Will the animal subjects regain consciousness following surgery?

NO - STOP HERE

YES - ANSWER ITEM 9-15

9. How long will the animal survive?

10. Will the surgery be performed in a room or area suitable for aseptic surgery?

YES - Identify the location where surgery will be performed:

NO - Explain:

## Appendix 9: IACUC/OB Protocol Form

### APPENDIX 4 (continued)

11. Which of the following aseptic techniques will be used?

Sterile Instruments      Gloves      Gown      Surgeon Scrub      Face Mask

None:

Other:

12. Will multiple survival surgical procedures be performed on a single animal?

YES - PROCEED TO 13.

NO - PROCEED TO 14.

13. Will the multiple survival surgeries be MAJOR? (As a general guideline, major survival surgery [e.g., laparotomy, thoracotomy, joint replacement, and limb amputation] penetrates and exposes a body cavity, produces substantial impairment of physical or physiologic functions, or involves extensive tissue dissection or transection (Brown et al. 1993). Minor survival surgery does not expose a body cavity and causes little or no physical impairment; this category includes wound suturing, peripheral vessel cannulation, percutaneous biopsy, etc.

YES - Explain:

NO - PROCEED TO 14.

14. Describe the post-operative care, including drugs, fluids, and physical support methods, that will be given to the animals:

Drug or fluid	Dose	Frequency	Route	Duration

14a. Physical support methods:

15. Who will be responsible for post operative care?

An after work contact phone number must be provided to the WSU staff. Check here to indicate that it has been provided.



# Appendix 9: IACUC/OB Protocol Form

WICHITA STATE UNIVERSITY  
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)  
ANIMAL PROTOCOL ANNUAL RENEWAL FORM

Date:

Principal Investigator:

Protocol Title:

Protocol #:

Date of Initial Approval:

Expiration Date (for this reporting period):

Animal Species:

1. RECORD OF ANIMAL USAGE:

SPECIES	TOTAL # APPROVED FOR PROTOCOL	TOTAL # USED FOR PROTOCOL	TOTAL # USED FOR PAST YEAR

2. NATURE OF THE PROTOCOL/STUDY:

Survival (Chronic) Study	Prolonged Restraint	Inducement of a Disease State
Terminal (Acute) Study	Neuromuscular Blockers	Inducement of Behavioral Stress
Multiple Surgeries	Antibody Production	Administration of Test Substances
Blood/Tissue Collection	Transgenic Breeding	Other:

3. (USDA) PROJECT (Pain) CATEGORY: C D E

**Category C:** Involves *procedures that cause no pain or no more than momentary or slight pain* and no pain-relieving drugs are used.

**Category D:** Involves *procedures that may cause more than momentary or slight pain or distress* for which appropriate sedatives, analgesics, or anesthetics will be administered.

**Category E:** Involves *procedures that may cause more than momentary or slight pain or distress* for which sedatives, analgesics, or anesthetics cannot/will not be administered due to scientific considerations/requirements.

4. PROTOCOL STATUS:

- A. Active - project ongoing
- B. Currently inactive - project was initiated but is presently inactive.
- C. Inactive - project never initiated but anticipated start date is:

## Appendix 9: IACUC/OB Protocol Form

5. **FUNDING SOURCE:** Specify the funding source. Include the grant or proposal number as applicable.

6. **PROJECT PERSONNEL:** Please list all personnel working on this project.

Name and Highest Degree	Role/Responsibility for Project

6a. **Are you requesting to add any new personnel at this time?**

No, skip to #7.

Yes, please complete the below box.

Name and Highest Degree	Title (Faculty, Student, etc)	Years and Relevant Experience	Role/Responsibility for this project

6b. **If new personnel do not have experience, how will they be trained? Or state N/A.**

7. **PROGRESS REPORT.** If the status of this project is 4.A. (Active; project ongoing) or 4.B. (Project was initiated, but is presently inactive), provide a brief update on the progress made in achieving the specific aims of the protocol. Please include in your answer how animals were utilized during this reporting period and how that fits with the total number of animals approved for the protocol. Please provide an explanation for any large discrepancy between the number of animals requested and those utilized to date. If the status of the project is 4.C. (Inactive - never initiated) you may state N/A.

## Appendix 9: IACUC/OB Protocol Form

8. **PROBLEMS/ADVERSE EVENTS.** If the status of this project is 4.A. (Active; project ongoing) or 4. B. (Project was initiated, but is presently inactive), describe any unanticipated adverse events, morbidity or mortality, the cause(s), if known, and how these problems were resolved. If NONE, this should be indicated. If the status of the project is 4.C. (Inactive - never initiated) you may state N/A.
9. **ALTERNATIVES TO ANIMAL USE.** Alternatives to the use of animals should be considered and used when possible. Since the last IACUC approval:
- A. Have alternatives to the use of animals become available that could be substituted to achieve your specific project aims?
  - B. What sources were utilized to consider alternatives? Please provide at minimum:
    - 1. The name of the database(s) searched:
    - 2. The date the search was performed:
    - 3. The period covered by the search:
    - 4. The key words and/or the search strategy used:
10. **ALTERNATIVES TO POTENTIALLY PAINFUL PROCEDURES.** (Address the following if your project involves USDA Category D or Category E.) Procedures that cause the least amount of pain or distress to the animals should be considered and used when possible. If your project is a USDA Category C, you may state N/A.
- A. Since the last IACUC approval, have alternatives which are potentially less painful or distressful become available that could be used to achieve your specific project aims?
  - B. Please provide at minimum:
    - 1. The name of the database(s) searched:
    - 2. The date the search was performed:
    - 3. The period covered by the search:
    - 4. The key words and/or the search strategy used:

## Appendix 9: IACUC/OB Protocol Form

- 11. DUPLICATION.** Activities involving animals must not unnecessarily duplicate previous experiments. Provide written assurance that the activities of this project remain in compliance with the requirement that there must be no unnecessary duplication and note how this was determined (e.g. database search).

**12. FUTURE PLANS**

No changes are planned; the project will continue as previously approved by the IACUC.

Changes are planned. *(Submit an amendment describing proposed changes. Please note that if the modifications are significant, you may be required to complete a new application. If you have questions or require assistance in making this determination, please contact the IACUC Chairperson and/or the Attending Veterinarian.)*

Other, explain:

**CERTIFICATION OF THE PRINCIPAL INVESTIGATOR.** Signature certifies that the Principal Investigator understands the requirements of the PHS Policy on Humane Care and Use of Laboratory Animals, applicable USDA regulations and the Institution's policies governing the use of vertebrate animals for research, testing, teaching or demonstration purposes. Signature further certifies that the investigator will continue to conduct the project in full compliance with the aforementioned requirements.

Signature of the Principal Investigator

Date

Signature of IACUC Representative

Date

# Appendix 9: IACUC/OB Protocol Form

WICHITA STATE UNIVERSITY  
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)  
AMENDMENT FORM

Date:

Protocol #:

PI:

Protocol Title:

Animal Species:

1. Describe specific proposed change to the protocol

## 2. Personnel Changes

If adding personnel please complete the below information. If not applicable mark this box  
(If adding more than one person please provide their information on a separate Word document)

Name (First, MI, Last):

Department:

E-mail Address:

Mark as applicable:    **WSU Faculty Member**        **WSU Grad Student**        **WSU Undergrad Student**

Other:

## Appendix 9: IACUC/OB Protocol Form

2a. Have new personnel completed CITI Training in the last 3 years:      Yes              No  
(Please contact the IACUC Administrator if more information on CITI is needed – [IACUC@wichita.edu](mailto:IACUC@wichita.edu))

2b. New Personnel's Qualifications/Experience:

2c. If new personnel do not have experience, how will they be trained?:

2d. Responsibilities of the new personnel for this study:

Signature of Principal Investigator

Date

Signature of IACUC Representative

Date

**\*\*Email completed application forms to [IACUC@wichita.edu](mailto:IACUC@wichita.edu).\*\***

## Appendix 10: IACUC/OB Periodic Report

Please attached a copy of the latest facilities (including laboratory inspections) and program assessment report conducted by the IACUC/OB.



DATE: June 18, 2019

TO: Kerry Wilks, Ph.D.  
Interim Dean of the Graduate School and Interim Institutional Official

FROM: Kim Cluff, Ph.D.  
Chair, Wichita State University's IACUC

RE: Semiannual Program Review and Facilities Inspection

This represents the semiannual report of the Institutional Animal Care and Use Committee (IACUC), as required by the PHS Policy on Humane Care and Use of Laboratory Animals and as a condition of this institution's Animal Welfare Assurance on file with the Office for Laboratory Animal Welfare, and the USDA Animal Welfare Regulations, 9 CFR Chapter I, subchapter A, as applicable.

### Evaluation of the Animal Care and Use Program

The IACUC conducted the evaluation of this institution's animal care and use program on May 2, 2019, using the *Guide for the Care and Use of Laboratory Animals (Guide, 8<sup>th</sup> edition)*, and as applicable, 9 CFR Chapter I, 2.31. No deficiencies were identified. All aspects of the program are consistent with the *PHS Policy*, the *Guide*, and applicable Animal Welfare Regulations.

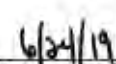
### Inspection of Animal Facilities

The IACUC inspected the animal facilities on May 2, 2019, using the *Guide*, and as applicable, 4 CFR Chapter I, 2.31. No deficiencies were identified. All aspects of the facilities are consistent with the *PHS Policy*, the *Guide*, and applicable Animal Welfare Regulations.

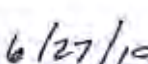
### Minority Views

There were no minority views.

  
\_\_\_\_\_  
Kim Cluff, IACUC Chair

  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Kerry Wilks, Institutional Official

  
\_\_\_\_\_  
Date

## Appendix 10: IACUC/OB Periodic Report

The following committee members were present for the program review on May 2, 2019.

In addition they have reviewed and approved the enclosed report  
of the program review and facilities inspection



Dr. Moriah Beck



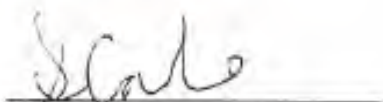
Barbara Hoppins



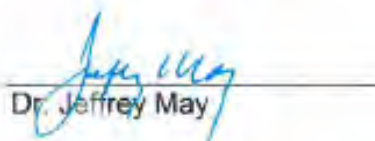
Dr. Karen Beetch



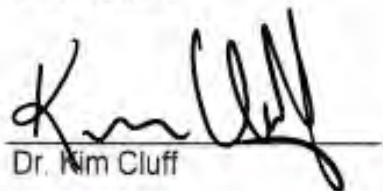
Becky Hundley



Sarah Catlin



Dr. Jeffrey May



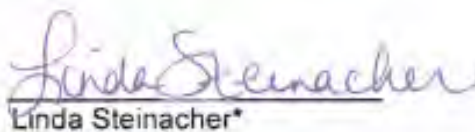
Dr. Kim Cluff



Kendra Nguyen\*



Jana Henderson (alternate)



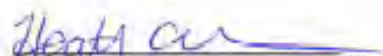
Linda Steinacher\*



Dr. William Hendry



Dr. Sandra Wilson



Dr. Heather Arens

Visitor\*

Visitor\*

Visitor\*

\*Non-voting



# Appendix 10: IACUC/OB Periodic Report

## I. Semiannual Program Review Checklist

### Institutional Policies and Responsibilities

Date: May 2, 2019

1. Animal Care and Use Program						
	A*	M	S	C	NA	
a. Responsibility for animal well-being is assumed by all members of the program ( <i>Guide, p 1</i> ) [must]	x					
b. IO has authority to allocate needed resources ( <i>Guide, p 13</i> )	x					
c. Resources necessary to manage program of veterinary care are provided ( <i>Guide, p 14</i> ) [must]	x					
d. Sufficient resources are available to manage the program, including training of personnel in accord with regulations and the <i>Guide</i> ( <i>Guide, pp 11, 15</i> )	x					
e. Program needs are regularly communicated to IO by AV and/or IACUC ( <i>Guide, p 13</i> )	x					
f. Responsibilities for daily animal care and facility management are assigned to specific individual(s) when a full-time veterinarian is not available on site ( <i>Guide, p 14</i> ) [must]	x					
g. Inter-institutional collaborations are described in formal written agreements ( <i>Guide, p 15</i> )	x					
h. Written agreements address responsibilities, animal ownership, and IACUC oversight ( <i>Guide, p 15</i> )	x					
2. Disaster Planning and Emergency Preparedness						
	A*	M	S	C	NA	
a. Disaster plans for each facility to include satellite locations are in place ( <i>Guide, p 35, p 75</i> ) [must]	x					
b. Plans include provisions for euthanasia ( <i>Guide, p 35</i> ) [must]	x					
c. Plans include triage plans to meet institutional and investigators' needs ( <i>Guide, p 35</i> )					x	
d. Plans define actions to prevent animal injury or death due to HVAC or other failures ( <i>Guide, p 35</i> )	x					
e. Plans describe preservation of critical or irreplaceable animals ( <i>Guide, p 35</i> )					x	
f. Plans include essential personnel and their training ( <i>Guide, p 35</i> )	x					
g. Animal facility plans are approved by the institution and incorporated into overall response plan ( <i>Guide, p 35</i> )	x					
h. Law enforcement and emergency personnel are provided a copy and integration with overall plan is in place ( <i>Guide, p 35</i> )	x					
3. IACUC						
	A*	M	S	C	NA	
a. Meets as necessary to fulfill responsibilities ( <i>Guide, p 25</i> ) [must]	x					
b. IACUC Members named in protocols or with conflicts recuse themselves from protocol decisions ( <i>Guide, p 26</i> ) [must]	x					
c. Continuing IACUC oversight after initial protocol approval is in place ( <i>Guide, p 33</i> )	x					
d. IACUC evaluates the effectiveness of training programs ( <i>Guide, p 15</i> )	x					
4. IACUC Protocol Review - Special Considerations						
	A*	M	S	C	NA	
a. Humane endpoints are established for studies that involve tumor models, infectious diseases, vaccine challenge, pain modeling, trauma, production of monoclonal antibodies, assessment of toxicologic effects, organ or system failure, and models of cardiovascular shock ( <i>Guide, p 27</i> )	x					
b. For pilot studies, a system to communicate with the IACUC is in place ( <i>Guide, p 28</i> )	x					
c. For genetically modified animals, enhanced monitoring and reporting is in place ( <i>Guide, p 28</i> )					x	
d. Restraint devices are justified in the animal use protocols ( <i>Guide, p 29</i> ) [must]	x					
e. Alternatives to physical restraint are considered ( <i>Guide, p 29</i> )	x					
f. Period of restraint is the minimum to meet scientific objectives ( <i>Guide, p 29</i> )	x					
g. Training of animals to adapt to restraint is provided ( <i>Guide, p 29</i> )					x	
h. Animals that fail to adapt are removed from study ( <i>Guide, p 29</i> )	x					
i. Appropriate observation intervals of restrained animals are provided ( <i>Guide, p 29</i> )	x					
j. Veterinary care is provided if lesions or illness result from restraint ( <i>Guide, p 30</i> ) [must]	x					
k. Explanations of purpose and duration of restraint are provided to study personnel ( <i>Guide, p 30</i> )	x					
l. Multiple surgical procedures on a single animal are justified and outcomes evaluated ( <i>Guide, p 30</i> )	x					
m. Major versus minor surgical procedures are evaluated on a case-by-case basis ( <i>Guide, p 30</i> )	x					

## Appendix 10: IACUC/OB Periodic Report

n. Multiple survival procedure justifications in non-regulated species conform to regulated species standards (Guide, p 30)	x				
o. Animals on food/fluid restriction are monitored to ensure nutritional needs are met (Guide, p 31)					x
p. Body weights for food/fluid restricted animals are recorded at least weekly (Guide, p 31)					x
q. Daily written records are maintained for food/fluid restricted animals (Guide, p 31)					x
r. Pharmaceutical grade chemicals are used, when available, for animal-related procedures (Guide, p 31)	x				
s. Non-pharmaceutical grade chemicals are described, justified, and approved by IACUC (Guide, p 31)	x				
t. Investigators conducting field studies know zoonotic diseases, safety issues, laws and regulations applicable in study area (Guide, p 32)	x				
u. Disposition plans are considered for species removed from the wild (Guide, p 32)					x
v. Toe-clipping only used when no alternative, performed aseptically and with pain relief (Guide, p 75)					x
<b>5. IACUC Membership and Functions</b>	<b>A*</b>	<b>M</b>	<b>S</b>	<b>C</b>	<b>NA</b>
a. IACUC is comprised of at least 5 members, appointed by CEO (PHS Policy, IV.A.3.)	x				
b. Members include a veterinarian, a scientist, a nonscientist, and a nonaffiliated non-lab animal user (Guide, p 24) <sup>i</sup>	x				
c. IACUC authority and resources for oversight and evaluation of institution's program are provided (Guide, p 14)	x				
d. IACUC conducts semiannual evaluations of institutional animal care and use program (PHS Policy, IV.B.)	x				
e. Conducts semiannual inspections of institutional animal facilities (PHS Policy, IV.B.)	x				
f. IACUC organizationally reports to the Institutional Official (PHS Policy, IV.A.1.b.)	x				
g. Methods for reporting and investigating animal welfare concerns are in place (Guide, p 23) [must]	x				
h. Reviews and investigates concerns about animal care and use at institution <sup>ii</sup> (PHS Policy, IV.B.)	x				
i. Procedures are in place for review, approval, and suspension of animal activities <sup>iii</sup> (PHS Policy, IV.B.)	x				
j. Procedures are in place for review and approval of significant changes to approved activities (PHS Policy, IV.B.)	x				
k. Policies are in place for special procedures (e.g., genetically modified animals, restraint, multiple survival surgery, food and fluid regulation, field investigations, agricultural animals) (Guide, p 27-32)	x				
l. Requests for exemptions from major survival surgical procedure restrictions are made to USDA/APHIS <sup>iv</sup> (Guide, p 30) [must]	x				
<b>6. IACUC Training</b>	<b>A*</b>	<b>M</b>	<b>S</b>	<b>C</b>	<b>NA</b>
1. All IACUC members should receive:					
a. Formal orientation to institution's program (Guide, p 17)	x				
b. Training on legislation, regulations, guidelines, and policies (Guide, p 17)	x				
c. Training on how to inspect facilities and labs where animal use or housing occurs (Guide, p 17)	x				
d. Training on how to review protocols as well as evaluate the program (Guide, p 17)	x				
e. Ongoing training/education (Guide, p 17)	x				
<b>7. IACUC Records and Reporting Requirements<sup>v</sup></b>	<b>A*</b>	<b>M</b>	<b>S</b>	<b>C</b>	<b>NA</b>
1. Semiannual report to the IO (PHS Policy, IV.B.)					
a. Submitted to IO every 6 months	x				
b. Compiles program review and facility inspection(s) results (includes all program and facility deficiencies)	x				
c. Includes minority IACUC views	x				
d. Describes IACUC-approved departures from the Guide or PHS Policy and the reasons for each departure <sup>vi</sup>	x				
e. Distinguishes significant from minor deficiencies	x				
f. Includes a plan and schedule for correction for each deficiency identified <sup>vii</sup>	x				
2. Reports to OLAW (PHS Policy, IV.F.)					
a. Annual report to OLAW documents program changes, dates of the semiannual program reviews and facility inspections and includes any minority views	x				

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b. Promptly advises OLAW of serious/ongoing Guide deviations or PHS Policy noncompliance (NOT-OD-05-034)	X				
c. Institute must promptly advise OLAW of any suspension of an animal activity by the IACUC (NOT-OD-05-034)	X				
3. Reports to U.S. Department of Agriculture (USDA) or Federal funding agency <sup>viii</sup>					
a. Annual report to USDA contains required information including all exceptions/exemptions	X				
b. Reporting mechanism to USDA is in place for IACUC-approved exceptions to the regulations and standards	X				
c. Reports are filed within 15 days for failures to adhere to timetable for correction of significant deficiencies	X				
d. Promptly reports suspensions of activities by the IACUC to USDA and any Federal funding agency	X				
4. Records (PHS Policy, IV.E.)					
a. IACUC meeting minutes and semiannual reports to the IO are maintained for 3 years	X				
b. Records of IACUC reviews of animal activities include all required information <sup>ix</sup>	X				
c. Records of IACUC reviews are maintained for 3 years after the completion of the study	X				
<b>8. Veterinary Care (See also next section - Veterinary Care)</b>	<b>A*</b>	<b>M</b>	<b>S</b>	<b>C</b>	<b>NA</b>
a. An arrangement for veterinarian(s) with training or experience in lab animal medicine is in place including backup veterinary care <sup>x</sup>	X				
b. Veterinary access to all animals is provided (Guide, p 14) [must]	X				
c. Direct or delegated authority is given to the veterinarian to oversee all aspects of animal care and use (Guide, p 14) [must]	X				
d. Veterinarian provides consultation when pain and distress exceeds anticipated level in protocol (Guide, p 5) [must]	X				
e. Veterinarian provides consultation when interventional control is not possible (Guide, p 5) [must]	X				
f. If part time /consulting veterinarian, visits meet programmatic needs (Guide, p 14)	X				
g. Regular communication occurs between veterinarian and IACUC (Guide, p 14)	X				
h. Veterinarian(s) have experience and training in species used (Guide, p 15) [must]	X				
i. Veterinarian(s) have experience in facility administration/management (Guide, p 15)	X				
<b>9. Personnel Qualifications and Training</b>	<b>A*</b>	<b>M</b>	<b>S</b>	<b>C</b>	<b>NA</b>
1. All personnel are adequately educated, trained, and/or qualified in basic principles of laboratory animal science. Personnel included: [must]					
a. Veterinary/other professional staff (Guide, p 15-16)	X				
b. IACUC members (Guide, p 17)	X				
c. Animal care personnel (Guide, p 16)	X				
d. Research investigators, instructors, technicians, trainees, and students (Guide, pp 16-17)	X				
2. Continuing education for program and research staff provided to ensure high quality care and reinforce training (Guide, pp 16-17)	X				
3. Training is available prior to starting animal activity (Guide, p 17)	X				
4. Training is documented (Guide, p 15)	X				
5. Training program content includes: (Guide, p 17)					
a. Methods for reporting concerns (Guide, p 17)	X				
b. Humane practices of animal care (e.g., housing, husbandry, handling) <sup>xi</sup>	X				
c. Humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care, aseptic surgical techniques and euthanasia (Guide, p 17) <sup>xii</sup>	X				
d. Research/testing methods that minimize numbers necessary to obtain valid results (PHS Policy, IV.A.1.g.)	X				
e. Research/testing methods that minimize animal pain or distress (PHS Policy, IV.A.1.g.)	X				
f. Use of hazardous agents, including access to OSHA chemical hazard notices where applicable (Guide, p 20)	X				
g. Animal care and use legislation (Guide, p 17)	X				
h. IACUC function (Guide, p 17)	X				
i. Ethics of animal use and Three R's (Guide, p 17)	X				
<b>10. Occupational Health and Safety of Personnel</b>	<b>A*</b>	<b>M</b>	<b>S</b>	<b>C</b>	<b>NA</b>
1. Program is in place and is consistent with federal, state, and local regulations (Guide, p 17) [must]	X				
2. Program covers all personnel who work in laboratory animal facilities (Guide, p 18)	X				
3. Changing, washing, and showering facilities are available as appropriate (Guide, p 19)	X				

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4. Hazardous facilities are separated from other areas and identified as limited access ( <i>Guide, p 19</i> )	X				
5. Personnel training is provided based on risk (e.g., zoonoses, hazards, personal hygiene, special precautions, animal allergies) ( <i>Guide, p 20</i> )	X				
6. Personal hygiene procedures are in place (e.g., work clothing, eating/drinking/smoking policies) ( <i>Guide, p 20</i> )	X				
7. Procedures for use, storage, and disposal of hazardous biologic, chemical, and physical agents are in place ( <i>Guide, p 21</i> )	X				
8. Personal Protective Equipment for the work area is appropriate and available ( <i>Guide, p 21</i> )	X				
9. Program for medical evaluation and preventive medicine for personnel includes:					
a. Pre-employment evaluation including health history ( <i>Guide, p 22</i> )	X				
b. Immunizations as appropriate (e.g., rabies, tetanus) and tests as appropriate ( <i>Guide, p 22</i> )	X				
c. Zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague) ( <i>Guide, p 23</i> )	X				
d. Procedures for reporting and treating injuries, including accidents, bites, allergies, etc. ( <i>Guide, p 23</i> )	X				
e. Promotes early diagnosis of allergies including preexisting conditions ( <i>Guide, p 22</i> )	X				
f. Considers confidentiality and other legal factors as required by federal, state and local regulations ( <i>Guide, p 22</i> ) [must]	X				
g. If serum samples are collected, the purpose is consistent with federal and state laws ( <i>Guide, p 22</i> ) [must]					X
10. Waste anesthetic gases are scavenged ( <i>Guide, p 21</i> )	X				
11. Hearing protection is provided in high noise areas ( <i>Guide, p 22</i> )					X
12. Respiratory protection is available when performing airborne particulate work ( <i>Guide, p 22</i> )	X				
13. Special precautions for personnel who work with nonhuman primates, their tissues or body fluids include:					
a. Tuberculosis screening provided for all exposed personnel ( <i>Guide, p 23</i> )					X
b. Training and implementation of procedures for bites, scratches, or injuries associated with macaques ( <i>Guide, p 23</i> )					X
c. PPE is provided including gloves, arm protection, face masks, face shields, or goggles ( <i>Guide, p 21</i> )					X
d. Injuries associated with macaques are carefully evaluated and treatment implemented ( <i>Guide, p 23</i> )					X
14. Occupational safety and health of field studies is reviewed by OSH committee or office ( <i>Guide, p 32</i> )	X				
<b>11. Personnel Security</b>	<b>A*</b>	<b>M</b>	<b>S</b>	<b>C</b>	<b>NA</b>
1. Preventive measures in place include pre-employment screening, and physical and IT security ( <i>Guide, p 23</i> )	X				
<b>12. Investigating &amp; Reporting Animal Welfare Concerns</b>	<b>A*</b>	<b>M</b>	<b>S</b>	<b>C</b>	<b>NA</b>
1. Methods for investigating and reporting animal welfare concerns are established ( <i>Guide, p 23</i> ) [must]	X				
2. Reported concerns and corrective actions are documented ( <i>Guide, p 24</i> )	X				
3. Mechanisms for reporting concerns are posted in facility and at applicable website with instructions ( <i>Guide, p 24</i> )	X				
a. Includes multiple contacts ( <i>Guide, p 24</i> )	X				
b. Includes anonymity, whistle blower policy, nondiscrimination and reprisal protection ( <i>Guide, p 24</i> )	X				

- \* A = acceptable  
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S = significant deficiency (is or may be a threat to animal health or safety)  
C = change in program (PHS Policy IV.A.1.a-i.) (include in semiannual report to IO and in annual report to OLAW)  
NA = not applicable

### NOTES:

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## Veterinary Care

Date: May 2, 2019

1. Clinical Care and Management	A*	M	S	C	NA
1. Veterinary program offers high quality of care and ethical standards ( <i>Guide, p 105</i> ) [must]	X				
2. Veterinarian provides guidance to all personnel to ensure appropriate husbandry, handling, treatment, anesthesia, analgesia, and euthanasia ( <i>Guide, p 106</i> )	X				
3. Veterinarian provides oversight to surgery and perioperative care ( <i>Guide, p 106</i> )	X				
4. Veterinary care program is appropriate for program requirements ( <i>Guide, pp 113-114</i> )	X				
5. Veterinarian(s) is familiar with species and use of animals and has access to medical and experimental treatment records ( <i>Guide, p 114</i> )	X				
6. Procedures to triage and prioritize incident reports are in place ( <i>Guide, p 114</i> )	X				
7. Procedures are in place to address:					
8. Problems with experiments to determine course of treatment in consultation with investigator ( <i>Guide, p 114</i> )	X				
9. Recurrent or significant health problems with the IACUC and documentation of treatments and outcomes ( <i>Guide, p 114</i> )	X				
10. Veterinary review and oversight of medical and animal use records ( <i>Guide, p 115</i> )	X				
11. Procedures established for timely reporting of animal injury, illness, or disease ( <i>Guide, p 114</i> ) [must]	X				
12. Procedures established for veterinary assessment, treatment, or euthanasia ( <i>Guide, p 114</i> ) [must]	X				
13. Veterinarian is authorized to treat, relieve pain, and/or euthanize ( <i>Guide, p 114</i> ) [must]	X				
2. Animal Procurement and Transportation/Preventive Medicine	A*	M	S	C	NA
1. Procedures for lawful animal procurement are in place ( <i>Guide, p 106</i> ) [must]					
2. Sufficient facilities and expertise are confirmed prior to procurement ( <i>Guide, p 106</i> )	X				
3. Procurement is linked to IACUC review and approval ( <i>Guide, p 106</i> )	X				
4. Random source dogs and cats are inspected for identification ( <i>Guide, p 106</i> )	X				
5. Population status of wildlife species is considered prior to procurement ( <i>Guide, p 106</i> )					X
6. Appropriate records are maintained on animal acquisition ( <i>Guide, p 106</i> )					X
7. Animal vendors are evaluated to meet program needs and quality ( <i>Guide, p 106</i> )	X				
8. Breeding colonies are based on need and managed to minimize numbers ( <i>Guide, p 107</i> )	X				
9. Procedures for compliance with animal transportation regulations, including international requirements, are in place ( <i>Guide, p 107</i> ) [must]	X				
10. Transportation is planned to ensure safety, security and minimize risk ( <i>Guide, p 107</i> )	X				
11. Movement of animals is planned to minimize transit time and deliveries are planned to ensure receiving personnel are available ( <i>Guide, pp 107-108</i> )	X				
12. Appropriate loading and unloading facilities are available ( <i>Guide, p 109</i> )	X				
13. Environment at receiving site is appropriate ( <i>Guide, p 109</i> )	X				
14. Policies in place on separation by species, source, and health status ( <i>Guide, pp 109, 111-112</i> )	X				
15. Procedures in place for quarantine to include zoonoses prevention ( <i>Guide, p 110</i> )	X				
16. Quarantined animals from different shipments are handled separately or physically separated ( <i>Guide, p 110</i> )	X				
17. Procedures in place for stabilization/acclimation ( <i>Guide, pp 110-111</i> )	X				
18. Policies in place for isolation of sick animals ( <i>Guide, p 112</i> )	X				
19. Program is in place for surveillance, diagnosis, treatment and control of disease to include daily observation ( <i>Guide, p 112</i> )	X				
20. Diagnostic resources are available for preventive health program ( <i>Guide, p 112</i> )	X				
3. Surgery	A*	M	S	C	NA
1. Surgical outcomes are assessed and corrective changes instituted ( <i>Guide, p 115</i> )	X				
2. Researchers have appropriate training to ensure good technique ( <i>Guide, p 115</i> ) [must]	X				
3. Pre-surgical plans are developed and include veterinary input (e.g., location, supplies, anesthetic and analgesic use, peri-operative care, recordkeeping) ( <i>Guide, p 116</i> )	X				
4. Aseptic surgery is conducted in dedicated facilities or spaces, unless exception justified and IACUC approved ( <i>Guide, p 116</i> )	X				
5. Surgical procedures including laparoscopic procedures are categorized as major or minor ( <i>Guide, pp 117-118</i> )	X				

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6. For nonsurvival surgery, the site is clipped, gloves are worn and instruments and area are clean (Guide, p 118)	X				
7. Aseptic technique is followed for survival surgical procedures (Guide, pp 118-119)	X				
8. Effective procedures for sterilizing instruments and monitoring expiration dates on sterile packs are in place (Guide, p 119)	X				
9. Procedures for monitoring surgical anesthesia and analgesia are in place (Guide, p 119)	X				
10. For aquatic species, skin surfaces are kept moist during surgical procedures (Guide, p 119)					X
11. Post-operative monitoring and care are provided by trained personnel and documented (e.g., thermoregulation, physiologic function, analgesia, infection, removal of skin closures) (Guide, pp 119-120)	X				

### 4. Pain, Distress, Anesthesia and Analgesia A\* M S C NA

1. Guidelines for assessment and categorization of pain, distress and animal wellbeing are provided during training (Guide, p 121)	X				
2. Selection of analgesics and anesthetics is based on professional veterinary judgment (Guide, p 121)	X				
3. Painful procedures are monitored to ensure appropriate analgesic management (Guide, p 122)	X				
4. Nonpharmacologic control of pain is considered as an element of postprocedural care (Guide, p 122)	X				
5. Procedures are in place to assure antinociception before surgery begins (Guide, p 122) [must]	X				
6. Guidelines for selection and use of analgesics and anesthetics are in place and regularly reviewed and updated (Guide, p 122)	X				
7. Special precautions for the use of paralytics are in place to ensure anesthesia <sup>210</sup> (Guide, p 123)					X

### 5. Euthanasia A\* M S C NA

1. Methods are consistent with AVMA Guidelines on Euthanasia unless approved by the IACUC (Guide, p 123)	X				
2. Standardized methods are developed and approved by the veterinarian and IACUC that avoid distress and consider animal age and species (Guide, pp 123-124)	X				
3. Training is provided on appropriate methods for each species and considers psychological stress to personnel (Guide, p 124)	X				
4. Procedures and training are in place to ensure death is confirmed (Guide, p 124) [must]	X				

### 6. Drug Storage and Control A\* M S C NA

1. Program complies with federal regulations for human and veterinary drugs (Guide, p 115) [must]	X				
2. Drug records and storage procedures are reviewed during facility inspections (Guide, p 115)	X				
3. Procedures are in place to ensure analgesics and anesthetics are used within expiration date (Guide, p 122) [must]	X				
4. Anesthetics and analgesics are acquired, stored, and their use and disposal are recorded legally and safely (Guide, p 122)	X				

- \* A = acceptable  
M = minor deficiency  
S = significant deficiency (is or may be a threat to animal health or safety)  
C = change in program (PHS Policy IV.A.1.a.-i.) (include in semiannual report to IO and in annual report to OLAW)  
NA = not applicable

#### NOTES:



# Appendix 10: IACUC/OB Periodic Report

## II. Semiannual Facility Inspection Checklist

### Terrestrial Animal Housing and Support Areas

Date: May 2, 2019

Location: Animal Care Facility

	A*	M	S	C	NA
<b>1. Location:</b>					
a. animal areas separate from personnel areas ( <a href="#">Guide, p 134</a> )	X				
b. separation of species ( <a href="#">Guide, p 111</a> )	X				
c. separation by disease status ( <a href="#">Guide, p 111</a> )	X				
d. security and access control ( <a href="#">Guide, p 151</a> )	X				
<b>2. Construction:</b>					
a. corridors ( <a href="#">Guide, p 136</a> )	X				
b. animal room doors ( <a href="#">Guide, p 137</a> )	X				
c. exterior windows ( <a href="#">Guide, p 137</a> )					X
d. floors ( <a href="#">Guide, p 137</a> )	X				
e. drainage ( <a href="#">Guide, p 138</a> )	X				
f. walls and ceilings ( <a href="#">Guide, p 138</a> )	X				
g. heating ventilation and air conditioning ( <a href="#">Guide, p 139</a> )	X				
h. power and lighting ( <a href="#">Guide, p 141</a> )	X				
i. noise control ( <a href="#">Guide, p 142</a> )	X				
j. vibration control ( <a href="#">Guide, p 142</a> )					X
k. environmental monitoring ( <a href="#">Guide, p 143</a> )	X				
<b>3. Room/Cage:</b>					
a. temperature and humidity ( <a href="#">Guide, p 43</a> )					
b. ventilation and air quality ( <a href="#">Guide, p 45</a> )	X				
c. illumination ( <a href="#">Guide, p 47</a> )	X				
d. noise and vibration ( <a href="#">Guide, p 49</a> )	X				
<b>4. Primary Enclosure:</b>					
a. space meets physiologic, behavioral <sup>xiv</sup> , and social <sup>xv</sup> needs ( <a href="#">Guide, pp 51, 55-63</a> )	X				
b. secure environment provided ( <a href="#">Guide, p 51</a> )	X				
c. durable, nontoxic materials in good repair and no risk of injury ( <a href="#">Guide, p 51</a> )	X				
d. flooring is safe and appropriate for species ( <a href="#">Guide, p 51</a> )	X				
e. adequate bedding and structures for resting, sleeping, breeding ( <a href="#">Guide, p 52</a> )	X				
f. objective assessments of housing and management are made ( <a href="#">Guide, p 52</a> )	X				
g. procedures for routine husbandry are documented ( <a href="#">Guide, p 52</a> )	X				
h. socially housed animals can escape or hide to avoid aggression ( <a href="#">Guide, p 55</a> )	X				
i. cage height provides adequate clearance ( <a href="#">Guide, p 56</a> )	X				
j. animals express natural postures, can turn around, access food and water, and rest away from urine and feces ( <a href="#">Guide, p 56</a> ) [must]	X				
k. rationale <sup>xvi</sup> for <a href="#">Guide</a> /USDA space exceptions approved by IACUC and based on performance indices ( <a href="#">Guide, p 56</a> )					X
l. dogs and cats allowed to exercise and provided human interaction ( <a href="#">Guide, p 58</a> )					X
m. nonhuman primates are socially housed except for scientific, veterinary or behavior reasons ( <a href="#">Guide, pp 58-59</a> )					X
n. single housing of nonhuman primates is for shortest duration possible ( <a href="#">Guide, p 60</a> )					X
o. opportunities for release into larger enclosures is considered for single caged nonhuman primates ( <a href="#">Guide, p 60</a> )					X
p. agricultural animals are housed socially ( <a href="#">Guide, p 60</a> )					X
q. food troughs and water devices for agricultural animals allow access for all animals ( <a href="#">Guide, p 60</a> )					X
<b>5. Environmental Enrichment, Behavioral and Social Management:</b>					
a. structures and resources promote species typical behavior ( <a href="#">Guide, pp 52-54</a> )	X				
b. novelty of enrichment is considered ( <a href="#">Guide, p 53</a> )	X				
c. species specific plans for housing including enrichment, behavior and activity are developed and reviewed regularly by IACUC, researchers and veterinarian ( <a href="#">Guide, pp 53, 58, 60, 63</a> )	X				
d. animal care personnel receive training to identify abnormal animal behaviors ( <a href="#">Guide, p 53</a> )	X				

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e. stability of pairs or groups is monitored for incompatibility (Guide, p 64)	X				
f. single housing is justified for social species (Guide, p 64)	X				
g. single housing is limited to the minimum period necessary (Guide, p 64)	X				
h. additional enrichment for single housed animals is provided (Guide, p 64)	X				
i. single housing is reviewed regularly by IACUC and veterinarian (Guide, p 64)	X				
j. habituation to routine procedures is part of enrichment program (Guide, p 64)	X				
<b>6. Sheltered or Outdoor Housing: (e.g., barns, corrals, pastures, islands)</b>					
a. weather protection and opportunity for retreat (Guide, p 54) [must]					X
b. appropriate size (Guide, p 54)					X
c. ventilation and sanitation of shelter (no waste/moisture build-up) (Guide, p 54)					X
d. animal acclimation (Guide, p 55)					X
e. social compatibility (Guide, p 55)					X
f. roundup/restraint procedures (Guide, p 55)	X				
g. appropriate security (Guide, p 55)					X
<b>7. Naturalistic Environments:</b>					
a. animals added /removed with consideration of effect on group (Guide, p 55)	X				
b. adequate food, fresh water, and shelter ensured (Guide, p 55)	X				
<b>8. Food:</b>					
a. feeding schedule and procedures including caloric intake management (Guide, pp 65-67)	X				
b. contamination prevention (Guide, p 65)	X				
c. vendor quality control (Guide, p 66)	X				
d. storage in sealed containers (Guide, p 66)	X				
e. expiration date labeling (Guide, p 66)	X				
f. vermin control (Guide, p 66)	X				
g. rotation of stocks (Guide, p 66)	X				
<b>9. Water:</b>					
a. ad libitum unless justified (Guide, pp 67-68)	X				
b. QC procedures (Guide, pp 67-68)	X				
<b>10. Bedding and Nesting Materials:</b>					
a. species appropriate (Guide, pp 68-69)	X				
b. keeps animals dry (Guide, pp 68-69)	X				
c. QC procedures (Guide, pp 68-69)	X				
d. minimizes scientific variables (Guide, pp 68-69)	X				
<b>11. Sanitation:</b>					
a. frequency of bedding/substrate change (Guide, p 70)	X				
b. cleaning and disinfection of microenvironment (Guide, pp 70-71)	X				
c. cleaning and disinfection of macroenvironment (Guide, p 72)	X				
d. assessing effectiveness (Guide, p 73)	X				
<b>12. Waste Disposal:</b>					
a. procedures for collection (Guide, pp 73-74)	X				
b. procedures for storage and disposal (Guide, pp 73-74)	X				
c. hazardous wastes are rendered safe before removal from facility (Guide, pp 73-74) [must]	X				
d. animal carcasses (Guide, pp 73-74)	X				
<b>13. Pest Control:</b>					
a. regularly scheduled (Guide, p 74)	X				
b. documented program including control of rodent pests and insecticide use (Guide, p 74)	X				
<b>14. Emergency, Weekend, and Holiday Animal Care:</b>					
a. care provided by qualified personnel every day (Guide, p 74)	X				
b. provision for accessible contact information (Guide, p 74)	X				
c. monitoring of backup systems (Guide, p 143)	X				
d. veterinary care available after hours, weekends, and holidays (Guide, pp 74, 114) [must]	X				
e. a disaster plan that takes into account both personnel and animals (Guide, p 75)	X				
<b>15. Identification:</b>					
a. cage/rack cards contain required information (Guide, p 75)	X				
b. genotype information included and standardized nomenclature used when applicable (Guide, p 75)	X				
<b>16. Recordkeeping:</b>					
a. clinical records accessible and contain appropriate information (Guide, pp 75-76)	X				
b. records are provided when animals are transferred between institutions (Guide, p 75)					X
<b>17. Breeding Genetics and Nomenclature:</b>					



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a. appropriate genetic records, management and monitoring procedures (Guide, p 76)	X				
b. phenotypes that affect wellbeing are reported to IACUC and effectively managed (Guide, p 77)	X				
<b>18. Storage:</b>					
a. adequate space for equipment, supplies, food, bedding and refuse (Guide, p 141)	X				
b. bedding in vermin-free area and protected from contamination (Guide, p 141)	X				
c. food in vermin-free, temperature and humidity controlled area and protected from contamination (Guide, p 141)	X				
d. refuse storage is separate (Guide, p 141)	X				
e. carcass and animal tissue storage is separate, refrigerated below 7°C and cleanable (Guide, p 141)	X				
<b>19. Personnel:</b>					
a. adequate space for locker rooms, administration and training (Guide, p 135)	X				

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S = significant deficiency (is or may be a threat to animal health or safety)

C = change in program (PHS Policy IV.A.1.a.-i.) (include in semiannual report to IO and in annual report to OLAW)

NA = not applicable

### NOTES:

### Cagewash

Date: May 2, 2019

Location: ACF

	A*	M	S	C	NA
<b>1. Construction and Operation:</b>					
a. dedicated central area for sanitizing cages and equipment is provided (Guide, p 143)	X				
b. cage-washing equipment meets need (Guide, p 143)	X				
c. doors, windows, floors, drainage, walls, ceilings (Guide, pp 136-138)	X				
d. convenient to animal areas/waste disposal (Guide, p 143)	X				
e. ease of access (including door size) facilitates use (Guide, p 143)	X				
f. sufficient space for staging and maneuvering (Guide, p 143)	X				
g. safety precautions/clothing/equipment used for waste disposal/prewash/acid wash ((Guide, p 143)	X				
h. traffic flow clean to dirty with no contamination of clean equipment by dirty equipment and appropriate air pressurization (Guide, p 143)	X				
i. insulation and/or sound attenuation present as needed (Guide, p 143)	X				
j. utilities are appropriate (Guide, p 143)	X				
k. ventilation meets heat and humidity load (Guide, p 143)	X				
l. safety features (e.g., SOPs, warning signs, eyewash stations) are in use (Guide, p 143)	X				
m. functioning safety devices to prevent entrapment in washer/sterilizers (Guide, p 143)					X
n. cage wash temperatures are monitored and records are available (Guide, p 73)	X				
o. appropriate clean cage storage (Guide, p 141)	X				

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S = significant deficiency (is or may be a threat to animal health or safety)

C = change in program (PHS Policy IV.A.1.a.-i.) (include in semiannual report to IO and in annual report to OLAW)

NA = not applicable

### NOTES:

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## Special Facilities: Aseptic Surgery

Date: May 2, 2019

Location: ACF

	A*	M	S	C	NA
<b>1. General Considerations:</b>					
a. location minimizes traffic/contamination ( <i>Guide, p 144</i> )	X				
b. functional components (surgical support, animal preparation, surgeon scrub, operating room, postoperative recovery) are designed and separated (physically or otherwise) ( <i>Guide, p 144</i> )	X				
c. appropriate drug storage, control, expiration date monitoring ( <i>Guide, pp 115, 122</i> )	X				
d. safe sharps disposal system ( <i>Guide, p 74</i> )	X				
e. adequate records of anesthesia and perioperative care ( <i>Guide, p 122</i> )	X				
f. aseptic procedures in use for all survival surgery ( <i>Guide, pp 118-119</i> )	X				
<b>2. Operating Room:</b>					
a. effective contamination control procedures ( <i>Guide, p 144</i> )	X				
b. effective cleaning procedures/dedicated tools ( <i>Guide, p 145</i> )	X				
c. interior surfaces smooth and impervious to moisture ( <i>Guide, p 145</i> )	X				
d. HVAC system meets <i>Guide</i> requirements ( <i>Guide, p 145</i> )	X				
e. lighting safe and appropriate ( <i>Guide, p 145</i> )	X				
f. outlets safe and appropriate ( <i>Guide, p 145</i> )	X				
g. scavenging of anesthetic gases implemented ( <i>Guide, p 145</i> )	X				
<b>3. Surgical Support:</b>					
a. facility for washing, sterilizing, storing instruments and supplies ( <i>Guide, p 145</i> )	X				
b. autoclave monitoring procedures are implemented ( <i>Guide, pp 119, 145</i> )	X				
c. storage of autoclaved materials maintains sterility ( <i>Guide, p 145</i> )	X				
d. cold sterilization procedures are appropriate ( <i>Guide, p 119</i> )	X				
<b>4. Animal Preparation:</b> contains large sink to facilitate cleaning of animal and operative site ( <i>Guide, p 145</i> )	X				
<b>5. Surgeon Scrub:</b> outside operating room, non-hand-operated sink ( <i>Guide, p 145</i> )	X				
<b>6. Postoperative Recovery:</b> allows adequate observation, easily cleaned, supports physiologic functions, minimizes risk of injury ( <i>Guide, p 145</i> )	X				
<b>7. Dressing Area:</b> place for personnel to change ( <i>Guide, p 145</i> )	X				

\* A = acceptable

M = minor deficiency

S = significant deficiency (is or may be a threat to animal health or safety)

C = change in program (PHS Policy [IV.A.1.a.-i.](#)) (include in semiannual report to IO and in annual report to OLAW)

NA = not applicable

## NOTES:

# Appendix 10: IACUC/OB Periodic Report

**Special Facilities: Procedure Areas, Non-survival Surgeries, Laboratories, Rodent Surgeries, Imaging, Whole Body Irradiation, Hazardous Agent Containment, Behavioral Studies**

**Date: May 2, 2019**

**Location: ACF**

	A*	M	S	C	NA
<b>1. General Considerations:</b>					
a. labs used to house animals only when scientifically required and limited to minimum period necessary ( <a href="#">Guide, p 134</a> )	X				
b. drug storage, control, and expiration dates ( <a href="#">Guide, pp 115, 122</a> )	X				
c. sharps disposal ( <a href="#">Guide, p 74</a> )	X				
d. anesthetic monitoring ( <a href="#">Guide, p 120</a> )	X				
e. scavenging of anesthetic gases ( <a href="#">Guide, p 21</a> )	X				
f. safety features (e.g., SOPs, safety signs, eyewash stations, secure gas cylinders) are in place ( <a href="#">Guide, p 19</a> )	X				
g. carcass disposal ( <a href="#">Guide, pp 73-74</a> )	X				
<b>2. Additional Concerns for Survival Surgery: (rodent and minor procedures only)</b>					
a. rodent survival surgery clean and uncluttered, not used for anything else during surgery ( <a href="#">Guide, p 144</a> )	X				
b. records of peri-operative care ( <a href="#">Guide, p 120</a> )	X				
c. aseptic procedures ( <a href="#">Guide, pp 118-119</a> )	X				
d. autoclave monitoring procedures ( <a href="#">Guide, pp 119, 145</a> )	X				
e. storage of autoclaved materials ( <a href="#">Guide, p 145</a> )	X				
f. cold sterilization procedures are appropriate ( <a href="#">Guide, p 119</a> )	X				
<b>3. Imaging/Whole Body Irradiation:</b>					
a. location of resource limits contamination risk ( <a href="#">Guide, p 147</a> )	X				
b. appropriate transportation methods are in place ( <a href="#">Guide, p 147</a> )	X				
c. gas anesthesia provision, scavenging and monitoring are appropriate ( <a href="#">Guide, p 147</a> )	X				
d. appropriate sensors and ventilation are provided for cryogen gases ( <a href="#">Guide, p 147</a> ) <b>[must]</b>					X
e. imaging console is located away from radiation source ( <a href="#">Guide, p 147</a> )	X				
<b>4. Hazardous Agent Containment:</b>					
a. facility adheres to APHIS, USDA and CDC Select Agent Regulations and other federal, state and local regulations including security measures ( <a href="#">Guide, p 148</a> ) <b>[must]</b>	X				
<b>5. Behavioral Studies:</b>					
a. facility minimizes airborne transmission of noise and ground-borne transmission of vibration ( <a href="#">Guide, p 149</a> )	X				
b. floor coverings reduce sound transmission ( <a href="#">Guide, p 149</a> )	X				
c. testing equipment allows for surface disinfection ( <a href="#">Guide, p 150</a> )	X				
d. components that cannot be cleaned are not in ready contact with animals and kept covered when not in use ( <a href="#">Guide, p 150</a> )	X				
e. housing areas are contiguous with testing areas when appropriate ( <a href="#">Guide, p 150</a> )	X				

\* A = acceptable

M = minor deficiency

S = significant deficiency (is or may be a threat to animal health or safety)

C = change in program (PHS Policy [IV.A.1.a.-i.](#)) (include in semiannual report to IO and in annual report to OLAW)

NA = not applicable

**NOTES:**

# Appendix 10: IACUC/OB Periodic Report

## III. Semiannual Program Review and Facility Inspection Report

Date: May 2, 2019

Members in Attendance: Moria Beck, Karen Beetch, Sarah Catlin, Kim Cluff, Jana Henderson, Heather Arens, Becky Hundley, Jeffrey May, Sandra Wilson

Deficiency Category*	✓	Location	Deficiency and Plan for Correction	Responsible Party	Correction Schedule and Interim Status	Date Complete

- \* **A** = acceptable  
**M** = minor deficiency  
**S** = significant deficiency (is or may be a threat to animal health or safety)  
**C** = change in program (PHS Policy [IV.A.1.a-i.](#)) (include in semiannual report to IO and in annual report to OLAW)  
**NA** = not applicable  
✓ Check if repeat deficiency



## Appendix 10: IACUC/OB Periodic Report

### IV. Endnotes

<sup>i</sup> Part 2 Subpart C - Research Facilities

- 2.31(b)(2) - "The Committee shall be composed of a Chairman and at least two additional members;... at least one shall not be affiliated in any way with the facility...such person will provide representation for general community interests in the proper care and treatment of animals." [PHS policy requires 5 members]

<sup>ii</sup> 2.32(c)(4) - "...No facility employee, Committee member, or laboratory personnel shall be discriminated against or be subject to any reprisal for reporting violations of any regulation or standards under the Act." [USDA requirement additional to PHS Policy]

<sup>iii</sup> 2.31(d)(5) - "...shall conduct continuing reviews of activities...not less than annually." [PHS Policy requires a complete new review every 3 years utilizing all the criteria for initial review]

<sup>iv</sup> 2.31(d)(1)(x) - "...no animal will be used in more than one major operative procedure from which it is allowed to recover unless...(it is) justified for scientific reasons...(or is) required as routine veterinary procedure...or other special circumstances as determined by the Administrator on an individual basis." [this last point is an additional USDA justification for multiple survival surgeries]

<sup>v</sup> 2.36 - "...each reporting facility shall submit an annual report to the APHIS, AC sector supervisor for the State where the facility is located on or before December 1 of each calendar year." [The USDA annual report has a list of requirements which differ from PHS annual report]

<sup>vi</sup> 2.36(b)(3) - "...exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the IACUC. A summary of all such exceptions must be attached to the facility's annual report." [Refers to USDA annual report]

<sup>vii</sup> 2.31(c)(3) - "...Any failure to adhere to the plan and schedule that results in a significant deficiency remaining uncorrected shall be reported in writing within 15 business days by the IACUC, through the institutional official, to APHIS and any Federal agency funding that activity." [PHS Policy requires prompt reporting to OPRR of serious or continuing noncompliance with the PHS Policy or serious deviations from the provisions of the *Guide*]

<sup>viii</sup> 2.36 - "...each reporting facility shall submit an annual report to the APHIS, AC sector supervisor for the State where the facility is located on or before December 1 of each calendar year." [The USDA annual report has a list of requirements which differ from PHS annual report]

<sup>ix</sup> In addition to PHS requirements for IACUC review/application for funding, USDA regulations require:

2.31(d)(1)(ii) - "The principal investigator (PI) consider alternatives to procedures that 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."

2.31(d)(1)(iii) - "The PI has provided written assurance that the activities do not unnecessarily duplicate previous experiments."

2.31(d)(1)(iv) - "Procedures that may cause more than momentary or slight pain or distress to the animals will:  
- involve in their planning, consultation with the attending veterinarian or his or her designee; [PHS Policy does not specify veterinary consultation]  
- not include paralytics without the use of anesthesia;"

2.31(d)(1)(x) - "No animal will be used in more than one major operative procedure from which it is allowed to recover, unless justified for scientific reasons by the principal investigator, in writing..."

<sup>\*</sup> 2.33(a)(1) - "In the case of a part-time attending veterinarian or consultant arrangements, the formal arrangements shall include a written program of veterinary care and regularly scheduled visits to the research facility." [USDA requirement additional]

## Appendix 10: IACUC/OB Periodic Report

<sup>xi</sup> 2.32(c) - "Humane methods of animal maintenance and experimentation, including the basic needs of each species, proper handling and care for the various species of animals used by the facility, proper pre-procedural and post-procedural care of animals, and aseptic surgical methods and procedures."

<sup>xii</sup> 2.32(c) - additional specifications include:

- "proper use of anesthetics, analgesics, and tranquilizers for any species of animals used by the facility"
- "methods whereby deficiencies in animal care and treatment are reported, including deficiencies in animal care and treatment reported by any employee of the facility..."
- "utilization of services (e.g., National Agricultural Library, National Library of Medicine) to provide information on appropriate animal care and use, alternatives to the use of live animals in research, that could prevent unintended and unnecessary duplication of research involving animals, and regarding the intent and requirements of the Act." [USDA training specifications are more detailed than PHS Policy].

<sup>xiii</sup> 2.31(d)(iv)(C) - "Procedures that may cause more than momentary or slight pain or distress to the animals will...not include the use of paralytics without anesthesia."

<sup>xiv</sup> Part 3 Subpart A 3.8 - "...research facilities must develop, document, and follow an appropriate plan to provide dogs with the opportunity for exercise. In addition the plan must be approved by the attending veterinarian. The plan must provide written standard procedures..."

<sup>xv</sup> Part 3 Subpart D 3.81 - "...research facilities must develop, document, and follow an appropriate plan for environment enhancement adequate to promote the psychological well-being of nonhuman primates."

<sup>xvi</sup> Part 3 Subpart A 3.6(c)(1) - "Each dog housed in a primary enclosure must be provided with a minimum amount of floor space, calculated as follows:  
(length of dog in inches ÷ 6)<sup>2</sup> / 144 = required floor space in square feet."

- Part 3 Subpart D 3.80 (b) - "Primary enclosures [for nonhuman primates] must meet the minimum space requirements provided in this subpart."

- In situations where the USDA regulations and the *Guide* differ with respect to space requirements, the larger of the two must be followed



## Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

Summarize the heating, ventilation and air conditioning (HVAC) systems for each animal facility, **including all satellite facilities**. Include **all animal holding rooms** (including satellite holding rooms), surgical facilities, procedure rooms, and support spaces integral to animal facilities (e.g., cage wash, cage and feed storage areas, necropsy, treatment).

<b>Location/Building/Facility:</b>	<b>Hubbard Hall, 5<sup>th</sup> floor, Animal Care Facility (no satellite facility)</b>
------------------------------------	---

In the text box below, provide a general description of the mechanical systems used to provide temperature, humidity and air pressure control. Include details such as:

- the source(s) of air and air recirculation rates if other than 100% fresh air
- treatment of air (filters, absorbers, etc.)
- design features such as centralized chilled water, re-heat coils (steam or hot water), individual room vs. zonal temperature and relative humidity control, the use of variable air volume (VAV) systems and other key features of HVAC systems affecting performance
- features that minimize the potential for adverse consequences to animal well-being (such as re-heat coils that fail closed or that are equipped with high-temperature cut-off systems), and
- how room temperature, ventilation, and critical air pressures are monitored and maintained in the event of a system or component failure, including notifying appropriate personnel in the event of a significant failure that occurs outside of regular working hours and/or other management systems used to respond to alerts or failures.

<p>-All rooms in the Animal Care Facility use 100% fresh air</p> <p>-air filters are used for treatment of air</p> <p>-The system does not have a VAV, but uses a re-heat box that brings the temperature up to a set-point in cooler months. During the summer, the chill water coil cools the air. A desiccant drum de-humidifies the air. A 100% exhaust fan modulates with outside air to maintain air pressure. The ACF has a zonal temperature system but each room can be adjusted +/- a few degrees.</p> <p>-In a power outage, the re-heat coils will shut-off to prevent over-heating of the air. An auxiliary air conditioning unit is turned on in the event of the chill water being shut-off or for back-up during high temperatures.</p> <p>-The Facilities Services personnel monitor the temperatures within the facility via a computerized sensor. An alarm in the control room at the Environment Management Systems (EMS) office is triggered when the temperature goes above 78F or below 64F. Someone from HVAC is on-call 24/7 and would be notified by EMS or campus police when temperatures are out of range or a system failure. De-humidifiers, space heaters, and/or fans are available to adjust temperatures if needed.</p>
---

## Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

In the Table below, provide room-specific information requested. For each room within this location, indicate use, including the species for animal housing rooms. *Measurement of air exchange rates and verification of relative pressure within animal housing rooms (excluding rooms housing aquatic species only) and cage washing facilities must be completed within the 12 months preceding completion of this Program Description.* Air exchange rates may be important to maintain air quality in other areas; however, measurements may be left at the discretion of the institution. Information may be provided in another format, providing all requested data is included. **[Note: Please remove the examples provided in the Table below.]**

Room No.	Specific Use	Temperature Set-Point (define units)	Electronic / Emergency Monitoring of Temperatures (Y/N)	Alert/Alarm Temperature Ranges (if applicable; define units)	Humidity Control (Y/N)	Relative Pressure	Air Exchange Rate (per hour)	Date Verified / Measured
		(settings to be verified)					(values to be measured)	
501	Storage	74°F	Y	Above 78°F and below 68°F	N	-	6.18	04/2019
502	Rats	70°F	Y	Above 78°F and below 68°F	N	-	12.5	04/2019
503	Hamsters	70°F	Y	Above 78°F and below 68°F	N	-	9.18	04/2019
504	Clean Room	72°F	Y	Above 78°F and below 68°F	N	+	4.51	04/2019



## Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

Room No.	Specific Use	Temperature Set-Point (define units)	Electronic / Emergency Monitoring of Temperatures (Y/N)	Alert/Alarm Temperature Ranges (if applicable; define units)	Humidity Control (Y/N)	Relative Pressure	Air Exchange Rate (per hour)	Date Verified / Measured
		(settings to be verified)					(values to be measured)	
504c	Restroom	70°F	Y	Above 78°F and below 68°F	N	-	2.94	04/2019
Hall	Hallway	70°F	Y	Above 78°F and below 68°F		+	3.81	04/2019
506	Empty	70°F	Y	Above 78°F and below 68°F	N	-	8.23	04/2019
507	Mice	72°F	Y	Above 78°F and below 68°F	N	-	8.86	04/2019
508	Storage	70°F	Y	Above 78°F and below 68°F	N	-	3.91	04/2019
509	Surgery	70°F	Y	Above 78°F and below 68°F	N	+	7.14	04/2019
510	Dirty Room	70°F	Y	Above 78°F and below 68°F	N	-	9.66	04/2019

## Appendix 12: Aquatic Systems Summary – Part I

Please summarize water management and monitoring information programs for each animal facility, including all satellite facilities, rooms, enclosures. The following key will assist you in completing the form:

- (1) List location of aquaria, including outdoor enclosures (ponds or outdoor tanks). If indoors, list building and room number.  
Note that all species housed at the same location and maintained via the same design and monitoring may be listed in the same row.
- (2) Please indicate if embryonic (E), larval (L), juvenile (J) or Adult (A)
- (3) Group tanks (ponds, outdoor tanks, multiple aquaria) are arranged as arrays with shared water supply; individual aquaria have exclusive water handling systems.
- (4) Indicate water type, e.g., fresh, brackish, or marine.
- (5) Indicate water pre-treatment, e.g., dechlorination, rough filters.
- (6) Indicate water circulation, e.g., static, re-circulated, constant flow, or some combination of these. If applicable, indicate water exchange frequency and amount (percentage).
- (7) Provide a key word for filtration employed, e.g., biological, chemical, mechanical, and type (e.g., mechanical-bead filter).  
A diagram may be provided showing the flow of water, filtration, source of “make-up” water and amount replaced daily.

### Part I

Location (1)	Species (2)	System Design					
		Group / Individual (3)	Water Type (4)	Pre-treatment (5)	Circulation (6)	Filtration (7)	Disinfection (e.g., UV, ozone)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Note:** Records of equipment maintenance (filter changes, UV bulb changes, probe changes, calibrations, *etc.*) should be available for review.

[Create additional rows by pressing TAB in the bottom-right box.]

## Appendix 12: Aquatic Systems Summary – Part II

The following key will assist you in completing this form:

- (1) In these columns, please indicate monitoring frequency, e.g. daily, weekly, monthly or other point sampling frequency; continuous/real time, or none, if applicable. Also indicate method of control (heaters versus room HVAC, hand versus auto dosing, etc.).
- (2) Indicate other parameters and their monitoring frequency, e.g., alkalinity, total hardness, conductivity, chlorine/chloramine.

### Part II

Monitoring									
Indicate in the boxes below the frequency of monitoring and method of control for the following parameters. (1)									
Location (from Part I)	Temperature	Salinity	pH	NH <sub>4</sub>	NO <sub>2</sub>	NO <sub>3</sub>	Dissolved O <sub>2</sub>	Total Dissolved Gases	Other. Please List (2):
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Note:** This information may be provided in another format, provided that all requested data is included.

[Create additional rows by pressing TAB in the bottom-right box.]

## Appendix 13: Primary Enclosures and Animal Space Provisions

Please complete the Table below considering performance criteria and guiding documents (e.g., Guide, Ag Guide, ETS 123 and/or other applicable standards) used by the IACUC/OB to establish adequacy of space provided for all research animals including traditional laboratory species, agricultural animals, aquatic species, and wildlife when reviewing biomedical, field, and agricultural research studies.

Species	Dimensions of Enclosure (cage, pen, tank*, corral, paddock, etc.)	Maximum Number Animals / Enclosure	Guiding Document Used to determine the Institution's Space Standards (Guide, Ag Guide, ETS 123, Other)	Enclosure Composition & Description**
Hamster	18"D x 9.5"H	2 adult hamsters	Guide	Open-topped static solid-bottomed caging
Rat	18"D x 9.5"H	3 rats (450g)	Guide	Open-topped static solid-bottomed caging
Mouse	11"D x 7.5 H	5 mice	Guide	static solid-bottomed caging with microisolators
Rabbits	32"D x 24"W x 16"H.	1 or 2	Guide***	Stainless steel

\*For aquatic species, provide tank volume.

\*\*Include descriptors such as open-topped, static microisolator, individually-ventilated cage systems (IVCS).

\*\*\*cages meet Guide requirements, but not yet been used.

## Appendix 14: Cleaning and Disinfection of the Micro- and Macro-Environment

Please describe the cleaning and disinfection methods in the Table below. Note the washing/sanitizing frequency and method for each of the following:

Area	Washing/Sanitizing Method (mechanical washer, hand washing, high-pressure sprayers, etc.)	Washing/Sanitizing Frequency	Chemical(s) Used*	Other Comments (e.g., autoclaved)
<b>Micro-environment</b>				
Solid-bottom cages (static)	Hand washing	1-2 x/week	10% Bleach/anionic liquid detergent	
Solid-bottom cages (IVC)	N/A	N/A	N/A	
Suspended wire-bottom or slotted floor cages	N/A	N/A	N/A	
Cage lids	Hand washing	Weekly	10% Bleach/anionic liquid detergent	
Filter tops	Hand washing	Weekly	10% Bleach/anionic liquid detergent	
Cage racks and shelves	Hand washing	Weekly	Quaternary ammonium disinfectant	
Cage pans under suspended cages	Hand washing	Weekly	Quaternary ammonium disinfectant	For rabbit cages, not yet used.
Play pens, floor pens, stalls, etc.	N/A	N/A	N/A	
Corrals for primates or outdoor paddocks for livestock	N/A	N/A	N/A	

## Appendix 14: Cleaning and Disinfection of the Micro- and Macro-Environment

Area	Washing/Sanitizing Method (mechanical washer, hand washing, high-pressure sprayers, etc.)	Washing/Sanitizing Frequency	Chemical(s) Used*	Other Comments (e.g., autoclaved)
Aquatic, amphibian, and reptile tanks and enclosures	N/A	N/A	N/A	
Feeders	Hand washing	Weekly	10% Bleach/anionic liquid detergent	
Watering devices	Hand washing	Weekly	10% Bleach/anionic liquid detergent	Includes bottles, sipper tubes and stoppers
Exercise devices and manipulanda used in environmental enrichment programs, etc.	Hand washing	Weekly	10% Bleach/anionic liquid detergent	Rats, mice, and hamsters have translucent red tubes for enrichment.
Transport cages	N/A	N/A	N/A	
Operant conditioning & recording chambers, mechanical restraint devices (chairs, slings, etc.)	N/A	N/A	N/A	
Euthanasia chambers	Hand washing	After use	10% Bleach/anionic liquid detergent	Home cage used so chamber washed after each use.
<b>Macro-Environment</b>				
<b>Animal Housing Rooms:</b>				

## Appendix 14: Cleaning and Disinfection of the Micro- and Macro-Environment

Area	Washing/Sanitizing Method (mechanical washer, hand washing, high-pressure sprayers, etc.)	Washing/Sanitizing Frequency	Chemical(s) Used*	Other Comments (e.g., autoclaved)
Floors	Hose-end sprayer	Washed weekly; sanitized monthly	Quaternary ammonium disinfectant	
Walls	Hose-end sprayer	Monthly	Quaternary ammonium disinfectant	
Ceilings	Hose-end sprayer	Monthly	Quaternary ammonium disinfectant	
Ducts/Pipes	N/A	N/A	N/A	
Fixtures	Hose-end sprayer	Monthly	Quaternary ammonium disinfectant	
<b>Corridors:</b>				
Floors	Mop bucket	Weekly	Quaternary ammonium disinfectant	
Walls	Hand washing	Monthly	Quaternary ammonium disinfectant	
Ceilings	Hand washing	Monthly	Quaternary ammonium disinfectant	
Ducts/Pipes	N/A	N/A	N/A	
Fixtures	Hand washing	Monthly	Quaternary ammonium disinfectant	
<b>Support Areas (e.g., surgery, procedure rooms, etc.); complete for each area:</b>				
Floors	Mop bucket	Weekly	Quaternary ammonium disinfectant	
Walls	Hand washing	Monthly	Quaternary ammonium disinfectant	



## Appendix 14: Cleaning and Disinfection of the Micro- and Macro-Environment

Area	Washing/Sanitizing Method (mechanical washer, hand washing, high-pressure sprayers, etc.)	Washing/Sanitizing Frequency	Chemical(s) Used*	Other Comments (e.g., autoclaved)
Ceilings	Hand washing	Monthly	Quaternary ammonium disinfectant	
Ducts/Pipes	N/A	N/A	N/A	
Fixtures	Hand washing	Monthly	Quaternary ammonium disinfectant	
<b>Implements (note whether or not shared):</b>				
Mops	Not shared	After each use	Washing machine detergent	
Mop buckets	Shared (not used in animal rooms)	Rinsed clean after each use		
Aquaria nets	N/A	N/A	N/A	
Other				
<b>Other:</b>				
Vehicle(s)	N/A	N/A	N/A	
Other transport equipment (list)	N/A			

\*Please provide chemical, not trade name.



## Appendix 15: Facilities and Equipment for Sanitizing Materials

In the Tables below, summarize the facilities and equipment used to sanitize animal related equipment (tunnel washer, bottle washer, rack washer, bulk autoclave, hand-washing area, bedding dispensing unit, *etc.*). Note that some descriptions may be combined if all share identical features (e.g., all rack washers).

**[Note: Please remove the examples provided in the Table below.]**

Building	Room No.	Equipment Type	Safety Feature(s)	Methods of Monitoring Effectiveness
Hubbard	504	Hand-Washing tub for all caging.	Limited to PPE	RODAC plates of caging tested quarterly, thermometer used to check temperatures each use.
Hubbard	443	Bulk autoclave	Temperature alarms, inspected annually.	Autoclave tape

**[Create additional rows by pressing TAB in the bottom-right box.]**

## Appendix 16: Lighting Summary

Using the Table below, summarize the lighting system(s) for the animal housing facility(ies). For each species or holding room type, list light intensity (range), construction features (e.g., water resistance), photoperiod (light:dark) and control (e.g., automatic versus manual, phasing). For systems automatically controlling photoperiod, describe override mechanisms (including alarms, if applicable).

**Location:** Animal Care Facility, Hubbard Hall

[Note: Please remove the examples provided in the Table below.]

Room Type <sup>(a)</sup>	Light Intensity Range	Lighting Fixture Construction Features <sup>(b)</sup>	Photo-period (hrs) <sup>(c)</sup>	Photoperiod and Lighting Control	Override Mechanisms (if applicable)
Rat/mouse Holding Rooms	130-300 lux	Surface mounted, water resistant	12:12	Automatic via wall-mounted timer box	Mechanical on/off switch
Hamster holding room	130-300 lux	Surface mounted, water resistant	14:10	Automatic via wall-mounted timer box	Mechanical on/off switch
Surgery	500 lux	Recessed, water resistant; arm-mounted, water resistant	N/A	On/off switch	N/A

[Create additional rows by pressing TAB in the bottom-right box.]

<sup>(a)</sup> A list of each room is not needed; group or cluster rooms by species or function

<sup>(b)</sup> Include such features as water resistance, red lighting, etc.

<sup>(c)</sup> Note if light cycle inverted/reversed.

**Repeat Location and Table as necessary for each location, including satellite housing locations.**

## Appendix 17: Satellite Housing Facilities

**Note:** In the Program Description Section 2. IV. (Physical Plant), item C., describe the criteria used to determine a “Satellite Animal Holding Area.” In the Table below, summarize these animal housing areas. Note that each of these must also be included in the Heating, Ventilation, and Air Conditioning (HVAC) Summary (**Appendix 11**) and Lighting Systems Summary (**Appendix 16**).

Building	Room(s)	Person Responsible	Species Used	Approximate Area (ft <sup>2</sup> or m <sup>2</sup> ) Devoted to Housing	Maximum Period of Stay	Purpose / Rationale / Justification	Construction Features and Finishes
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[Create additional rows by pressing TAB in the bottom-right box.]