



March 29, 2019

AAALAC International

Dear AAALAC:

I am writing in regards to your correspondence, dated October 15, 2018, referencing the upcoming visitation of AAALAC International to our animal care facilities and the request for a program description ahead of your visit. As always, our goal is to facilitate this visit and maintain our high level of research and animal care excellence, thereby granting us continued accreditation. Enclosed you will find our program description and its appendices. Please note that Ferris State University's file number is [REDACTED] and that the phone number and e-mail address associated with this file are [REDACTED] and [REDACTED] respectively.

May and June are the best months for a visit. We do require disposable booties and lab coats (which will be provided to you) for all non-laboratory personnel entering the facility.

We do request that at least one of the individuals have expertise in evaluation of small institution facility's needs, where a large number of protocols are dedicated to classroom instruction. During our 2013 and 2010 evaluations, we were often asked by the visitors why we sought Accreditation with how little research we conduct. We do so to attract talented Faculty who wish to include research as a teaching tool and to grow our research functions at the university. Please do not hesitate to contact me if you need any additional information.

Sincerely,

Animal Care Facility Manager

Enclosure

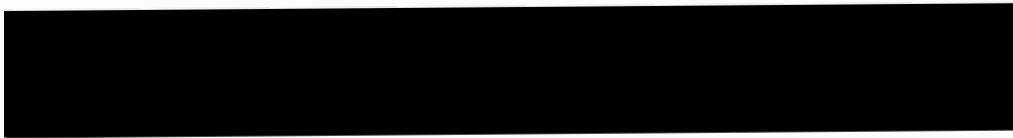
ANIMAL CARE FACILITIES
VETERINARY SUPPORT SERVICES

Program Description
Animal Care and Use Program

**< Ferris State University Animal Care
Facility**

>

< Ferris State University >



<April 1, 2019>

For
AAALAC International

Table of Contents

Section 1. Introduction	1
Section 2. Description	6
I. Animal Care and Use Program	6
A. Program Management.....	6
1. Program Management Responsibility	6
a. The Institutional Official.....	6
b. Role of the Attending Veterinarian	6
c. Interinstitutional Collaborations	7
2. Personnel Management.....	8
a. Training, Education, and Continuing Educational Opportunities	8
i. Veterinary and Other Professional Staff	8
ii. Animal Care Personnel.....	9
iii. The Research Team.....	9
b. Occupational Health and Safety of Personnel.....	11
i. Institutional Oversight	11
ii. Standard Working Conditions and Baseline Precautions	12
1) Medical Evaluation and Preventive Medicine for Personnel	12
2) Personnel Training Regarding Occupational Health and Safety.....	21
3) Personal Hygiene	22
4) Standard Personnel Protection.....	22
iii. Animal Experimentation Involving Hazards	24
B. Program Oversight	36
1. The Role of the IACUC/OB.....	36
a. IACUC/OB Composition and Function	36
b. Protocol Review	36
c. Special Considerations for IACUC/OB Review	38
i. Experimental and Humane Endpoints	38
ii. Unexpected Outcomes that Affect Animal Well-being	40

iii. Physical Restraint.....	40
iv. Multiple Survival Surgical Procedures	41
v. Food and Fluid Regulation.....	43
vi. Use of Non-Pharmaceutical-Grade Drugs and Other Substances.....	43
vii. Field Investigations.....	47
viii. Animal Reuse	47
2. Post-Approval Monitoring	48
3. Investigating and Reporting Animal Welfare Concerns.....	49
4. Disaster Planning and Emergency Preparedness	50
II. Animal Environment, Housing and Management	50
A. Animal Environment	50
1. Temperature and Humidity	51
2. Ventilation and Air Quality	51
3. Life Support Systems for Aquatic Species.....	52
4. Noise and Vibration	52
B. Animal Housing	53
1. Primary Enclosures.....	53
2. Environmental Enrichment, Social, and Behavioral Management	53
a. Environmental Enrichment.....	53
b. Social Environment	54
c. Enrichment, Social and Behavioral Management Program Review	54
d. Procedural Habituation and Training of Animals	55
e. Sheltered or Outdoor Housing	55
f. Naturalistic Environments	56
C. Animal Facility Management	56
1. Husbandry	56
a. Food.....	56
b. Drinking Water	57
c. Bedding and Nesting Materials	58

d. Miscellaneous Animal Care and Use Equipment	58
e. Sanitation	59
i. Bedding/Substrate Change.....	59
ii. Cleaning and Disinfection of the Micro- and Macro-Environments	59
f. Conventional Waste Disposal	60
g. Pest Control	60
h. Weekend and Holiday Animal Care	61
2. Population Management.....	62
a. Identification.....	62
b. Breeding, Genetics, and Nomenclature	62
III. Veterinary Care.....	63
A. Animal Procurement and Transportation.....	63
1. Animal Procurement	63
2. Transportation of Animals.....	63
B. Preventive Medicine	63
1. Animal Biosecurity	63
2. Quarantine and Stabilization.....	64
3. Separation by Health Status and Species	65
C. Clinical Care and Management	65
1. Surveillance, Diagnosis, Treatment and Control of Disease.....	65
2. Emergency Care.....	66
3. Clinical Record Keeping	67
4. Diagnostic Resources.....	67
5. Drug Storage and Control.....	68
D. Surgery.....	68
1. Pre-Surgical Planning	68
2. Surgical Facilities.....	68
3. Surgical Procedures	69
4. Aseptic Technique	69
5. Intraoperative Monitoring	70

6. Postoperative Care	70
E. Pain and Distress	70
F. Anesthesia and Analgesia	71
G. Euthanasia	72
IV. Physical Plant	73
A. Facilities Overview	73
B. Centralized (Centrally-Managed) Animal Facility(ies).....	73
C. Satellite Animal Housing Facilities.....	75
D. Emergency Power and Life Support Systems	75
1. Power	75
2. Other System Malfunctions.....	76
E. Other Facilities	76
1. Other Animal Use Facilities	76
2. Other Animal Program Support Facilities.....	76

Appendices

Appendix 1:	Glossary of Abbreviations and Acronyms
Appendix 2:	Summary of Animal Housing and Support Sites
Appendix 3:	Line Drawings
Appendix 4:	Organizational Chart(s)
Appendix 5:	Animal Usage
Appendix 6:	Personnel Medical Evaluation Form
Appendix 7:	IACUC/OB Membership Roster
Appendix 8:	IACUC/OB Minutes
Appendix 9:	Blank IACUC/OB Protocol Form
Appendix 10:	IACUC/OB Periodic Report
Appendix 11:	Heating, Ventilation and Air Conditioning (HVAC) System Summary
Appendix 12:	Aquatic Systems Summary – Part I & II
Appendix 13:	Primary Enclosures and Animal Space Provisions
Appendix 14:	Cleaning and Disinfection of the Micro- and Macro-Environment
Appendix 15:	Facilities and Equipment for Sanitizing Materials
Appendix 16:	Lighting Summary
Appendix 17:	Satellite Housing Facilities

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.

Ferris State University Animal Care is the program unit for Ferris State University. Colleges covered within the program currently include the College of Pharmacy and the College of Arts and Sciences.

- 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.

Ferris State University has more than 14,000 students enrolled in classes on its main campus in Big Rapids, 19 off-campus sites throughout Michigan and at Ferris' Kendall College of Art and Design in Grand Rapids. By offering people what they want, when and where they need it, Ferris is Michigan's "statewide university," with a transfer rate higher than any other university in Michigan, facilitated by the ease of "laddering" from a two-year to a four-year degree. Ferris is distinguished by its strong heritage of opportunity and career-oriented approach to education where theory meets practice, along with unique degrees that are not available at other universities in the state, region or nation. More than 180 programs, ranging from associate to doctoral degrees, are offered through eight degree-granting colleges: Arts and Sciences, Business, Education and Human Services, Engineering Technology, Health Professions, Kendall College of Art and Design, Michigan College of Optometry, and Pharmacy.

The Animal Care and Use program relates directly to the University Mission providing opportunities for collaborative research efforts between faculty and students, offering experiences you cannot gain in the traditional classroom setting; by embracing the diversity of ideas from different backgrounds and cultures through research and teaching; by teaching ethics both inside and outside the class room, utilizing opportunities to instruct on the ethical care and use of animals in research to further the students' ethical base; by creating a research environment that values excellence in endeavors beyond the classroom; by fostering the responsibility and desire for the lifelong pursuit of knowledge, through hands on research and teaching activities, and by providing opportunities, both inside and beyond the classroom to gain valuable career skills and knowledge as well as leadership development and success.

- 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.

Ferris State University utilizes the standards outlined in the *Guide* for all animals, as well as the Animal Welfare Act regulations for covered species. When a NIH/NSF funded project occurs, further standards outlined by PHS policy are implemented, only for the animals falling under this funding, as outlined in submitted Animal Welfare Assurances.

- 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.

Ferris State University has established an Institutional Animal Care and Use Committee (hereafter known as the IACUC), which is qualified through experience, expertise, and ongoing training of its members to oversee Ferris State University's animal care and use program. The IACUC consists of 10 members, and its membership meets the compositional requirements set forth in the PHS Policy on Humane Care and Use of Laboratory Animals, IV.A.3.b. (1)- (4).

The day-to-day care of animals is provided by part-time employees who are students at the University. Their work is overseen by the facility manager, [REDACTED]

The University-wide animal care and use program is monitored by the IACUC. Semi-annual facility inspections are conducted in accordance with the Guide and USDA standards. IACUC members accompany the Coordinator on these inspections. Reports are distributed to the IACUC with meeting agendas and are discussed at full committee meetings. Program evaluations, along with a summary of the inspections are provided to the Institutional Official, Paul Blake, and Vice President for Academic Affairs/Provost. Program deficiencies and any minority views are also reported to the I.O.

The University-wide education program for the use and care of animals (CITI Training) is under the direction of Office of Research and Sponsored Programs. This program provides training and information on regulatory compliance, animal husbandry, species-specific handling techniques (including wet labs) and occupational health and safety. The Occupational Health and Safety program, in the laboratory, is the responsibility of [REDACTED] MA, MSPH, C (ASCP), CSP, CHSP, CEHP and conducted in conjunction with Birkam Health.

- 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.

Paul Blake, PhD. / I.O.

Janice Weaver, Ph.D./Chair, IACUC

James Scott, DVM/University Attending Veterinarian

- 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 major type of research that takes place at Ferris State University is Functional Equivalence research utilizing Pigeons. This research project is instructional research for Undergraduate Students.

The major forms of teaching protocols include Anatomy and Physiology musculature protocols involving Rats, Frogs and Turtles; Behavioral Modification instructional classrooms with Rats, Wild Fish Population Study Labs utilizing Mark/Recapture. Between teaching and research, we have 3 PI's and 8 Protocols that utilize animals. Details can be found in Appendix 5.

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

The majority of funding, currently in place for research projects utilizing animals on campus, comes from internally funded Faculty Research Grants, Student Research Fellowships, Mini-Grants, and Department level funds for research. Currently and in the past faculty have pursued and/or obtained NIH R20/R15 grant funding in support of animal based research.

- 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.

No other Ferris State University owned units function outside of the program outlined in this program description. All research and instruction involving the use of animals by Ferris State University units are solely ran by this program.

- 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.

Ferris State University Animal Care Facilities contracts with Riversbend Animal Hospital for Emergency Veterinary Services. This animal hospital was added under the 2013 AAALAC Program. Riversbend is an AAHA accredited hospital privately owned by Ferris State's AV, Dr. James Scott, DVM, and is located roughly 10 minutes from the facility. Only sick animals are housed at the hospital for the period of treatment and recovery at which time they are returned to the Ferris Animal Care Facility.

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

Please make note that this institution is primarily a teaching focused institution rather than a research focused institution and that a large number of our protocols are focused on classroom instruction rather than scientific research.

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 AV, IACUC Chair (acting on behalf of the IACUC), Lab Safety Director, and Facility Manager have direct access to the IO via email, phone, and the scheduling of face to face meetings to discuss any emergency or immediate needs. Ongoing communication takes place via Semi-Annual Reports to the IO following semi-annual evaluations of both the program and facilities. The IO also periodically visits the IACUC during a scheduled Full Committee Meeting, observing the interactions and deliberation of the IACUC.

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.

The AV for Ferris State University, Dr. James P Scott, DVM is a Full Professor of Anatomy and Physiology within the colleges of Arts and Science and Optometry. He is a licensed veterinarian through the State of Michigan, is the Veterinarian of Record with the USDA and AAALAC, and holds the full responsibility for the Animal Care Program at the University including but not limited to: detection/surveillance/prevention/diagnosis/treatment/resolution, handling/restraint/anesthetics/analgesics/tranquilization/euthanasia

, surgical/post- surgical care, promotion and monitoring of animals physical and psychological wellbeing, overseeing adequacy of husbandry program, reviewing and approving all animal care via his role on the IACUC, training of institutional staff in the care and use of laboratory animals, assisting in establishment and/or monitoring of occupational health and safety program, monitors for zoonotic diseases, and advises on and monitors biohazard control policies and procedures relevant to the animal care and use program. He is an active member of the IACUC and participates in program/facilities review. He is on call 24/7 for any Veterinary needs of the facility and regularly visits the facilities checking in on animal health and addressing any Veterinary concerns of the IACUC and Facility Manager. As compensation for the time spent overseeing the ACP and Facilities Dr. Scott receives ¼ time release for his services.

In the event of Dr. James Scott being unavailable, [REDACTED] of Rivers Bend Animal Hospital, which is located ten minutes from Ferris State University, owned by Dr. Scott, serves as the backup veterinarian, and will respond to Ferris Facilities for any veterinary concerns.

- 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.

[REDACTED] plays a role in providing basic veterinary care including but not limited to: administration of Veterinarian prescribed treatment, early detection/ monitoring of animals' health concerns, and identification/monitoring of all veterinary related concerns related to research and teaching protocols [REDACTED] received training in prior employment settings to provide basic veterinary care to research animals and acts under the oversight and guidance of the AV.

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.

Currently the only offsite collaboration is the use of the AAHA Accredited Riversbend Animal Hospital for care of sick and injured animals. If research collaboration were to take place, a contract and IACUC memorandum of understanding would be drawn up between Ferris State University and the collaborative institution assigning responsibilities of each location's institution. These

would be maintained on file for review and would be reviewed during the Ferris State University's Semi-Annual program review. Every effort would be made to collaborate with an AAALAC accredited institution and that institution's accredatory status would be reviewed prior to contracting.

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 main training format utilized by Ferris State University is the Collaborative Institutional Training Initiative (CITI) to carry out and evaluate individuals' training. The AV in conjunction with the Facility Manager carry out hands on training and advisement of students, PI's and staff following Guide/AVMA approved standards. The effectiveness of training programs is reviewed during the Semi-Annual Review process and any on the job training is documented by training forms for Facility Staff and by the PI in the laboratories. The PI's training and qualifications are summarized in the Protocol and verified during Protocol review prior to approval.

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.

James P. Scott -DVM from Michigan State University's College of Veterinary Medicine.

-Licensed in the State of Michigan as DVM.

-Licensed by the DEA

-Over 34 years of experience in Private Practice.

-Attends the National AVMA and AALAS Conferences Annually for Continuing Education

- DVM from Michigan State University's College of Veterinary Medicine

- Licensed in the state of Michigan as DVM

- Completed surgery residency at Minnesota State.

Bachelor of Science in Biology Bowling Green State University

-RLATG certified since 2009

-CMAR certified since 2013

- Over 16 years' experience in Laboratory Animal Care.

-Over 10 years' managing Laboratory Animal Care

-Ongoing Continuing education through AALAS Since 2009, including State, District, and National Conference attendance

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

1) Indicate the number of animal care personnel.

4

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.

All animal care personnel are student workers employed by the animal care facility. The majority are Pre-vet with the remainder being biologically based majors. They are trained on the job by the Animal Care Facility Manager and are required to pass CITI. Their experience levels vary from 1-3 years' experience depending on their Pre-vet background and their time on the job with Ferris State University. Continuing education is provided in a hands on training format during the course of their employment with the Facility on an as needed basis.

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.

Research personnel are required to document previous training on the Protocol form which is reviewed and verified prior to approval. ALL PI's and staff are required to complete the Appropriate CITI training and the Veterinarian verifies any surgical training or conducts the training with individual PI's prior to the start of their project. Periodically the Vet and/or a member of the

IACUC (typically the Animal Facility Coordinator or IACUC Chair) will walk through the research space, review the research process and procedures taking place as part of post approval monitoring, and document any findings with the IACUC. Annual reports and DE novo reviews again confirm updated training or experience as necessary to meet or exceed the AVMA/Guide requirements.

a) Briefly describe the content of any required training.

All personnel are required to obtain and keep their appropriate CITI training modules up to date following IACUC outlined policies. All PI's are required to stay up to date with surgical and pain mitigation techniques as animal care techniques which are verified by the AV and Facility coordinator.

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

All training requirements are verified prior to approval of the Protocol document and any new staff is required to complete all training prior obtaining approval of addition to the protocol.

c) Describe continuing education opportunities offered.

The IACUC encourages all PI's and staff to participate in publically provided opportunities through various outside resources.

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]

All surgical based protocols are reviewed by the AV and the PI is required to consult with the AV on prior training and obtaining any further training needed prior to protocol approval. This information is then put before the IACUC during the protocol review process and further verified during the review process.

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

Any Primary Investigator performing anesthesia is verified to have been prior trained or is trained by the attending vet ahead of any Protocol work taking place. The PI is responsible for training their project staff that will be involved.

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

Each individual is trained by the Veterinarian, the Facility Manager, or a properly trained Student Technician. The individual's training is documented and their proficiency is verified the first two or three times, they perform the procedure.

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 primary entities that are involved in the planning, oversight, and operation of the institutional occupational health and safety program include the AV, Laboratory Safety Director, Facility Manager, Birkam Health Center, and the IACUC.

- 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.].

The Academic Affairs Laboratory Safety Hazard Analysis is utilized to identify and evaluate potential hazards. Based on the hazard analysis a risk

matrix system is implemented to determine frequency and severity of risks. At this point, a team consisting of the Animal Care Facility Manager, the Attending Vet, the PI, and the Laboratory Safety Director will be assembled to review the risk matrix for integrating that information, as needed, in to the procedures/processes to support the protocol. The potential hazards are managed through the industrial hygiene hierarchy of controls. Such as but not limited to engineering controls, substitution where possible, personal protective equipment, and administrative controls.

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

The Academic Affairs Laboratory Safety Director reassesses hazards when changes in the protocols take place, change in facility management take place, when changes in the facilities themselves take place(ex. Renovations), and reassesses when protocols are changed or renewed.

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]

Ferris Academic Affairs utilizes the Academic Affairs Laboratory Safety Management System flow chart for Incident Reporting and Investigation flow chart to report and evaluate exposure to hazards and work place injuries as needed.

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.**

G. Principal Investigator, Faculty Laboratory Instructors and Laboratory Supervisors shall be responsible for: Designing the protocols involving animals used for teaching or research.

2. Identifying with the assistance of the Animal Care Coordinator, Attending Veterinarian and Academic Affairs Director of Laboratory Safety, those individuals who will have either direct or casual exposure with animals or equipment associated with animal care (See Appendix C for employee, student or student employee and see Appendix D for visitor)

3. Ensuring all individuals associated with their protocol comply with the Animal Care Occupational Program requirements. (See Appendix A) A correctly filled out Animal Care Occupational Assessment will take on average two weeks for processing by the Healthcare Provider. Note no Animal Care Occupational Assessments will be conducted when the IACUC is not in session (June, July and August). If a need arises for an Animal Care Occupational Assessment to be conducted the chair of the IACUC, Animal Care Coordinator and the Birkam Health Center Nursing Supervisor will needed to be contacted to make special arrangements for this evaluation.

Animal Care Occupational Health Program | Page 5 of 28

4. Identifying in the teaching or research laboratory setting, situations where potential problems and/or exposure to hazardous biological, chemical or physical agents exists with the assistance from the Animal Care Coordinator, Attending Veterinarian, Academic Affairs Director of Laboratory Safety, Healthcare Provider, and IACUC.

5. Completing the IACUC Protocol Application including where applicable the following appendices

- a. Appendix 1-Pain and Distress
- b. Appendix 2-Teaching
- c. Appendix 3-Field Study
- d. Appendix 4-Maintenance of Breeding Colony
- e. Appendix 5-Surgical Procedures
- f. Appendix 6-Hazardous Materials
- g. Appendix 7-Modification to Approved Protocol

6. Identifying the existing workplace hazards for all individuals they supervise, based on the

type of work they will be performing in consultation with the Animal Care Coordinator, Attending Veterinarian, and Academic Affairs Director of Laboratory Safety.

7. Providing Faculty, Staff and Students with documentation (such as SOP's) and training on site

specific to Animal Care Providers' Occupational Health and Safety risks/hazards

associated with the research, experiment, project, process or procedure to be performed.

Faculty, Staff and Student Employee training documentation will be maintained. Student

training will remain with the instructor who provided that training.

8. Arranging for immediate medical attention in the event of an emergency for Faculty, Staff,

Students, and visitors.

9. Reporting all injuries and illnesses involving an employee by completing the Employee

Incident Report. Supply the original to the Dean's office; provide a copy to the employee,

Human Resources and Academic Affairs Laboratory Safety.

10. Reporting all injuries and illness involving a non-employee by completing the Injury/Incident

Report. Supply the original to the Dean's office; provide a copy to the individual, Risk

Management and Academic Affairs Laboratory Safety.

H. Staff, Student Employees, Students, and Visitors shall be responsible for:

1. Following the instructions, SOPs, and procedures they receive from the Principal Investigator,

Faculty Laboratory Instructors, or their supervisor.

2. Understanding the signs and symptoms related to a potential occupational exposure to animals.

3. Reporting any injuries or illnesses that are related to the care and use of animals immediate to their supervisor.

4. Obtaining the necessary medical follow-up after receiving an injury or illness involving an animal.

IV. PROCESS

A. Pre-assignment Animal Care Occupational Health for Direct Contact Assessments are designed to

establish baseline health information on individuals prior to their potential exposure with

animal-related research as well as provide education concerning potential hazards associated with

animal-related work. (See Appendix A)

1. Any individual who has been identified to participate with direct contact in various activities associated with the care and use of research and teaching animals shall undergo a preplacement medical evaluation.

2. The individual will obtain the Animal Care Occupational Assessment form (See Appendix B) from the Animal Care Webpage.

Animal Care Occupational Health Program | Page 6 of 28

3. The individual is responsible for filling out their own Animal Care Occupational Assessment form completely, based on their best information and knowledge. Every section of the form must receive a response. If the information is not available, this can be denoted with N/A.

4. When the Animal Care Occupational Assessment form is completed, print the form and sign

it. Place the form in a sealed business envelope. Write on the outside of the envelope

“confidential.” Place the business envelope into an interoffice envelope.

5. The document may now be hand delivered to Birkam Health or sent through campus mail.

Regardless of the method of delivery used, address the interoffice envelope “Birkam Health

Center, attention Nursing Supervisor.”

6. The initial review of the Animal Care Occupational Assessment form, by the Birkam Health

Center healthcare staff, will be for completeness. If there are any unanswered questions, the form will be returned to the originator.

7. Birkam Health Center’s healthcare providers will determine based on the information

provided if the individual will need to have a follow-up appointment.

a. If an appointment is required, the Birkam Health Center staff will contact the individual.

b. If no follow-up appointment is needed the individual will be informed by the Birkam Health Center staff.

c. Birkam Health Center staff will inform the Animal Care Coordinator of the status and

approval for all the individuals who have submitted an Animal Care Occupational Assessment form.

d. If special accommodations are needed to approve an individual to work with or care for animals, the Healthcare Provider will work with the Attending Veterinarian, Animal Care Coordinator, and the Academic Affairs Director of Laboratory Safety.

8. When an individual has successfully completed the pre medical evaluation offered by Birkam Health Center, the individual may now contact the Animal Care Coordinator to schedule the remaining steps in the Animal Care Pre-Entry Process

(See Appendix C) including receiving the Occupational Health for Animal Personnel

Education and Prevention Packet (Right-to-Know).

B. Animal Care Pre-Entry Process (Non-Visitor Casual Exposure)

1. An individual who has been identified as having casual exposure with animals or equipment

used by animals will not be required to have a medical evaluation.

2. The individual will be supplied with the Occupational Health for Animal Personnel Education

and Prevention Packet (Right-to-Know).

3. After reading the material and having the opportunity to ask questions, the Animal

Care Coordinator will request the individual acknowledge having received the information and

having the opportunity to ask questions.

4. This acknowledgement will be in the form of a sign in sheet and will be retained by the Animal

Care Coordinator.

5. The individual will be permitted to enter the Animal Care facility or classroom for which the

individual has received the Right-to-Know packet, only under direct supervision of

the authorized person.

6. The individual will not be permitted to have any interactions with animals, animal tissues and

equipment associated with animals.

C. Animal Care Pre-Entry Process Visitor (Appendix D)

This process is designed to provide a sustainable system to inform and evaluate the individual's

potential exposure from the care and use of research animals as a visitor to Ferris State University's

Animal Care.

1. If possible, prior to the visitor's arrival, the Animal Care Coordinator will determine if the

visitor will have casual or direct contact with the animals or equipment.

2. For Direct contact, if possible, prior to the visitor's arrival an introductory letter will be sent to them explaining the operations and potential exposures associated with the Animal Care Facility.

Animal Care Occupational Health Program | Page 7 of 28

3. If there is direct contact with the animals or equipment the visitor will be supplied by the

Animal Care Coordinator with:

a. The introductory letter

b. Occupational Health for Animal Personnel Education and Prevention Packet (Right-toKnow)

4. The visitor will be able to enter the Animal Care facilities or laboratories under the direct

supervision of authorized personnel and interact with animals, animal tissues and equipment associated with animals.

5. For Indirect contact, the visitor will enter the Animal Care facilities or laboratories under the direct supervision of an authorized person.

- b)** Describe provisions for allowing an individual (following completion of individual health and job related risk assessments) to decline participation in all or part(s) of subsequently available medical and preventive medicine components of the institutional program, e.g., vaccinations, physical examinations, respiratory protection, as applicable. Provide an estimate (percentage) of personnel associated with the animal care and use program that have declined participation in the medical evaluation program.

Note: Do not include names of the personnel

N/A

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

All Risk Assessments are submitted to the Healthcare Provider by the person completing the Risk Assessment and those documents are kept by the HIPPA compliant Healthcare Provider (Birkam Health). Healthcare Provider sends a form stating the individual is cleared for work with animals and any restrictions (PPE) required for the individual to work with the animals.

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

B. Animal Care Pre-Entry Process (Non-Visitor Casual Exposure)

1. An individual who has been identified as having casual exposure with animals or equipment used by animals will not be required to have a medical evaluation.
2. The individual will be supplied with the Occupational Health for Animal Personnel Education and Prevention Packet (Right-to-Know).
3. After reading the material and having the opportunity to ask questions, the Animal Care Coordinator will request the individual acknowledge having received the information and having the opportunity to ask questions.
4. This acknowledgement will be in the form of a sign in sheet and will be retained by the Animal Care Coordinator.
5. The individual will be permitted to enter the Animal Care facility or classroom for which the individual has received the Right-to-Know packet, only under direct supervision of the authorized person.
6. The individual will not be permitted to have any interactions with animals, animal tissues and equipment associated with animals.

C. Animal Care Pre-Entry Process Visitor (Appendix D)

This process is designed to provide a sustainable system to inform and evaluate the individual's potential exposure from the care and use of research animals as a visitor to Ferris State University's Animal Care.

1. If possible, prior to the visitor's arrival, the Animal Care Coordinator will determine if the visitor will have casual or direct contact with the animals or equipment.
2. For Direct contact, if possible, prior to the visitor's arrival an introductory letter will be sent to them explaining the operations and potential exposures associated with the Animal Care Facility.

Animal Care Occupational Health Program | Page 7 of 28

3. If there is direct contact with the animals or equipment the visitor will be supplied by the

Animal Care Coordinator with:

- a. The introductory letter
- b. Occupational Health for Animal Personnel Education and Prevention Packet (Right-toKnow)
4. The visitor will be able to enter the Animal Care facilities or laboratories under the direct supervision of authorized personnel and interact with animals, animal tissues and equipment associated with animals.
5. For Indirect contact, the visitor will enter the Animal Care facilities or laboratories under the direct supervision of an authorized person.

- 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.

Health Care Provider shall be responsible for:

1. Providing the healthcare services appropriate for the individuals engaged in care and use of teaching, and research animals such as but not limited to
 - a. Medical evaluations and exams.
 - b. Identify additional risks for individuals based on their medical history or conditions (pregnancy or pre-existing allergies).
 - c. Medical treatment to Faculty, Staff, Student Employees and Students who receive an injury or suspected illness resulting from an animal exposure. If the need for emergency medical care is beyond the scope of Birkam Health Center, the injured or ill individual shall be referred to a hospital for additional care.
 - d. Communicate the necessary medical information in the event of an occupational illness or injury in a timely manner to Academic Affairs Director of Laboratory Safety, Risk Management, the individual's direct supervisor and the Animal Care Coordinator.

2. Developing the knowledge of the work hazards associated with individuals whose duties place them near animals used for teaching or research.
3. Develop an understanding of the temporal and spatial distribution of the potential hazards associated with the care and use of animals.
4. Understanding the medical presentation of illnesses and injuries for individuals involved with providing animal care as well as understand the characteristics of the workforce, the nature of sensitivity or susceptibility factors among members of the workforce and how those factors affect the ability of authorized personnel to perform their tasks. Based on this knowledge, be able to understand that the tasks associated with the care and use of Ferris State University's animals present a direct threat to the individual's health.
5. Implementing a preplacement medical evaluation for those individuals identified to participate in various animal care activities and subject to substantial hazards in the animal care and use program.
 - a. These medical evaluations shall not be offered during the months of June, July, and August to coincide with the time frame in which Ferris State University IACUC doesn't meet for protocol approval.
 - b. In the event IACUC meets to review a protocol outside of this time frame, that may lead to a medical evaluation, Birkam Health Center nursing supervisor will be advised of this possible need. An arrangement will be made if necessary to support the medical evaluation.
6. Interacting with the Animal Care Coordinator, Attending Veterinarian, and Academic Affairs Director of Laboratory Safety for the purpose of assisting in making program decisions that are based on the best available medical knowledge, as it relates to occupational exposure for authorized personnel. Provide alerts to the Academic Affairs Director of Laboratory Safety to hazards that may require additional hierarchy of controls.
7. Communicating medical information related to potential occupational exposure to future and current individuals involved with providing animal care or services to the animal care

facility. This information shall be conveyed in such a fashion so these individuals may decide whether to accept exposure to the potential hazards.

8. Communicating in a timely fashion, in the event of an occupational injury or illness to the positions with the need to know, including Animal Care Coordinator, Attending Veterinarian, Academic Affairs Director of Laboratory Safety and Chair of the IACUC and worker compensation.

9. Providing the Academic Affairs Division with the status of occupational-related illness and injury among authorized individuals.

10. Providing education to individuals concerning early warning signs of illnesses or injuries related to the care and use of animals that should receive prompt medical actions or evaluations

11. Participating in the identification of employees at high risk of occupational exposure because of animal-related teaching or research.

- 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.

The only other entity to provide medical services would be a referral to the local Hospital. Their qualifications would be that of a standard hospital.

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.

CITI Program, On the Job Training, Informational Health Packet

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.

Disposable PPE is provided to all personnel or appropriate PPE is discussed with the PI during the start up phase of the project by the Academic Affairs Laboratory Safety Director.

- b) Describe arrangements for laundering work clothing.

Disposable PPE eliminates laundering of work clothing.

- 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.

Handwashing, showering, and changing of clothing is discussed in the Informational Health Packet.

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

Eating and drinking in the animals facilities are restricted to designated areas. Smoking is not allowed in facilities and outdoor locations are provided.

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).

Chemicals are kept in a chemical safety cabinet. Ear plugs are provided for noisy equipment areas.

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

Dirty Animal Cages are the primary source of Allergens. We utilize HEPA filtered Laminar flow cage dump stations to minimize exposure.

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

Zoonoses are likely transmitted during cage change and animal handling. Gloves are provided as well as species specific training. PPE requirements are listed for each room.

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

PPE is monitored by the Facility Manager weekly, and by the employee at each use. Problems are noted and fixed promptly.

- e) Respiratory Protection

- i) Describe situations where respiratory protective equipment is available or required, such as cage washing facilities, feedmills, etc.

N/A

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

Programs for respirators would be instituted on a project by project basis and training for use would be overseen and administered by the Academic Affairs Laboratory Safety Director or the Occupational Health and Safety Office.

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

It would be selected on the basis of the Risk Assessment.

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).

Cage and Bottle Washers as well as Pressure washers are used. All training is conducted by the Animal Care Facility Manager or Senior Technicians in the facility.

- 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.**

Anesthetic gases are not used. We utilize injectables.

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.

N/A

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

N/A

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

N/A

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.

Academic Affairs Laboratory Safety shall be responsible for:

1. Reviewing animal use protocols, including those that involve the use of hazardous substances.
2. Determining in conjunction with the Animal Care Coordinator and the Attending Veterinarian, the occupational health hazards, identifying individual positions that are at higher hazard because of animal-related teaching and research, and relating this information to the Healthcare Provider.(Appendix E-H)
3. Evaluating and recommending hierarchy of hazard controls, as well as identifying potential

needs for special medical monitoring to the Healthcare Provider.

4. Providing technical assistance in the development of standard operating procedures (SOPs) for laboratory environmental, health and safety compliance.
5. Overseeing the implementation of respiratory protection for individuals assigned to perform tasks where the hazard assessments have determined the need for such a control measure.
6. Providing technical support and training to Faculty and Staff upon request.
7. Collaborating with Animal Care Coordinator, Attending Veterinarian, and the Healthcare Provider to ensure the Animal Care Occupational Health program is selectively and judiciously based on work activities that place the individual at risk of an occupational injury or illness.
(See Appendices E, F, G, and H)
8. Serving as Academic Affairs Division liaison for local, county, state, and federal agencies regarding Academic Affairs Laboratory safety issues.
9. Conducting an incident follow-up for any Animal Care related medical exposure.
10. Identifies and implements a process involving the Healthcare Provider, Attending Veterinarian, Animal Care Coordinator and Chair of the IACUC to evaluate the Animal Care Occupational Program on a periodic basis.
11. Following a significant injury or illness that has directly impacted the environment or authorized personnel, this written program will be evaluated.

- 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.**

Academic Affairs Laboratory Safety shall be responsible for:

1. Reviewing animal use protocols, including those that involve the use of hazardous substances.
2. Determining in conjunction with the Animal Care Coordinator and the Attending Veterinarian, the occupational health hazards, identifying individual positions that are at higher hazard because of animal-related teaching and research, and relating this information to the Healthcare Provider.(Appendix E-H)

3. Evaluating and recommending hierarchy of hazard controls, as well as identifying potential needs for special medical monitoring to the Healthcare Provider.
4. Providing technical assistance in the development of standard operating procedures (SOPs) for laboratory environmental, health and safety compliance.
5. Overseeing the implementation of respiratory protection for individuals assigned to perform tasks where the hazard assessments have determined the need for such a control measure.
6. Providing technical support and training to Faculty and Staff upon request.
7. Collaborating with Animal Care Coordinator, Attending Veterinarian, and the Healthcare Provider to ensure the Animal Care Occupational Health program is selectively and judiciously based on work activities that place the individual at risk of an occupational injury or illness.
(See Appendices E, F, G, and H)
8. Serving as Academic Affairs Division liaison for local, county, state, and federal agencies regarding Academic Affairs Laboratory safety issues.
9. Conducting an incident follow-up for any Animal Care related medical exposure.
10. Identifies and implements a process involving the Healthcare Provider, Attending Veterinarian, Animal Care Coordinator and Chair of the IACUC to evaluate the Animal Care Occupational Program on a periodic basis.
11. Following a significant injury or illness that has directly impacted the environment or authorized personnel, this written program will be evaluated.

- 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.

- The types of Biohazardous Waste that may be generated include:
1. Cultures and stocks of potentially Infectious Agents and associated biologicals, including laboratory waste, biological production wastes, discarded live and attenuated vaccines, and culture dishes (and related devices).
 2. Liquid human and animal waste, including blood and blood products and bloody fluids, but not including urine or materials stained with blood or body fluids.

3. Sharps (needles, syringes, scalpels, or any other items that are sharp enough to penetrate the skin and is contaminated with potentially infectious material).

IV. PROCESS

Academic Affairs Laboratory Safety Biohazardous Waste CAS Biology Department | Page 4 of 15

4. Pathological Waste (human organs, tissues, body parts other than teeth, products of conception or fluids removed during trauma or other surgical procedure not fixed in formaldehyde).

5. Used or potentially contaminated personal protective equipment (gloves, gowns, masks, shoe covers or bonnets).

B. The following processes are to be used for segregation, packaging, labeling and containment of Biohazardous Waste.

1. General Procedures

a. All Biohazardous Waste shall be packaged, contained and located in a manner that prevents and protects the waste from release at the producing facility at any time before ultimate disposal.

b. The categories of Biohazardous Waste shall be separated at the point of origin into appropriate properly labeled containers.

c. All primary containers (other than Biohazardous bags) used for Biohazardous waste collection, storage and disposal will be labeled with a Biohazardous symbol, or the words “Medical Waste” or “Pathological Waste”. The biohazard symbol or the words “Biohazardous Waste” or “Pathological Waste” will be written in letters at least 1 inch high.

The required background color for all primary containers is red or orange fluorescent (for example Biohazardous bags).

d. Biohazardous Waste shall not be compacted or mixed with other waste materials before decontamination or incineration.

e. If decontaminated Biohazardous Waste is mixed with other solid waste the container must be labeled to indicate that it contains decontaminated Biohazardous Waste.

f. Biohazardous Waste stored in a generating facility shall be stored in such a manner that

putrefaction will not occur and Infectious Agents will not become in contact with the air or individuals.

g. Biohazardous Waste cannot be stored on the premises of the producing Laboratory for more

than 90 days (60 days in service and 30 days waiting for pick up). The storage period begins

when the use of the container is initiated with the first waste item. All storage of

Biohazardous Waste shall be in full compliance with applicable governmental laws and

regulations, and Academic Affairs requirements.

h. Biohazardous Waste shall be stored in a special area or locked in a container that

weights more than 500 pounds that prevents access by vermins or unknown individuals.

C. Waste Type-Specific Management Methods

1. All liquid cultures and stocks of materials contaminated with a potential Infectious Agent or

associated biological hazards, including laboratory waste, biological production wastes, and discarded

live or attenuated vaccines, shall be stored in closeable, puncture-resistant containers and

decontaminated by autoclaving or chemically treating. After autoclaving or chemically treating,

liquid decontaminated waste can be disposed of in a sanitary sewer if no other hazardous materials

are present (e.g., chemicals or radioactive materials) that are prohibited from discharge to the

sanitary sewer under Ferris State University discharge permit. The Academic Affairs Director of

Laboratory Safety should be consulted with any questions regarding the suitability of a waste stream

for discharge into the sanitary sewer.

Academic Affairs Laboratory Safety Biohazardous Waste CAS Biology Department | Page 5 of 15

2. All solid cultures and stocks of materials contaminated with a potential Infectious Agent, culture

dishes, and related devices other than sharps, can be stored in leak-proof, biohazard bags prior to

decontamination. If rupture of bags or leakage is possible, a secondary leak-proof container or bag

shall be used.

3. Whenever possible, biohazards bags with an "Autoclaved" bag indicator must be integrated into the

Biohazardous Waste process. As an alternative, heat-sensitive tape may be applied, crisscrossing the

bag's biohazard symbol and/or marking prior to Autoclaving.

a. Solid Biohazardous Wastes, excluding sharps, which have been decontaminated by

Autoclaving, may be disposed of in the regular dumpster if they are securely packaged

Academic Affairs Laboratory Safety Biohazardous Waste CAS Biology
Department | Page 6 of 15

3. All containers and equipment (e.g., refrigerators) used for storage shall be labeled with the biohazard

sticker or the words Biohazardous Waste, or pathological waste in letters not less than one inch high.

The preferable background color of all primary Biohazardous Waste containers is red or orange
fluorescent.

4. Always destroy the oldest sealed Biohazardous Waste container first. If any Biohazardous Waste

containers have not been disposed of within 65 days, notify the Academic Affairs Director of

Laboratory Safety immediately.

E. On-Site Storage

1. Biohazardous Waste cannot be stored in the Academic Affairs Laboratory for more than 90 days (60

days in service and 30 waiting pick up).

2. All containers and equipment, such as refrigerators used for storage, shall be labeled with a

Biohazardous sticker or the words "Medical Waste" or "Pathological Waste" in letters not less than

one inch high. The background color for all primary Biohazardous containers is red or orange

fluorescent.

F. Personal Protective Measures

1. All disposable objects that may cause skin punctures or cuts must be placed in rigid puncture resistant

containers.

2. The following Personal Protective Equipment shall be worn when handling Biohazardous Waste: eye

protection, gloves and a lab coat or disposable lab coat/gown.

G. Biohazardous Waste Training

1. All Faculty, Staff, Student Employees and Students who generate, handle, or dispose of Biohazardous

Waste must complete training in the provisions of the Bloodborne Pathogen and Biohazardous Waste

Management Programs.

2. Anyone with newly assigned duties involving Biohazardous Waste shall complete the Bloodborne

Pathogen and Biohazardous Waste training prior to assuming the duties involving Biohazardous waste.

3. Whenever there is a change in the Bloodborne Pathogen Program or Biohazardous Waste

Management Program for Biology, the Department Head/Chair/Director will notify Academic Affairs

Director of Laboratory Safety, for the purpose of determining the type of training needed to address the changes.

4. The training topics will include:

a. Purpose and overview of the Academic Affairs Laboratory Safety Bloodborne Pathogen

Program and Biohazardous Waste Management Program.

b. Types of Biohazardous Waste generated, treated or disposed of at the work site.

c. Segregation, packaging, storage and transportation of Biohazardous waste that is generated, treated or disposed of at the work site.

d. Treatment and disposal methods for Biohazardous Waste that is generated, treated or disposed of at all work sites.

Academic Affairs Laboratory Safety Biohazardous Waste CAS Biology Department | Page 7 of 15

H. Training Records

1. The training records for all Faculty, Staff and Student Employees who have completed the Academic Affairs Bloodborne Pathogen and Biohazardous Training for the Biology Department will be kept by the College of Arts and Sciences and maintained for a minimum of three years.

2. The training records for the Students will be kept with the Faculty members who provided the training and maintained per course documentation requirements.

3. All Faculty, Staff and Student Employee records will include the name of the individual, their title and the training date.

I. Simulation Props

1. Any Biohazardous Waste container that is used for in a simulation laboratory, for the intent to simulate Biohazardous Waste, shall be marked on the bottom of the container "For Simulation Laboratory- not containing real Biohazardous Waste".

2. All Faculty and Staff involved in teaching a simulation laboratory will be using a simulated Biohazardous

Waste container, and will denote this in the Faculty's lesson plans or the Faculty's class documentation.

3. Marking the items, ensuring the items do not contain Biohazardous Waste, and denoting this process

in the lesson plans/documentation—these items will not be subjected to the 90 on site storage rule.

4. When it is determined these items need to be disposed of, they will be disposed of through the

Biohazardous Waste stream, for convenience.

V. DEFINITIONS

Autoclave

Equipment that provides a means of sterilization using superheated steam under pressure.

Approved Sharps Container

A container that is leak-proof, puncture-resistant, closeable, bears the biohazard symbol, and is manufactured as a sharps container.

Biohazardous Waste

Culture and Stocks - infectious agents and associated biologicals, including laboratory waste, biological production wastes, discarded live and attenuated vaccines, culture dishes and related devices.

Liquid - human and animal waste, including blood and blood products and body fluids, but not including urine or materials stained with blood and body fluids.

Pathological Waste - human organs, tissues, body parts other than teeth, products of conception, and fluids removed by trauma or during surgery or autopsy, or other medical procedure and not fixed in formaldehyde.

Pathological Waste does not include a fetus or fetal body parts.

Sharps - including needles, syringes, scalpels, and intravenous tubing with needles attached.

Contaminated Wastes from Animals - wastes that have been exposed to agents infectious to humans, these being primarily research animals.

Bloodborne Pathogens

Pathogenic organisms present in human blood or other potentially infectious body fluids that can cause disease in

humans. These pathogens include, but are not limited to, the Hepatitis B Virus (HBV) and the Human Immunodeficiency

Virus (HIV).

Decontamination

A process that renders Biohazardous Waste safe for routine handling as solid waste.

Exposures

Include inoculation through cutaneous penetration, ingestion, probable inhalation following gross aerosolization, or any incident causing serious exposure to personnel or danger of environmental contamination.

Infectious Agent

A pathogen that is sufficiently virulent so that if a susceptible host is exposed to the pathogen in an adequate concentration and through a portal of entry, the result could be transmission of disease to a human.

Laboratory Personnel

Individuals who perform duties within the laboratory including but not limited to Faculty, Staff, Student Employees, Students and Non-FSU Individuals.

Medical Waste

Any of the following that are not generated from a household, a farm operation or other agricultural business, a home for the aged, or a home health care agency:

Culture and Stocks - infectious agents and associated biologicals, including laboratory waste, biological production wastes, discarded live and attenuated vaccines, culture dishes and related devices.

Liquid - human and animal waste, including blood and blood products and body fluids but not including urine or materials stained with blood and body fluids.

Pathological Waste - human organs, tissues, body parts other than teeth, products of conception, and fluids removed by trauma or during surgery or autopsy or other medical procedure and not fixed in formaldehyde.

Pathological Waste does not include a fetus or fetal body parts.

Sharps - including needles, syringes, scalpels, and intravenous tubing with needles attached.

Contaminated Wastes from Animals - wastes that have been exposed to agents infectious to humans, these being primarily research animals.

Pathogen

Is a microorganism (including bacteria, viruses, rickettsia, parasites, fungi or other agent, such as a proteinaceous infectious particle (prion), that can cause disease in humans or animals.

Personal Protective Equipment (PPE)

Includes all equipment designed to provide protection to the wearer from potential hazards to the eyes, face, hands, feet, ears, extremities and respiratory tract.

Release

Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, enjecting, escaping, leaching, dumping or disposal of Biohazardous/Medical Waste into the environment in violation of the state of Michigan Public Health Code (Exerpt) Act 368 of 1978 Part 138 Medical Waste.

Saturated with Blood

Indicates that an item must be considered Regulated Medical Waste if it contains free flowing or dripping blood, or if blood is dried, would flake off during handling and disposal.

Stained or No Blood

Indicates that an item is considered Non-Regulated Medical Waste (or regular solid waste) and may be discarded along with regular waste.

Academic Affairs Laboratory Safety Biohazardous Waste CAS Biology Department | Page 9 of 15

VI. RELATED OR REFERRED TO DOCUMENTS

Standart Operating Procedure (SOP)

A detailed, as written documentation providing instruction to achieve uniformity of the performance of a specific function/task/operation. This documentation may take many forms including; Experiments Procedures, Research Notebooks, Flowcharts, and Student Handbooks.

Storage

The containment of Biohazardous/Medical Waste in a manner that does not constitute disposal of the Medical Waste.

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

All medical evaluations and preventative health programs are based on specific Hazard Assessments relating to specific projects and are developed on a project by project basis.

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.

Qualifications and training would be project specific to comply with all regulatory guidelines and would be developed on a project by project basis.

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.

N/A

- 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.

N/A

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

N/A

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.

N/A

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 committee membership is duly appointed by the IO upon recommendation of the IACUC chair, who in conjunction with the IACUC membership have screened and offered up potential members as candidates based up on prior experience and potential for commitment to the IACUC role.

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

Regular FCR meetings are scheduled in February, March (when possible), April, September, October, November, and December. Emergency meetings are called by the Chair and scheduled as soon as possible when the need arises.

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

Continuing education is provided as part of the December meeting and either, outside experts is brought in or internal experts are requested to review with or update the IACUC on pertinent regulatory/best practice information. All IACUC members are made aware of and are encouraged to participate in Public Forum training opportunities put on by various recognized entities such as AALAS, PRIM&R, etc.

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.

All protocols, whether internally or externally funded submitted to the IACUC undergo the same review as follows: Protocols are reviewed and approved (or require modifications for approval) or deny approval of applications for all protocols that involve the care and use of any vertebrate animals in teaching and/or research; this includes field studies involving the capture, capture and release, and/or harvesting of vertebrate animals from the wild.

1. To ensure IACUC review, a protocol application and any supporting documents should be made available to the IACUC at least one week prior to such protocol application review.
2. When full IACUC review of a protocol application is not feasible, the IACUC Chair will appoint a Designated Review Committee comprised IACUC membership to review the protocol application.
 - (1) The Designated Review Committee, after review, may approve (or require modifications for approval) or request full committee review of the protocol application.
3. When full IACUC review of a protocol application is requested, approval of that protocol application may be granted only after review at an appropriately convened meeting of a quorum. Approval, modifications for approval, or denial requires a simple majority vote of the quorum.
4. No IACUC member may participate in an IACUC review of, or vote on, a protocol application in which that member has a vested interest. Nor will that member constitute part of a quorum. That member may, however, if requested by the IACUC, provide information about the protocol to the IACUC.
5. Consultants may assist in the review of a protocol application, but they may not vote unless they are members of the IACUC.
6. The IACUC will notify, in writing, the principal investigator(s) and the IO of its decision to approve, to request modification for approval, or to deny the reviewed protocol application. This notification will occur within five business days of the IACUC’s decision.
 - a) Denial of approval will include specific reason(s) for the denial and provide the principal investigator a reasonable opportunity to respond either in person or in writing. The Chair may, at his/her discretion, convene a special meeting of the IACUC to consider the response. Such consideration may include a decision to approve the protocol.

b) Requested modification(s) for approval will be specific. The IACUC will provide the principal investigator with a deadline for submitting such modification(s). The Chair may, at his/her discretion, convene a special meeting of the IACUC to consider the modified protocol application. Such consideration, if the modification(s) adequately address (es) the IACUC's concerns, will include a decision to approve the protocol. Such consideration will not include a request for modification(s) not included in the original review, unless there exists through oversight during the original review some aspect of the protocol application that, if approved, would result in violation of Federal and/or State regulations or FSU Animal Care Policy.

While scientific merit of the Protocols submitted is not evaluated by the IACUC, the IACUC will evaluate scientific elements of the protocol as they relate to welfare and use of the animals and any adverse effects on the animals are weighed against the potential benefits outlined in the study design of the protocol.

All protocols are reviewed prior to the IACUC review and the vet is on hand during the IACUC review to discuss and provide subject matter expert opinions on pain or distress related to the protocol.

The IACUC also reviews the alternatives section (Literature review) in the protocol document to ensure due diligence on the part of the PI in seeking out alternatives to animal based research.

Experimental group sizes are reviewed for appropriateness of size to ensure statistically relative data can be obtained while adhering to the three R's.

- 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.

When full IACUC review of a protocol application is not feasible, the IACUC Chair will appoint a Designated Review Committee comprised IACUC membership to review the protocol application.

(1) The Designated Review Committee, after review, may approve (or require modifications for approval) or request full committee review of the protocol application

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 experimental endpoint of a study occurs when the scientific aims and objectives have been reached. The humane endpoint is the point at which pain or distress in an experimental animal is prevented, terminated, or relieved. The use of humane endpoints contributes to refinement by providing an alternative to experimental endpoints that result in unrelieved or severe animal pain and distress, including death. The humane endpoint should be relevant and reliable.

For

many invasive experiments, the experimental and humane endpoints are closely linked, and are carefully considered during IACUC protocol review. While all studies should employ endpoints that are humane, studies that commonly require special consideration include those that involve tumor models, infectious diseases, vaccine challenge, pain modeling, trauma, production of monoclonal antibodies, assessment of toxicological effects, organ or system failure, and models of cardiovascular shock.

The PI, who has precise knowledge of both the objectives of the study and the proposed model, will identify, explain, and include in the animal use protocol a study endpoint that is both humane and scientifically sound.

The identification of humane endpoints is often challenging, however, because multiple factors must be weighed, including the model, species (and sometimes strain or stock), animal health status, study objectives, institutional policy, regulatory requirements, and occasionally conflicting scientific literature. Determination of humane endpoints involve the PI, the veterinarian, and the IACUC, and will be defined when possible before the start of the study. Information that is critical to the IACUC's assessment of appropriate endpoint

consideration in a protocol includes precise definition of the humane endpoint (including assessment criteria), the frequency of animal observation, training of personnel responsible for assessment and recognition of the humane endpoint, and the response required upon reaching the humane endpoint. An understanding of preemptive euthanasia, behavioral or physiologic definitions of the moribund state (ibid.) and the use of study specific

animal assessment records will be utilized to

aid the PI and IACUC when considering or developing proposed endpoints.

When novel studies are proposed or information for an alternative endpoint is lacking, the use of pilot studies will be considered an effective method for identifying and

defining humane endpoints and reaching consensus among the PI, IACUC, and veterinarian. A system for communication with the IACUC will be

in place both during and after such studies.

- 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).

Pilot studies and or special veterinary oversight is requested.

- 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.

PI, AV, Animal Facility Manager. Appropriate training would be ensured by the IACUC through CITI training and or special training provided by the AV.

- 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.

Fundamental to scientific inquiry is the investigation of novel experimental variables. Because of the potential for unexpected outcomes that may affect animal well-being when highly novel variables are introduced, more frequent monitoring of animals will be required. Investigators may find that the phenotype precludes breeding of particular genotypes or that unexpected infertility occurs, situations that could lead to increases in the numbers of animals used and revision of the animal use protocol. When the study reveals a condition that negatively affects animal well-being, this will be reported to the IACUC, and more extensive analysis may be required to better define the phenotype

- 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 currently approved protocols specify a need for physical restraint.

- 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.

N/A

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.

Ferris State University's Policy on Multiple Major Survival Surgeries in Animal Research. (Last reviewed November 2015)

Surgical procedures in the laboratory setting may be categorized as major or minor (USDA 1985). Whether a procedure is major or minor should be evaluated on a case-by-case basis, as determined by the veterinarian and IACUC (NRC 2003b; Silverman et al. 2007; for additional discussion see Chapter 4, Surgical Procedures). Regardless of classification, multiple surgical procedures on a single animal should be evaluated to determine their impact on the animal's wellbeing.

Multiple major surgical procedures on a single animal are acceptable only if they are (1) included in and essential components of a single research project or protocol, (2) scientifically justified by the investigator, or (3) necessary for clinical reasons. Conservation of scarce animal resources may justify the conduct of multiple major surgeries on a single animal, but the application of such a practice on a single animal used in separate protocols is discouraged and should be reviewed critically by the IACUC. When applicable, the IO must submit a request to the USDA/APHIS and receive approval in order to allow a regulated animal to undergo multiple major survival surgical procedures in separate unrelated research protocols (USDA 1985, 1997a). Justifications for allowing animals not regulated by the USDA to undergo multiple survival procedures that meet the above criteria should conform to those required for regulated species. If multiple survival surgery is approved, the IACUC should pay particular attention to

animal well-being through continuing evaluation of outcomes. Cost savings alone is not an adequate reason for performing multiple major survival surgical procedures.

Some procedures characterized as minor may induce substantial postprocedural pain or impairment and should similarly be scientifically justified if performed more than once in a single animal. All determinations are based on a Protocol by Protocol review by the IACUC.

- 2) Describe the procedure for approving multiple survival surgery (major or minor) and the criteria used to determine the potential impact on the animals' well-being.

Surgical procedures in the laboratory setting may be categorized as major or minor (USDA 1985). Whether a procedure is major or minor should be evaluated on a case-by-case basis, as determined by the veterinarian and IACUC (NRC 2003b; Silverman et al. 2007; for additional discussion see Chapter 4, Surgical Procedures). Regardless of classification, multiple surgical procedures on a single animal should be evaluated to determine their impact on the animal's wellbeing.

Multiple major surgical procedures on a single animal are acceptable only if they are (1) included in and essential components of a single research project or protocol, (2) scientifically justified by the investigator, or (3) necessary for clinical reasons. Conservation of scarce animal resources may justify the conduct of multiple major surgeries on a single animal, but the application of such a practice on a single animal used in separate protocols is discouraged and should be reviewed critically by the IACUC. When applicable, the IO must submit a request to the USDA/APHIS and receive approval in order to allow a regulated animal to undergo multiple major survival surgical procedures in separate unrelated research protocols (USDA 1985, 1997a). Justifications for allowing animals not regulated by the USDA to undergo multiple survival procedures that meet the above criteria should conform to those required for regulated species. If multiple survival surgery is approved, the IACUC pays particular attention to animal well-being through continuing evaluation of outcomes. Cost savings alone is not an adequate reason for performing multiple major survival surgical procedures.

Some procedures characterized as minor may induce substantial postprocedural pain or impairment and should similarly be scientifically justified if performed more than once in a single animal. N/A

- 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.

N/A

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.

There are two projects currently taking place at Ferris State University that involve Food Restriction:

The first is Rat Laboratory Exercises for PSYC 410(Behavior Modification) and PSYC 370(Principles of Learning) in which behavior modification requires live animals, with the rat being the most commonly used animal model for this type of learning according to the literature search. The animals are on ad libitum feed other than the 48 hours before the exercise during which access to feed will be restricted to no less than 50% free feed consumption. And will be returned to ad libitum amounts immediately following the exercise.

The Second is Functional Equivalence in Pigeons (PSYC 478 and PSYC 480, and Independent Studies in Psychology) in which pigeons learning and food reinforcement test their ability to treat two stimuli as substitutable for one another thereby teaching the students how learning occurs in pigeons and be able to relate that to human learning. The birds are maintained throughout the semester at 80-85% of their free feeding weight, being given supplemental food to that which they receive while in the experimental chamber such that they maintain that weight.

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.

USE OF NON-PHARMACEUTICAL GRADE SUBSTANCES IN LABORATORY ANIMALS

PERFORMANCE STANDARD: All compounds/substances/chemicals introduced into animals should be pharmaceutical grade to prevent contamination, infection or damage and to support research outcomes.

BACKGROUND/PURPOSE: The use of pharmaceutical-grade substances in laboratory animals ensures that the substances administered meet established documentable standards of purity and composition. This in turn helps ensure research animal health and welfare, as well as the validity of experimental results. The use of lower grade substances/compounds with undefined or higher levels of impurities or poorly formulated non-commercial preparations can introduce unwanted experimental variables or even toxic effects, and so should be avoided if possible. Although pharmaceutical grade substances should be used in experimental animals whenever possible, the use of non-pharmaceutical-grade substances in experimental animals is an acceptable practice under certain circumstances. For example, in the case of new investigational compounds, they would be the only grade and formulation available. The NIH Office of Laboratory Animal Welfare (OLAW) and the United States Department of Agriculture (USDA) both have determined that the use of non-pharmaceutical-grade substances should be based on (1) scientific necessity, (2) non-availability of an acceptable veterinary or human pharmaceutical-grade compound, and (3) specific review and approval by the institutional IACUC. Cost savings alone is not considered an adequate justification for the use of non-pharmaceutical-grade substances in laboratory animals. OLAW has also stated that while the possible implications of the use of non-pharmaceutical grade substances in non-survival studies appears less evident, the scientific issues remain the same and professional judgment, as outlined above, must still apply. It is important to understand that this guideline pertains to all components, both active and inactive, contained in the preparation to be administered. Therefore, the vehicle used to facilitate administration of a compound is as important of a consideration as the active compound in the preparation.

DEFINITIONS:

- Pharmaceutical grade compound\substance\chemical: Drug, biologic, reagent, etc. which is approved by the FDA or for which a chemical purity standard has been written/established by USP/NF, BP
- Analytical grade bulk chemical: ~99% purity; Certificate of Analysis is usually available
- Non-availability: Not commercially available from an active US vendor; includes formulations supplied as tablet, capsule, injectable, etc.

- New investigational compound: Supplied by its manufacturer for testing in an experimental setting only and for this reason would not have chemical purity standards established; by default is considered a non-pharmaceutical grade compound
- USP/NF: United States Pharmacopeia/National Formulary
- BP: British Pharmacopeia
- FDA: Food and Drug Administration; FDA approved compounds are manufactured using USP/NF compounds

Policy for Use of Non-pharmaceutical Grade Substances in Laboratory Animals
Date of last IACUC approval: 11/07/2013

POLICY OUTLINE: This policy provides a definitive position on the use of non-pharmaceutical grade substances in the Ferris State University animal care & use program. The policy is consistent with the guidance from the NIH/ILAR Guide for the Care and Use of Animals, the corresponding Position Statement from AAALAC, International, and the NIH/Office of Laboratory Animal Welfare's Position Statement.

1. When selecting compounds the following order of choice should be applied:
 - a. FDA-approved veterinary or human pharmaceutical substances;
 - b. FDA-approved veterinary or human pharmaceutical substances used to compound a needed dosage form;
 - c. USP/NF or BP pharmaceutical grade substance used in a needed dosage form (also includes compounded products from sources such as compounding pharmacies);
 - d. Analytical grade bulk chemical used to compound a needed dosage form (requires justification);
2. Other grades and sources of substances (requires justification).

NOTE: For new investigational drugs the grade and formulation is not optional, but the investigator and IACUC can verify health and safety issues described above.

3. For a majority of common substances used in laboratory animal research, pharmaceutical grade (USP or NF grade) substances are available and should be used. Examples of common substances that are available in USP or NF grades include:

- Saline
- DMSO
- Corn oil

- Tamoxifen
- Tetracycline
- Analgesics (e.g., buprenorphine)
- Anesthetics (e.g. ketamine)
- Euthanasia reagents (e.g. Euthasol)

4. When a non-pharmaceutical grade substance is proposed: When developing and reviewing a proposal to use non-pharmaceutical grade substances, the investigator and IACUC should consider animal welfare and scientific issues related to the use of the substances, including potential for contamination, safety, efficacy, and the inadvertent introduction of confounding research variables. For all non-pharmaceutical grade substances used in animals, the IACUC shall consider the grade/purity being proposed, the formulation of the final product, and issues such as sterility, pyrogenicity, stability, pH, osmolality, site/route of administration, pharmacokinetics, physiological compatibility, and quality control. The IACUC may use a variety of administrative methods to review and approve the use of such agents. For example, the IACUC may establish acceptable scientific criteria within the institution, rather than on a case-by-case basis. The use of non-pharmaceutical-grade compounds in laboratory animals shall be clearly delineated and justified in the protocol document and/or covered by an IACUC policy developed for their use.

Policy for Use of Non-pharmaceutical Grade Substances in Laboratory Animals
Date of last IACUC approval: 11-7-2013

5. Examples for use of Non-Pharmaceutical-Grade Substances: It would be reasonable for the IACUC to review and the Committee may approve the use of non-pharmaceutical-grade substances in the following situations:
- a. If no equivalent veterinary or human drug is available for experimental use, then the highest-grade equivalent chemical reagent should be used and formulated aseptically and with a non-toxic vehicle as appropriate for the route of administration.
 - b. Although an equivalent veterinary or human drug is available for experimental use, the chemical-grade reagent is required to replicate methods from previous studies because results are directly compared to those of replicated studies.
 - c. Although an equivalent veterinary or human drug is available, dilution or change in formulation is required.
 - If adulteration by dilution, addition, or other change in formulation is required, there may be no additional advantage to be gained by using the USP formulation.
 - Use of the highest-grade reagent may have the advantage of single-stage formulation and also result in purity that is equal to or higher than the human or veterinary drug.

- Professional judgment should be used to determine the appropriate test material and to ensure use of an agent with the least likelihood for causing adverse effects.
- d. The available human or veterinary drug is not concentrated enough to meet experimental requirements.
- e. The available human or veterinary drug does not meet the non-toxic vehicle requirements for the specified route of injection.

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.

PI's are trained through their educational background in regards to research based Ecological Disruption/Occupational Health and Safety/ Knowledge of the Species Involved/Pathogens known to exist within the Species/ Proper Euthanasia Techniques and State/ Federal Permitting. Review of their training and background regarding these issues take place during protocol review verifying they are qualified in these areas and the adherence to this training is insured during post approval monitoring of their protocol.

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

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

It is the policy of Ferris State University that Animal Reuse will fall under the oversight of IACUC and that protocol review and determination of Animal Welfare will be in keeping with goal of the three R's.

- 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.

1. Protocol 18-003-921 Differential Value and Equivalence (a behavioral study protocol) utilizes the same Pigeons for a 6 year period with the behavioral shaping values changing from year to year.

- 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).

Currently all protocols utilizing NON-USDA covered species require a de-novo FCR every three years with an abbreviated review/report/renewal occurring annually via either FCR or DMR.

All protocols utilizing USDA covered species require a de-novo FCR annually.

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

The IACUC announces and schedules, at a FCR quorum meetings, semi-annual program reviews with one review being completed during an FCR by the IACUC quorum and the second one being completed by a subcommittee with any findings being presented at the next scheduled FCR quorum meeting.

The IACUC also announces and schedules, at a FCR quorum meeting, semi-annual facility and laboratory inspections with all members being invited and a subcommittee of volunteers usually being selected to complete the review of all holding facilities, animal use areas, contract sites, transport vehicles, as well as the facility itself. All findings are brought back to the next scheduled FCR quorum meeting for review.

- 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**.

Facility and laboratory inspections are conducted on a semi-annual basis per the Guide. If a repeated problem is noticed, PAM is instituted within the designated area.

- 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.

No deficiencies have been noted.

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

Monitoring by walking around is conducted by the Animal Facilities Manager who engages the PIs in meaningful discussions to increase knowledge and maintain compliance.

3. Investigating and Reporting Animal Welfare Concerns [Guide, pp. 23-24]

Describe institutional methods for reporting and investigating animal welfare concerns.

Methods whereby deficiencies in animal care and treatment are reported, including deficiencies in animal care and treatment reported by any employee of the facility. 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.

Animal Welfare Act (as of Nov. 6, 2013)

As found in the United States Code

Title 7 – Agriculture

Chapter 54 – Transportation, Sale, and Handling of Certain Animals

Sections 2131 - 2159

Reporting Animal Care and Use Concerns

Issues of violations found in the animal care facility, research labs, or other areas must be reported in writing, using the "Animal Welfare Concern Reporting Form." This form can also be found in the Facility Manager's office, in [REDACTED]

Reports can be made anonymously to:

Community IACUC member

[REDACTED]

Phone: [REDACTED]

Email: [REDACTED]

-or-

Attending Veterinarian

James Scott, DVM

FSU Office: [REDACTED]
Cell: [REDACTED]
Email: JamesScott@ferris.edu

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.

A) Response team membership:

- 1) Manager of the Animal Care Facility
- 2) Attending Veterinarian of the Animal Care Facility
- 3) Administrative representative from CAS (Department Head of Biological Sciences)
- 4) Administrative representative from Pharmacy
- 5) Chair of Ferris IACUC committee

B) Role of the response team:

- 1) Evaluation of an inquiry or threat
- 2) Consultation with relevant parties that may provide additional information
Faculty that may be related to event (PI of research projects or teaching protocols)
General council
University Public Relations officer
Public Safety
Physical Plant personnel
- 3) Inform higher administration (Deans of CAS and Pharmacy, VPAA)
- 4) Make a recommendation for action
- 5) The role of the response team is not to speak for the University, but to inform and make recommendations to the University Spokesperson should that become necessary.

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.

Daily all animal rooms are checked for Pressure Gradients as well as Temperature and Humidity by the Facility manager and/or workers and documented on room sheets. Triennially the actual ventilation rates are assessed, verified, and validated by internal Physical Plant experts or outside contractors.

- 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]

Rodents (Mice/Rats) :21 degrees C +/- 3
Reptiles/Amphibians (Frogs/Turtles): 21 degrees C +/- 3
Avian (Pigeons): 20 degrees C +/-3

- 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]

Nesting material is provided for rodents and heat lamps/basking areas are available for Reptiles and Amphibians.

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.

Daily all animal rooms are checked for Pressure Gradients verifying negative/positive pressures by the Facility manager and workers. Triennially the actual ventilation rates are assessed, verified, and validated by internal Physical Plant experts or outside contractors.

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

No special primary enclosures utilize forced ventilation.

- 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.

N/A

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).

There are currently two water garden style tanks designed to house our frogs and turtles respectively. Water is changed at minimum bi-weekly based on current animal populations with both environments set up to mimic near natural environment

- 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).

There are currently two water garden style tanks designed to house our frogs and turtles respectively. Water is changed at minimum bi-weekly based on current animal populations with both environments set up to mimic near natural environment Housing densities provide for Guide appropriate cage space per animal.

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.

Excessive noise and vibration is limited by concrete block walls and epoxy floors with equipment being designed with noise/vibration dampening qualities. Noisy equipment is generally located away from the housing areas wherever 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.

All animals are housed in caging/tanks that meet the standards outlined by the *Guide* and the IACUC verifies proper housing densities during Semi-annual reviews of the facilities as well as review of PI projects during Protocol review. Special attention is paid to socialization requirements, and currently no performance based housing is required by research Protocol.

- 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]

Currently there are no exceptions to the guiding documents and any requests for exceptions would be scientifically validated by previous studies found in scientific journals or a pilot study would be requested by the IACUC/AV to verify any performance based housing standards prior to implementation.

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).

Rodent cages are provided with PVC hiding spaces when not socially housed unless the PI can provide scientific justification as to why this is not allowed. Pigeons are provided with perches of various types in the social housing set up. Frogs are provided with stone and artificial turf resting places.

Turtles are provided with an artificial turf basking area.

- 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).

Non-structural provisions to encourage animals to exhibit species-typical activities include as follows:

Pigeons: colored hanging toys/mirrors/sand baths/water baths in social housing. Pigeons are also encouraged to forage in cage by the addition of food into artificial turf mounted in their caging.
Rodents: provided with I-CHEW brand rat chews as well as occasional food based treats when Protocols allow.

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

- i. Describe institutional expectations or strategies for social housing of animals.

Wherever possible/as the default it is the policy of Ferris State University to house social species socially in groups appropriate to their species. All animals are consistently monitored for stress/dominance based behaviors that would cause injury or stress to the animals and re-housing/AV exceptions to social housing are utilized on a case by case basis.

- 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.

If social animals are not socially housed it is due to either a Protocol based (usually food intake monitoring), scientifically justified, IACUC approved justification or an AV justified separation for health/dominance aggression/breeding based justification.

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

For isolated or individually housed animals, extra time is taken by the technician for social interaction during cage change, and extra food enrichment or toy enrichment is added to the animals' cage to provide for species specific activities.

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.

Enrichment programs and exceptions to social housing of social species are reviewed in an ongoing basis by the Facility manager based on the behaviors and reactions of the animals on a day to day basis. All programs of social housing and enrichment are reviewed during the semi-annual review of facilities by IACUC membership and suggestions for improvement are evaluated and implemented by the Facility manager and then monitored for effectiveness and whether the improvement is meeting the goal of implementation.

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.

If the animals are bred within the facilities, extra time is taken by the technicians to socialize the animals to common handling techniques while the animals are young. If the animals are brought in from outside dealers, a minimum of one week is allowed for acclimatization and technicians spend extra time with these animals monitoring for social aggression as well as handling the animals utilizing common husbandry procedures. If Protocols were to require the use of restraints or procedures uncommon to regular husbandry, the PI would work with the Facility Manager to develop a program for habituation to these items or procedures prior to the start of Protocol work.

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.

Rat/Mouse Feed: Lab Diet 5012/5015

Pigeon Feed: Standish Milling "Ideal" Poultry Feed/ Coastal Oyster Shell

All of the above are ordered through Big Rapids Farm and Garden and shipped to the facility on Arrival. Fruits and Vegetables are bought locally from Meijer's Grocery.

Frogs: Crickets from Top Hat Cricket

Turtles: Crickets from Top Hat Cricket and Turtle Food from Fluker's

- 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 food is stored in [REDACTED] upon arrival. Temperature is held between 65-70 degrees Fahrenheit and below 50% humidity. Area is daily monitored for vermin, bags are checked before use, and food is housed on pallet at least 5 inches from the walls and other pallets.

- 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).

Food preparation areas include sinks and counters. Areas are sanitized daily as well as right after preparation.

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

Unless Protocol requires restricted feed all animals are provided food *ad libitum*. Frogs and Turtles are fed daily by dropping crickets or into the water. Turtles are also fed nutritionally complete turtle chow. Fish are fed three times daily via a modified chemical sprayer which is sanitized daily. Rats and Mice are provided food in a wire cage top designed to hold feed Pigeon feed is places in a sanitizable plastic or stainless steel hanging or platform feeder.

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

All feed is mill date checked. Stock is rotated when new stock arrives placing newest feed on the bottom of the stack. Verification of mill date takes place during feeding assuring outdated stock is removed from rooms and replaced. Rooms feed bins have associated documentation which is notated during feed stock replacement.

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 source for all animals is city water. Water is supplied to Rodents via water bottles and sipper tubes. Water for Pigeons is placed in Stainless steel pans and monitored daily for cleanliness and water availability

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

Water is tested for contaminants on an annual basis through this facility and any issues are reported and remedied by the Physical Plant staff.

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

N/A

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

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

For all Rodents Sani-chip shavings are used for bedding placing $\frac{3}{4}$ to 1 inch of bedding in the bottom of caging. Nestlets by Ancare or Shepherd Shacks by Shepherd Papers are added to the cage.

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

For all Rodents Sani-chip shavings are used for bedding placing $\frac{3}{4}$ to 1 inch of bedding in the bottom of caging. Nestlets by Ancare or Shepherd Shacks by Shepherd Papers are added to the cage.

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

All bedding bags are checked for holes and contaminants upon arrival. Stock is rotated when new stock arrives placing newest bedding on the bottom of the stack

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.

Currently no motorized vehicles/trailers are used for transporting animals however should the need arise, Biology Vans would be utilized for transporting animals, the cargo compartment is covered in plastic to prevent dander contamination. The

environment is environmentally controlled through standard passenger van AC/Heater for the short drive across campus.

- 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.).

High pressure sprayers used in the cage/room sanitization process are Model number GPW1950 Green Works pressure washers which produce 1950PSI. Also utilized is a Sanitation Strategies battery operated foamer for application of Quaternary Ammonia solution for sanitization. A ShopVac BullDog 8 Gallon wet dry vac is utilized for entry carpets and bedding spills is used in Pharmacy. In science, a wet/dry vac is utilized in the cleaning of the Turtle tank.

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.

Rats/Mice- Contact Bedding/Changed once per week
Frogs and Turtles- Water/Changed at least once a week more if needed
Pigeons- Non- contact papers in trays/changed at least once a week. Every other day when on free feed. Thoroughly sanitized every 2 weeks.

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

No Exceptions to the Guide.

- 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 in cage dump stations/dirty side washroom/ or drain depending on species. Clean is added either in room or on clean side of cage wash.

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.

N/A

- 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).

- Ongoing cage wash temperature monitoring.
- Visual inspection.
- Cage Wash Soap System Provider (Sanitation Strategies) Validates using ATP and provides report.

- b) Describe preventive maintenance programs for mechanical washers.

Cage washer is on PM service.

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 is bagged and removed to landfill via commercial general refuse dumpster daily.

- ii. Animal carcasses.

Animal Carcasses are bagged, stored in freezer until freezer is nearly full, then incinerated onsite, and disposed of in commercial general refuse dumpster.

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).

Currently the program for controlling pest is monitoring using Sticky Traps which are checked daily. These traps monitor for both rodent and insect pests. There has not been a recent history of pest issues and if needed licensed/certified professionals with Animal Research Facility experience would be contacted.

- 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.

No natural predators or guard animals are used.

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

Currently no pesticide use takes place and a program of notification and opt - out procedures would be utilized in case of use.

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.

Regular staff provides for weekend and holiday care for basic husbandry needs on weekends and short breaks, and regular husbandry duties on extended holidays and breaks.

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

N/A

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

All employees are provided with contact numbers for responsible animal care and veterinary personnel and the same numbers are posted through the facility in locations near facility phones. Veterinary care is ON CALL 24/7/365 with back up vet care and contact information available in cases where the AV is not available. The Facility Coordinator carries a cellular phone on them at all times for 24/7/365 access.

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).

Rats/Mice- cage cards and paw pad tattoos are utilized for identification
Pigeons- cage cards and each animal has attached to its leg from the vendor a numbered leg band
Frogs and Turtles- not utilized in a fashion where individual or group identification is needed.

b. Breeding, Genetics, and Nomenclature

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

The investigator meets with the Animal Care Facility Manager and reviews selection of the animals needed based on genetic characteristics. When needed the sales representative from a vendor is involved and their expertise is utilized in the selection of an animal model.

- 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 investigator meets with the Animal Care Facility Manager and reviews proper nomenclature standards for animals utilized in their project. They are given resources by the Animal Facility Coordinator and are required to follow publically utilized standards.

- 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."

Any newly generated genotypes will be evaluated for phenotypic concerns by the AV with the assistance of the Animal Facility Manager and standard endpoints will be established by the investigator for inclusion into their Protocol. The IACUC will be notified via the Protocol along with regular communication between the IACUC and the AV.

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 ordered for approved protocols are ordered through the Animal Care Facility Manager. Animal care personnel who have the responsibility of receiving the animals are trained to evaluate the condition of the animals by observing the animals' activity, eating, drinking, respiratory rate, consistency of fecal matter, condition of pelage, weight, etc.,. Any abnormalities will be brought to the attention of the animal care facility manager and/or the attending veterinarian.

Rodent vendor animal health surveillance reports are monitored routinely and are maintained in an ongoing file in the Animal Care Facility Office. Rodents from other institutions are quarantined (in an isolator within the pharmacy facility) until their disease status can be determined through physical examination and/or serology profiling.

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).

Rats, mice and birds are shipped via commercial airlines in approved filtered boxes or ground transport. Reptiles and amphibians are shipped in an approved container via US Mail or UPS/FedEx

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.

Animals that are brought into the Animal Care Facility are obtained from reputable vendors that have taken great strides to reduce the possibility that their animals are sick or diseased. When the animals reach our facility they are kept in quarantine until it is determined that their health status will not threaten the animals existing within our facility (see B2). Observation of all animals within the animal care facility occurs daily during daily cleaning, feeding and watering. Abnormalities are brought to the attention of the Animal Care Facility Coordinator and/or the Attending Veterinarian.

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

When an animal is suspected of having an infectious agent that results in morbidity or mortality, they are immediately isolated from the other animals to an isolation facility located within the Pharmacy animal care facility. The attending veterinarian is alerted and will perform a physical exam. Part of this exam may include culture and sensitivity, necropsy and histopathology if the attending veterinarian determines these procedures are necessary. Tissue and blood samples may be sent to the diagnostic lab for determination of the causative agent. Once a causative agent is found the best course of treatment is determined and implemented.

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

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

Animals that are brought into the Animal Care Facility are obtained from reputable vendors that have taken great strides to reduce the possibility that their animals are sick or diseased. When the animals reach our facility they are examined by animal care staff and kept in quarantine until it is determined that their health status will not threaten the animals existing within our facility. Observation of all animals within the animal care facility occurs daily during daily cleaning, feeding and watering. Abnormalities are brought to the attention of the Animal Care Facility Manager and/or the Attending Veterinarian.

- 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.

Quarantine rooms will house animals after they have been cleaned thoroughly, sanitized, and will have no other animals housed concurrently. All animals are monitored closely for signs of sickness and disease. Any animals showing abnormal

symptoms are brought to the attention of the animal care facility manager and/or attending veterinarian.

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

In the rare occasion that animals are ordered and brought in from off campus suppliers, stabilization and quarantine occurs concurrently. During this period, the animals are allowed to acclimate to their new housing conditions

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.

In our facility, all animal species are divided into separate housing areas. Animals of the same species are separated by source only during the quarantine period. Animals of the same species are separated due to health status when individuals are suspected of having contagious disease. This separation will be into an extra open room away from healthy animals. During this separation, the animals' health status will be monitored. The animal could be returned to the original facility once they are determined not to represent a health threat to other animals in the facility.

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

This does not apply to our facility.

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

If it is determined that the illness of the animals was of a contagious nature, the room and/or isolation unit would be maintained at a negative pressure and sanitation procedures would be mandatory by animal care facility personnel who work in these rooms to minimize the potential spread of these organisms.

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.

Animal care facility workers are trained by the facility manager and the attending veterinarian for signs and symptoms of disease in the animal species that they will be caring for. As the animals are fed, watered and cleaned daily the facility workers will bring abnormalities to the attention of the facility manager and/or attending veterinarian. This reporting is generally done verbally as both the facility manager and attending veterinarian are available by cell phone at all times. If the abnormality has been determined not to be of an urgent nature, this contact can be done by campus email or text messaging.

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

The reporting of these observations is done verbally by cell phone and or text/email. Both the animal care facility manager and attending veterinarian are available by cell phone at all times and are usually within the same facility as the animal care facility.

- 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.

At this time, preventative medicine/health management and monitoring includes daily observation by animal care facility staff and regular visits and walk through and physical examination by the attending veterinarian. Vendor surveillance documents are provided when the animals are purchased and arrive to the animal care facility.

2. Emergency Care [Guide, p. 114]

- 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 numbers are posted in several locations within the facility. These lists contain the home, cell and office phone numbers of the animal care facility manager and attending veterinarian. The Ferris State University Department of Public Safety has been provided with a current list of animal care staff and attending veterinarian including contact information. The attending veterinarian and facility manager are available by cell phone at all times.

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

The attending veterinarian has the final say on all emergency procedures

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.

All medical records for ill animals, including clinical observations, laboratory results, diagnosis, treatment and medical progress are maintained by the facility manager. These records will include daily health and treatment sheets that are kept within the animal rooms during the treatment of that animal.

- 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.

AV/Animal Facility Manager All medical records for ill animals, including clinical observations, laboratory results, diagnosis, treatment and medical progress are maintained by the facility manager. These records will include daily health and treatment sheets that are kept within the animal rooms during the treatment of that animal.

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

The AV generates the records and assists the Animal Facility Manager in maintaining Recordkeeping Compliance.

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

- a. In-house diagnostic laboratory capabilities.

Provided by Riversbend Animal Hospital of Big Rapids MI

- b. Commercially provided diagnostic laboratory services.

Provided by IDEXX Laboratories

- c. Necropsy facilities and histopathology capabilities.

Riversbend Animal Hospital provides the necropsy facility. Histopathology services are provided by IDEXX Laboratories

d. Radiology and other imaging capabilities.

Digital X-ray and Ultrasound procedures are performed at Riversbend Animal Hospital by trained and qualified staff

5. Drug Storage and Control

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

Controlled and non-controlled drugs are stored in a locked safe in the facility manager office [REDACTED]. Drugs that are currently being used are stored in a Brinks wall safe that has a keyless code entry. Only the facility manager and attending veterinarian have the code for this safe. Drugs that are not currently being used are stored in a locked chest. The keys to this chest are located in the Brinks wall safe.

b. Describe record keeping procedures for controlled substances.

Controlled substance use is recorded in a drug log book according to DEA standards. The log is kept to monitor how much is used, where it is used and by whom. The log books are kept in the manager's office in [REDACTED]. Drugs are monitored monthly for expiration dates by the facility manager and attending veterinarian.

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.

Prior to IACUC approval of protocols involving surgical procedures, the IACUC requires that all aspects of pre-surgical planning be addressed including: who will be performing the procedure, are they properly trained, in what facility will this be performed and who will be responsible for pre and postoperative care

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.

None at this time.

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).

Major survival surgeries would include surgical intervention that penetrates and exposes a body cavity and/or a procedure that produces substantial impairment of physical or physiologic functions, or involves extensive tissue dissection or transection.

- b. How is non-survival surgery defined?

Procedures in which surgery is performed and the animal is properly euthanized while under general anesthesia

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

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

Aseptic surgical techniques will be addressed during the training sessions and will reference the Aseptic Surgical Techniques SOP

- 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.

Instrument sterilization and proper protective clothing will be addressed during the PI and support staff training sessions. Copies of these SOP's can be found at the animal care facility and on the IACUC blackboard web site.

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

N/A

- d. Indicate how effectiveness of sterilization is monitored.

N/A

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

Before IACUC approval of a protocol involving a surgical procedure, it is determined if the PI has the proper training in the surgical procedure being performed as well as sterile surgical technique. The attending veterinarian will oversee all surgical procedures and the proper use of anesthetic and analgesic agents. Major surgical procedures and surgical procedures that are performed on all USDA covered species are performed at a dedicated surgical suite provided at Riversbend Animal Hospital.

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 minor surgical procedures done at Ferris State University is accomplished by the PI and records are provided to the animal care facility manager and the attending veterinarian.

Monitoring during major surgeries is provided by licensed veterinary technicians that are trained in intraoperative monitoring. These services are provided by Riversbend Animal Hospital. Intraoperative records are kept of anesthetic depth, cardiac and respiratory function, and body temperature.

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.

As required by the IACUC, the principle investigators are required to oversee their own postsurgical care program including drugs administered, times, food and water consumption, and behavior monitoring in consultation with the attending veterinarian. Records are maintained by the PI and are provided to the facility manager. Ultimately, the PI is overseen by the attending veterinarian and IACUC

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

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

Guidelines and advice on the use of anesthetic and analgesic agents are provided in many ways; Principle investigators may consult the veterinarian at any time regarding the need for and use of anesthetic and analgesic agents. When the “Application for in Teaching and/or Research “protocol form is reviewed by the veterinarian and IACUC, the PI’s choice of anesthetic and analgesic agents and the appropriateness of use are evaluated. When necessary, the veterinarian recommends changes in the anesthetic regimen or in the routine use of analgesics. In the course of providing clinical veterinary care, analgesics are prescribed where deemed appropriate by the veterinarian in consultation with the principle investigators. Finally, the veterinarian will disseminate information and train investigators and research personnel in the appropriate use of anesthetic and analgesic agents.

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

All training is provided by Attending Veterinarian and/or Facility Manager on project by project 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.

Ketamine/acepromazine followed by Isoflurane gas anesthesia – Rats, Mice
Ketamine/xylazine with or without isoflurane – rats
Dexdomitor/butorphanol – rats, birds
Buprenorphine – rats, mice, birds
Meloxicam – rats, mice, birds

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

The proper use of anesthetic and analgesic agents in research animals is an ethical and scientific imperative. With this in mind, the IACUC and the attending veterinarian will require all submitted protocols to contain specific procedures, methods and agents be used to minimize pain and discomfort of all research animals. The attending veterinarian evaluates each procedure and treatment within a submitted protocol to determine if proper steps and agents are used to prevent significant pain and distress. It is generally true that the IACUC and PI looks to the attending veterinarian for guidance in the submission and approval of a protocol that may contain procedures that could possibly cause pain and discomfort.

The attending veterinarian and the animal care facility manager will work closely with facility staff and PI’s to train on the signs of pain and discomfort in the various species within the animal care facility.

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.

The monitoring of the effectiveness of anesthetic and analgesic agents is done by the attending veterinarian, animal facility manager and trained animal facility staff. The animals are observed for any evidence or signs of pain and distress. This could include but is not limited to changes in behavior, level of eating or drinking and level of activity. Staff and PI's are trained to watch for evidence of pain and distress and are instructed to contact the attending veterinarian if they have any suspicions.

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 have never been used at Ferris State University but would be considered as a useful addition to systemic anesthetic agents as long as analgesic agents are used concurrently. Under no condition can neuromuscular blocking agents be used without a deep level of anesthesia or proper analgesic agents to prevent the possibility of sensation during and after a surgical procedure.

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

The majority of anesthesia that is performed at the Animal care facility is in the form of a systemic injectable type. In the event that a procedure would require gas anesthetics, the procedure would be performed at Riversbend Animal Hospital which is under AAHA standards. Anesthetic vaporizers are tested and calibrated yearly.

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.

The method and species in which that method is used is as following:
Barbiturate overdose – rats, mice and birds
Carbon Dioxide hypercarbia followed by thoracotomy – rats and mice
Decapitation followed by pithing – frogs
Cervical stunning followed by pithing - turtles

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

Maintaining and the proper functioning of euthanasia equipment are performed by the animal care facility manager. Each time a euthanasia is performed by a trained animal care staff member, that person inspects the equipment making sure that it is in working order prior to use. Maintenance logs of euthanasia equipment are kept in the animal care facility office.

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

Methods used to confirm death include, but are not limited to; palpation of the chest for palpable heartbeat, the use of a stethoscope for sounds of respiratory sounds and heart valve closure, lack of corneal reflex and toe pinch for sensory/motor reflex. Thoracotomy and pithing are performed to ensure death has occurred.

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.

Both facilities utilized are located on the main campus of the University. Each site is a Suite of rooms. The Main facility is on the [REDACTED] The Satellite facility is located on [REDACTED] Both sites are under the oversight of the Animal Care Facility Coordinator who spends time each week between the sites overseeing the operations and evaluating the animal care and health in each facility. The Vet also regularly visits each site and the IACUC reviews both sites during semi-annual reviews.

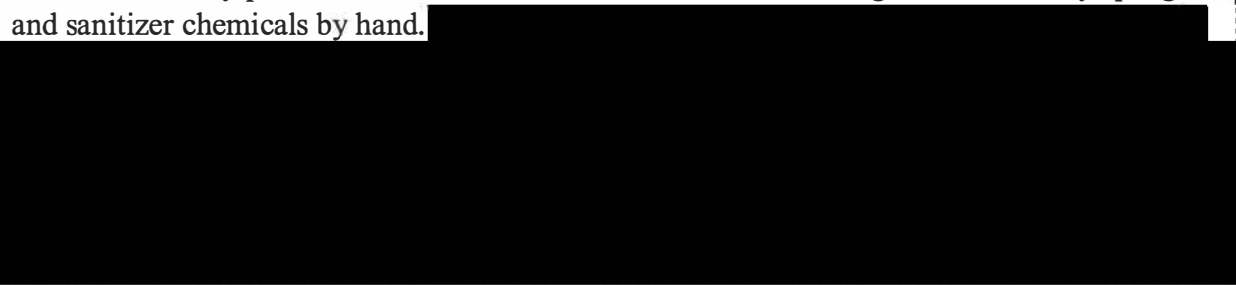
B. Centralized (Centrally-Managed) Animal Facility(ies)

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).

All animal facilities are set up in a conventional setting with utilizing the Guide recommendations for housing. All animals utilized in the laboratories are there for no longer than 12 hours unless the IACUC has approved an exception to this rule. All labs are reviewed by the IACUC during Semi-annual Inspections and by the AV and Facility Coordinator prior to the start of research and periodically throughout the research period to verify all animals are provided with housing and care that represent the minimum requirements outlined in the Guide throughout the course of the study. All finishes throughout the facility are either of epoxy in the case of the floors, semi-gloss or epoxy paint on the walls/or are made of an impervious material, and semi-gloss paint on solid gypsum-board ceilings. Any areas within the facility that are not easily pressure-washed for sanitization are cleaned at regular intervals by sponge and sanitizer chemicals by hand.



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.

Back- up power is currently only provided



- 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).

N/A

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

According to the privacy principles on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, we wish to advise you that the personal data in the Program Description will become part a permanent file owned by AAALAC International, and that can be shared with AAALAC International offices and representatives in order to perform an evaluation of the institution's animal care and use program and provide accreditation services. The institution has the option of exercising rights of data access, rectification, cancellation, and opposition at: accredit@aaalac.org

Appendix 1: Glossary of Abbreviations and Acronyms

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

Abbreviation/Acronym	Definition
AAHA	American Animal Hospital Association
PI	Primary Investigator
AV	Attending Veterinarian
PPE	Personal Protective Equipment
SOP	Standard Operating Procedure
AALSD	Academic Affairs Laboratory Safety Director
CITI	Collaborative Institutional Training Initiative
PSYC	Psychology
ATP	Adenosine triphosphate

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/meters (or acreage) for animal care and use, and the total square footage/meters (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, HVAC, 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) each facility is from a reference point such as from the largest animal facility. A campus/site map (with a distance scale) may be included as an Appendix to provide this information. Provide floor plans of each area as an Appendix. In Section II.B., describe the general types of animal housing facilities available (e.g., conventional, hazard containment, gnotobiotic, barrier, barns, etc.) and other details of the facilities. See Instructions, Appendix 1 - 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*)	Distance from main facility (campus/site map(s) also may be provided in lieu of this information)	Approx. sq.ft./m (acreage) animal housing	Approx. sq.ft./m (acreage) support/ procedure space	Species housed	Approximate Daily Animal Census by species	Person in charge of site
	Main Facility	830ft ²	1435ft ²	Rats Mice Rabbits	100 12 6	
	¾ Mile	1125ft ²	375ft ²	Frogs Turtles Fish Rats Pigeons	30 10 500 42 24	
Totals:		1955ft ²	1810ft ²			
Total animal housing and support space:		3765ft ² Please specify ft ² or m ²				

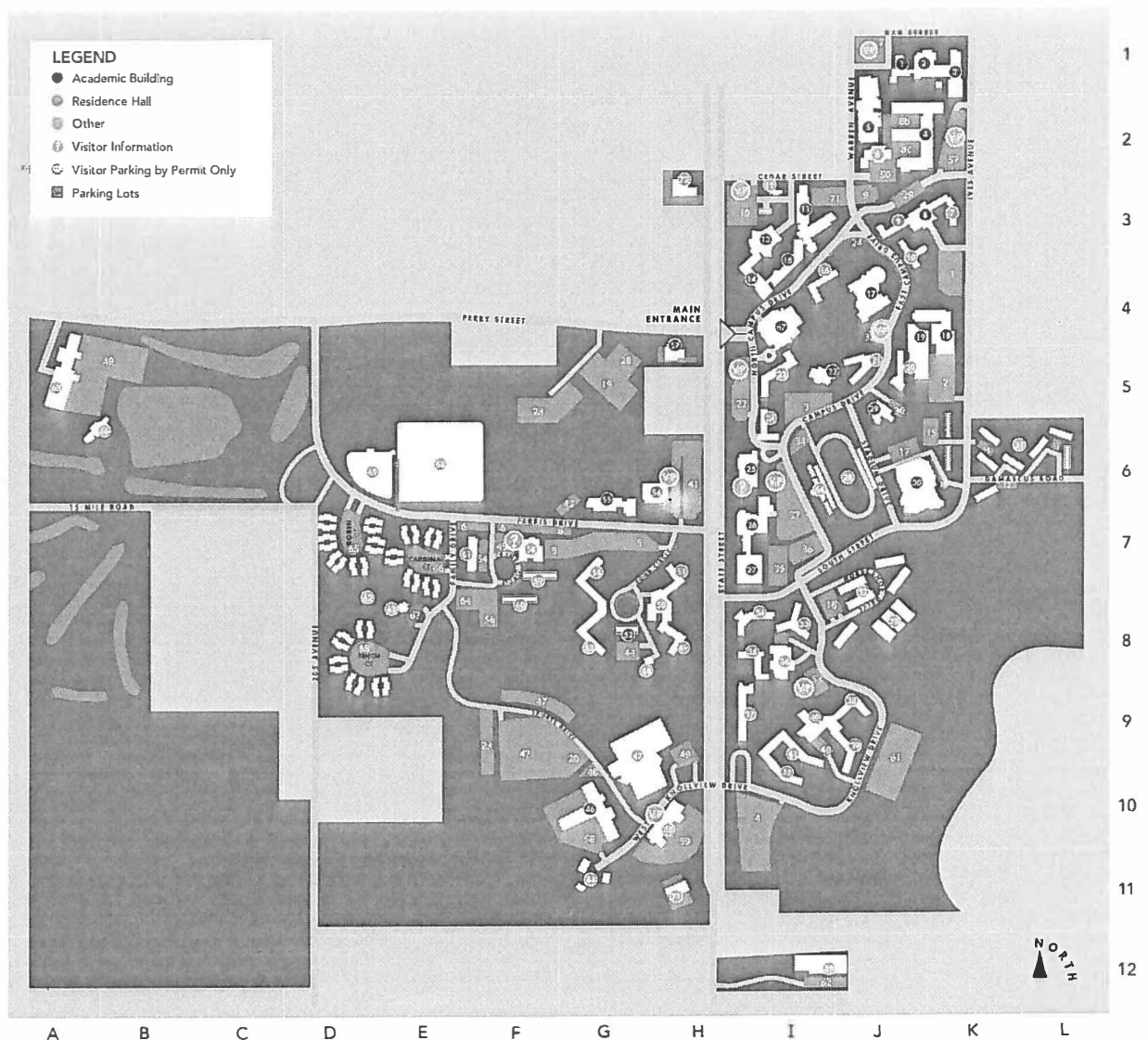
*Please state name and acronyms used for building names, if not coded for confidentiality.

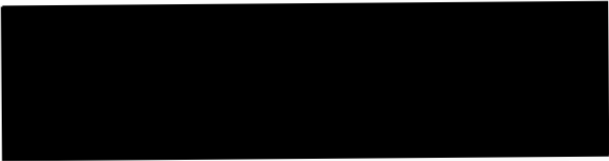
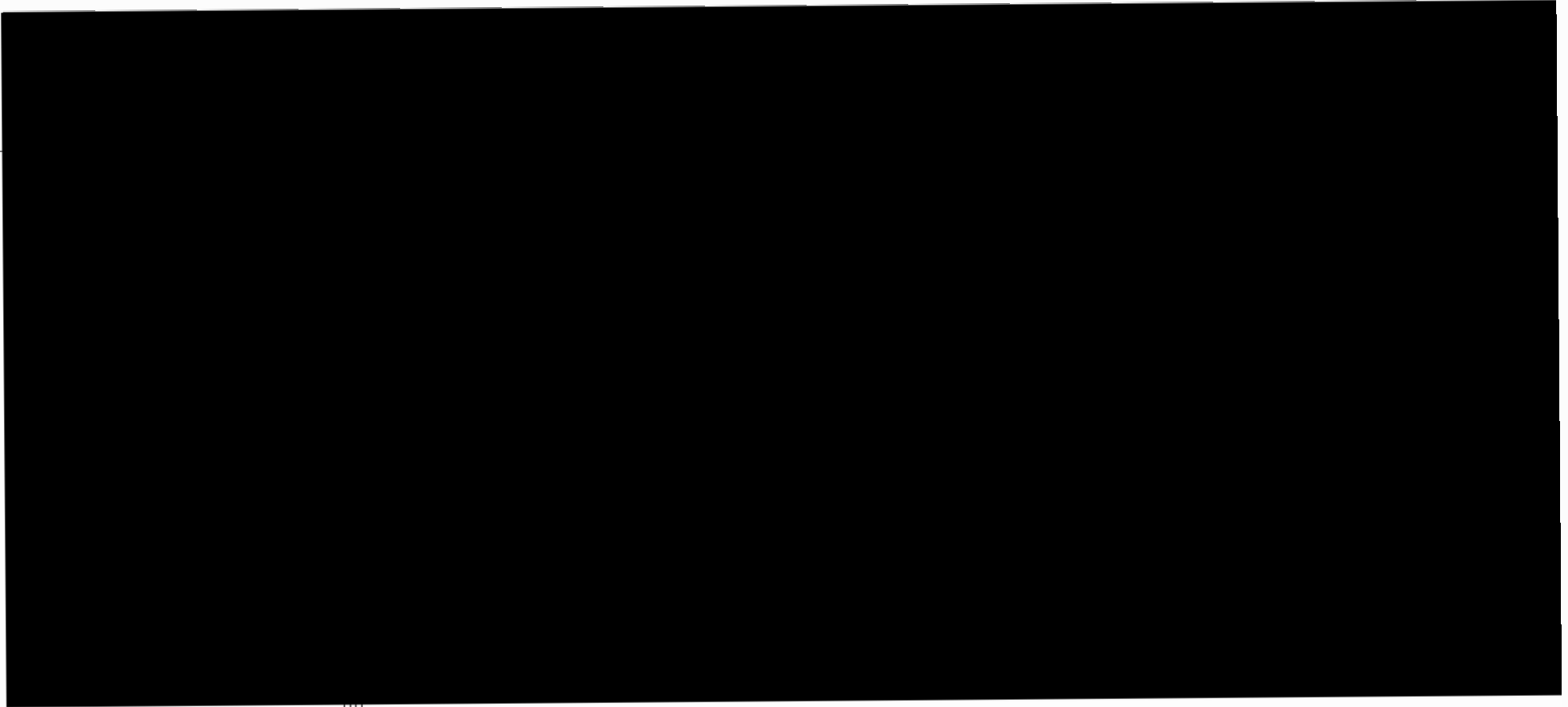
MAP KEY

2 Alumni Building (Extended Learning)	J1	27 Masselink Hall West	J3
15 Arts & Sciences Commons (College of Arts & Sciences, CardioVital Center)	I3	28 McKessey House	I3
1 Automotive Center	J2	29 McNerney Hall	J9
29 Birkam Health Center	J5	31 Merrill Hall	I9
40 Bishop Hall (College of Education & Human Services, Tutor Place)	F8	32 Miller Hall	I9
24 Bond Hall North	G7	33 Music Center	I5
25 Bond Hall South	G8	34 National Elastomer Center for Plastics & Rubber Technology	J4
33 Brophy Hall	J9	35 North Storage	H3
27 Business Building (College of Business)	I7	36 Pennock Hall (Michigan College of Optometry)	F7
26 Campus Power Plant	J2	37 Pharmacy Building (College of Pharmacy)	G6
10 Carlisle Hall	J3	38 Pickell Hall	I8
21 Clark Hall	J5	39 Praliken Building	K1
27 Copy Center	H5	41 Puterbaugh Hall	H7
29 Cramer Hall	F7	42 Racquet & Fitness Center	I12
22 Creative Arts Center	G8	43 Rankin Student Center	J4
31 East Campus Apartments	L6, K6	44 Science Building	I3
28 Ewigleben Sports Complex (Ice Arena & Warm Arena)	G9	45 South Campus Apartments	J7
FLUTE (Perry Library for Information, Technology and Education)	I4	46 South Commons (The Commons)	I8
23 General Services Annex Building	H11	47 Southwest Commons (Center for)	H8
45 General Services Building (Physical Plant Office & Shop, Main Pool, Central Recreation & Fitness)	H10	48 Southwest Heating Plant	G8
8 Granger Center for Construction & HVAC	J2	49 Starr Building	I4
49 Grounds Maintenance	G11	50 Student Recreation Center	J6
24 Hallissy Hall	I5	51 Swan Building	K4
46 Heavy Equipment Technology	G10	52 Taggart Hall	I8
35 Helen Ferris Hall	I4	53 Tinne Center for Student Services	I6
49 Henderson Hall	H8	54 Top Taggart Field & Track	J6
45 Holiday Inn & Conference Center	A5	55 Trans Hall	I10
20 Intercollegiate Soccer Field	J8	56 Vandercook Hall	I5
29 Intercollegiate Softball Field	D6	57 Victor F. Spathoff Center (College of Allied Health Sciences)	H6
26 Interdisciplinary Resource Center (IRC)	I7	58 Ward Hall	I8
20 Johnson Hall (College of Technology)	J5	59 West Building	J1
43 Karas Field Intramural Recreation	E6	60 West Campus Apartments	D7, D8, E7
40 Kathe Golf Course Clubhouse	B5	61 West Campus Community Center	E8
40 Knollcrest Commons	I9	62 West Commons (Perrin-Pollock)	F7
8 Masselink Commons (PSU Telecommunications, Masselink Hall)	K3	63 Wheeler Pavilion	I6
27 Masselink Hall East	K3	64 G. Mennen Williams Auditorium	I3

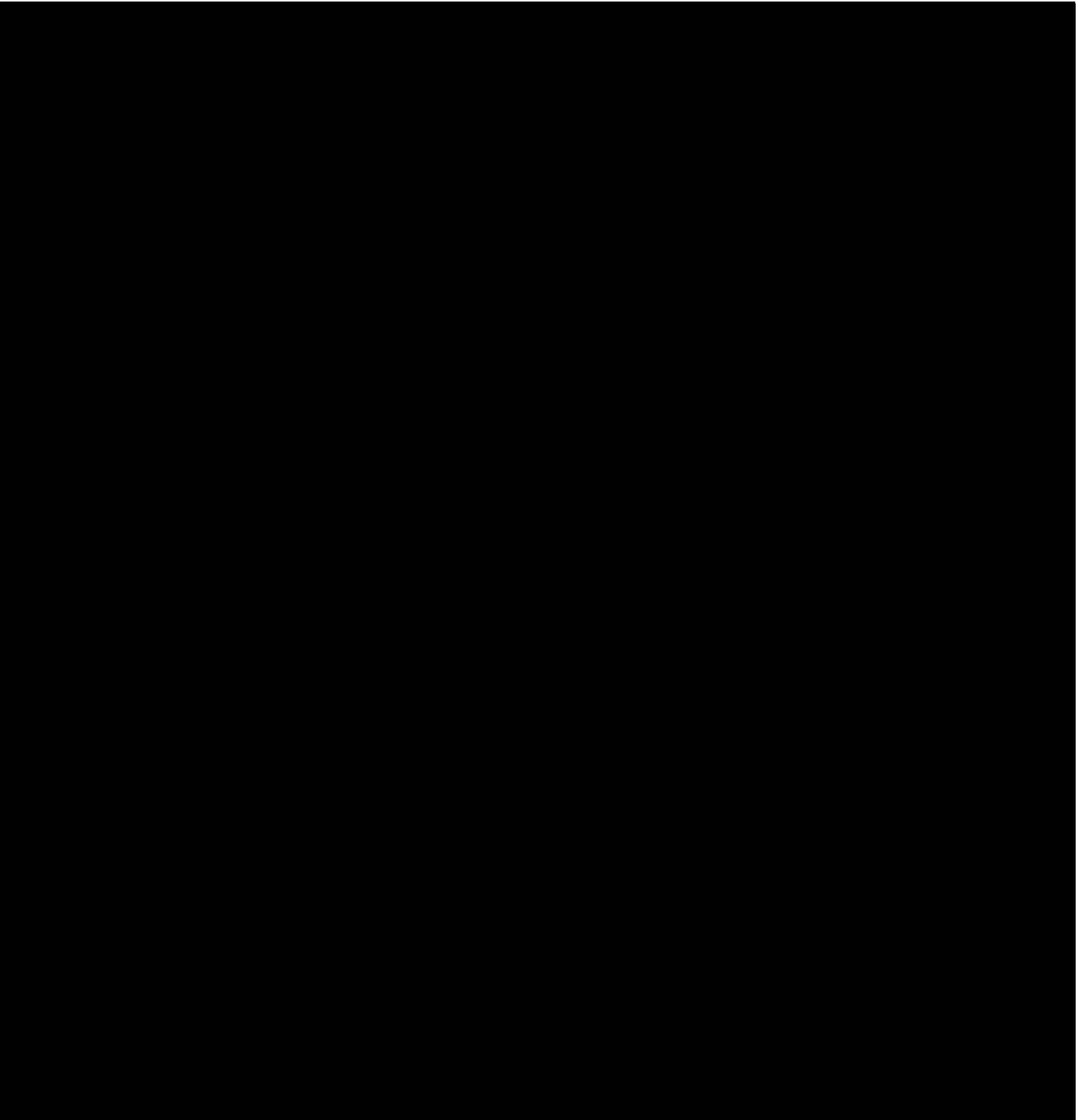
LEGEND

- Academic Building
- Residence Hall
- Other
- Visitor Information
- Visitor Parking by Permit Only
- Parking Lots





TOTAL SQUARE FEET: 2770

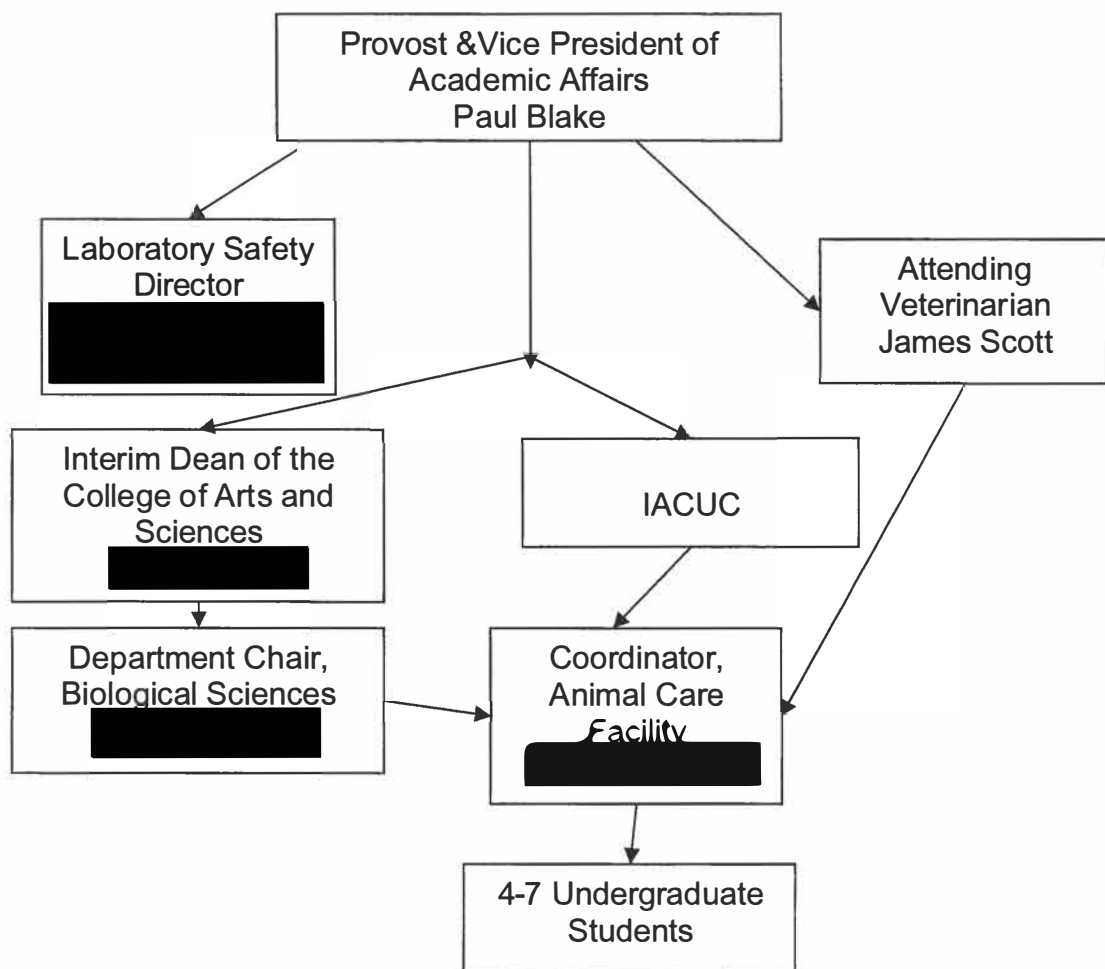


NORTH

SCALE: 1/8"=1'-0"

Appendix #1: Organization Structure

Ferris State University Animal Care and Use Program Organizational Structure College of Pharmacy and College of Arts and Science



Animal Usage (Form B)

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.

[illegible]

Appendix B



Academic Affairs

Animal Care Occupational Assessment

Instructions

Each item on this form must receive an answer. Provide the information to the best of your knowledge. This is a fillable Word document form. Mac users, to mark the check boxes, place the cursor in front of the check box, hold down the space bar and x to place an x in the check box. When the Animal Care Occupational Assessment form is complete, print it out, sign it, fold it and seal it in an envelope. Mark on the outside of the envelope *confidential*. Place that envelope in a business envelope and address the envelope Birkam Health attention Nursing Supervisor.

Name: Click here to enter text. Gender: Choose an item. DOB: Click here to enter a date.

Department: Click here to enter text. Supervisor/PI: Click here to enter text.

Job Title: Click here to enter text.

Active Protocol Numbers Associated With (list all that apply): Click here to enter text.

Today's Date: Click here to enter a date.

Date of Evaluation: Click here to enter a date.

☐ Animal Care Personnel

☐ Investigator

☐ Student (non-worker)

☐ Volunteer

☐ Animal Care Student

Personnel

☐ Investigator Staff

☐ Veterinarian

☐ Engineer

☐ Housekeeping/Custodial

☐ Security

☐ Contractor

☐ Maintenance/Skill

Trades: Choose an item.

☐ Other: Click here to enter text.

Occupational/Environmental Health History

I am involved with veterinary care or animal husbandry at Ferris State University

☐ Yes ☐ No

I will perform surgical manipulations of animals

☐ Yes ☐ No

Have you worked with laboratory animals in the past?

☐ Yes ☐ No

If yes, list: Click here to enter text.

How long? Click here to enter text.

I have performed maintenance or custodial services for animal care or veterinary facility

☐ Yes ☐ No

I will perform maintenance or custodial services for animal care

☐ Yes ☐ No

Appendix B

Academic Affairs

Exposures in the Lab Environment (Check all that apply)

- | | | |
|--|---|--|
| ☐ Recombinant DNA (rDNA) | ☐ Radioactive material | ☐ Other Hazardous chemicals |
| ☐ Infectious agents | ☐ Teratogens/Carcinogens | ☐ Perform maintenance activities/skill trades |
| ☐ Parasites | ☐ Anesthetic gases | ☐ Perform housekeeping/custodial activities |
| ☐ Adjuvants/Vaccines | ☐ Heavy Metals | ☐ None of the above |
| ☐ Toxins/Venoms | ☐ Lasers | |
| ☐ Other biological agents | | |

Personal Health History

Have you ever been diagnosed and/or treated for the following diseases? Check all that apply.

- | | | |
|--|---|--|
| ☐ Acne | ☐ Depression | ☐ Irregular heartbeat |
| ☐ Animal-related diseases | ☐ Diabetes | ☐ Joint pain |
| ☐ Animal-related injuries | ☐ Eczema | ☐ Kidney disease |
| ☐ Animal, latex, venom, or other allergies | ☐ Emphysema | ☐ Liver disease |
| ☐ Anxiety | ☐ Gastrointestinal disorder | ☐ Loss of consciousness |
| ☐ Arthritis Type: Click here to enter text. | ☐ Hay Fever | ☐ Measles |
| ☐ Asthma | ☐ Heart disease | ☐ Neck pain |
| ☐ Autoimmune diseases | ☐ Heart Murmur | ☐ Other illnesses |
| ☐ Cancer | ☐ Hepatitis (Type A) | ☐ Other lung disease |
| ☐ Claustrophobia | ☐ Hepatitis (Type B) | ☐ Rheumatic fever |
| ☐ Chicken Pox | ☐ Hepatitis (Type C) | ☐ Seizures |
| ☐ Chronic Back Pain | ☐ Hypertension | ☐ Tuberculosis |
| ☐ Chronic Bronchitis | ☐ Immunosuppressive treatments | ☐ Zoonotic disease |

Have you experienced any of these symptoms within the last six months to a year:

Bloody sputum ☐ Chronic cough ☐ Fever/ Chills ☐ Shortness of breath ☐ Weight loss

Do you have a family history of:

Asthma ☐ Eczema ☐ Hay Fever ☐ Other skin problems

Comments: [Click here to enter text.](#)

Appendix B

Have you ever been skin or blood tested for allergies to:

- ☐ Mice/rats
- ☐ Ragweed
- ☐ Dust
- ☐ Grass

- ☐ Cats
- ☐ Trees
- ☐ Dogs
- ☐ Mold

- ☐ Other: Click here to enter text.
- ☐ None

Have you ever received allergy shots for allergies? *Provide the approximate dates to the best of your ability for items checked.*

- ☐ Mice/rats Click here to enter a date.
- ☐ Ragweed Click here to enter a date.
- ☐ Dust Click here to enter a date.

- ☐ Grass Click here to enter a date.
- ☐ Cats Click here to enter a date.
- ☐ Trees Click here to enter a date.

- ☐ Dogs Click here to enter a date.
- ☐ Mold Click here to enter a date.
- ☐ Other: Click here to enter text.
- ☐ None

Have you ever been diagnosed or treated for Asthma? ☐ Yes ☐ No

Type: Click here to enter text.

Date: Click here to enter a date.

Spirometry dates: Click here to enter a date.

Hospitalizations dates: Click here to enter a date.

Asthma medications: Click here to enter text.

Do you use tobacco? ☐ Yes ☐ No

Check all that apply: ☐ Chew ☐ Smoke ☐ Other

How many years have you used tobacco? Click here to enter text.

If NOT currently, have you smoked before? ☐ Yes ☐ No

When? Click here to enter text.

When have you stopped? Click here to enter text.

List all medications you are currently taking:

Click here to enter text.

Allergies to medications:

Click here to enter text.

Immunizations

Tell us the approximate dates to the best of your ability of immunizations or titers (blood tests) received.

Hepatitis B series: Click here to enter a date.

Chickenpox (Varicella): Click here to enter a date.

Rabies series: Click here to enter a date.

Hepatitis B titers: Click here to enter a date.

Chickenpox titers or disease: Click here to enter a date.

Rabies booster: Click here to enter a date.

Appendix B

MMR series: Click here to enter a date.

Q Fever titers: Click here to enter a date.

MMR titers: Click here to enter a date.

Influenza: Click here to enter a date.

Other: Click here to enter text.

Chest X-ray: Click here to enter a date.

Normal? ☐ Y ☐ N

TB skin or blood test: Click here to enter a date.

Normal? ☐ Y ☐ N

Tetanus (T-DAP): Click here to enter a date.

Do you have any concerns or questions about your occupational health and safety? Click here to enter text.

For women only:

Are you pregnant? ☐ Yes ☐ No

Are you planning to become pregnant within the next year? ☐ Yes ☐ No

Animal Exposure

Do you have indoor pets at home? ☐ Yes ☐ No

If yes, check all pets that apply. (If indoor pet is not listed, check other and fill in the type of pet.)

Pets	<1 Year	1-3 Years	4+ years
Fish/Frogs/Aquatics	☐	☐	☐
Rodents (mice, rats)	☐	☐	☐
Hamsters, guinea pigs	☐	☐	☐
Rabbits	☐	☐	☐
Dogs	☐	☐	☐
Cats	☐	☐	☐
Other: Click here to enter text.	☐	☐	☐

Comments: Click here to enter text.

Do you have any of the following types of reactions around the animals?

Reactions	Within Past 12 Months	Prior Reactions
Runny/stuffy nose	☐ Yes ☐ No	☐ Yes ☐ No
Itchy/red eyes	☐ Yes ☐ No	☐ Yes ☐ No
Cough	☐ Yes ☐ No	☐ Yes ☐ No

Appendix B

Wheezing	☐ Yes ☐ No	☐ Yes ☐ No
Chest tightness	☐ Yes ☐ No	☐ Yes ☐ No
Shortness of breath	☐ Yes ☐ No	☐ Yes ☐ No
Hives/Skin rash/Dry skin	☐ Yes ☐ No	☐ Yes ☐ No
Throat Swelling	☐ Yes ☐ No	☐ Yes ☐ No
Difficulty swallowing	☐ Yes ☐ No	☐ Yes ☐ No
Difficulty breathing	☐ Yes ☐ No	☐ Yes ☐ No

Comments: [Click here to enter text.](#)

I hereby authorize Birkam Health center or their designee to evaluate and treat me. Based on their evaluation, I may be requested to have a follow-up evaluation or cleared to work with the animals in Ferris State University's Academic Affair Animal Care Program.

I understand that I must report to my immediate supervisor, professor, principle investigator, or Animal Care supervisor immediately (within 24 hours) if I experience any changes in my health, any animal bite/scratch or reaction to any agent.

Name (Print):

Signature:

Date:

Provider's notes (select appropriate answer):

☐ I have reviewed this form and the patient does not require a medical exam.

☐ I have reviewed this form and the patient requires a medical exam.

Comments:

Appendix B

Examining Clinician:

Print Name:

Date:

Supervising Physician:

Print Name:

Date:

IACUC Membership Spring 2019

Attending Veterinarian/Faculty	James Scott, DVM	Vet/ Professor College of Arts and Sciences Biological Sciences Department [REDACTED] Admin. Unit- Physiology
Animal Care Facility Coordinator	[REDACTED]	Coordinator Animal Care Facility [REDACTED] Admin Unit – Lab Animal Care
Outside Person	[REDACTED]	NonAffiliated Member [REDACTED] Admin Unit – Community Member
FSU Senate Liaison	[REDACTED]	Associate Professor Biology Department College of Arts and Science [REDACTED] Admin Unit - Physiology
Faculty	[REDACTED]	Associate Professor Biological Sciences Department College of Arts and Science [REDACTED] Admin Unit – Animal Science
Chair	Janice Weaver, PhD	Professor College of Arts and Sciences Social Sciences Department [REDACTED] Admin Unit - Psychology
Faculty	[REDACTED]	Professor College of Arts and Sciences Biological Sciences Department [REDACTED] Admin. Unit – Animal Sciences
Faculty	[REDACTED]	Professor Emeritus Social Sciences Department College of Arts and Sciences Admin. Unit–Psychology Emeritus
University Safety Officer	[REDACTED]	Safety Coordinator Human Resources Department Administration and Finance [REDACTED] Admin Unit – Human Resources
Lab Safety Coordinator	[REDACTED]	Lab Safety Coordinator Human Resources Department Administration and Finance [REDACTED] Admin Unit – Human Resources
Non-voting appointee	[REDACTED]	Research Compliance Officer Office of Academic Research [REDACTED] Admin Unit – Academic Research
Institutional Official	Paul Blake, PhD	Current IO/ Provost Academic Affairs [REDACTED]

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday February 2 2017

Call To Order: Meeting called to order @ 11:02am by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]

[REDACTED] Jim Scott, [REDACTED]

Absent: [REDACTED]

Guests:

Minutes Approval: Minutes of December 2016, Motion to approve December Minutes

[REDACTED]
Motion Carried

Discussions: Protocol Review

Mark Recapture of Fish [REDACTED]

Second

Put recapture period in

Motion Carried

Anopthalmic and Zebrafish as a group Motion to approve Jim Scott , Second [REDACTED]

[REDACTED] Motion Carried

Janice Weaver relinquished Chairmanship to [REDACTED]

Annual Report Review

Rat Laboratory Exercises Motion to approve [REDACTED] Seconded [REDACTED]

Motion Carried

[REDACTED] relinquished chairmanship back to Janice Weaver

Modifications to Approved Protocol

Spinal Cord Injury and Memory Motion to approve by [REDACTED] Seconded by Jim Scott

Motion Carried

Reminders/Announcements:

Compliance Webinar Whistleblower

Drug Update

Controlled Substances Licensure passed by state. Waiting on Federal

Seoul Virus Updates

CDC Notice

Adjournment: Meeting Adjourned @ 11:31 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday March 2, 2017

Call To Order: Meeting called to order @ 11:02 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]
[REDACTED]

Absent: Jim Scott, [REDACTED]

Minutes Approval: Minutes of February 2, 2017, Motion to approve [REDACTED]

, Seconded [REDACTED]

Motion Carried

Abstained [REDACTED]

Discussions:

New Protocol Review

Rabbit Anti-Bovine Serum Albumin and Anti-bacteriophage Poly clonal Antibodies

Motion to Approve [REDACTED], Seconded [REDACTED]

Add Euthanasia methods

Appendix 1 under blood collection select yes since using topical anesthetic

Motion Carried

Mice Antibody-secreting Splenic Lymphocytes from Immunization with Sheep Red Blood Cells

Motion to Approve [REDACTED], Seconded [REDACTED]

Motion Carried

Schedule Semi-annual inspection of facilities (last was 9-23-2016)

March 17, 2017 10am Science [REDACTED] Janice Weaver

Schedule Semi-annual review of Animal Care Program (last was 9-30-2016)

Before March 30, 2017 Janice Weaver and [REDACTED]

Reminders/Announcements:

Invitation for [REDACTED] to rejoin IACUC

Invitation to [REDACTED] to join the IACUC

Adjournment: Meeting Adjourned @ 11:28 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday April 6th, 2017

Call To Order: Meeting called to order @ 11:01 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]

[REDACTED] Jim Scott [REDACTED]

Absent: [REDACTED]

Minutes Approval: Minutes of March 2, 2017 , Motion to approve [REDACTED]
, Seconded [REDACTED] Motion Carried Abstained: [REDACTED]

Discussions:

Protocol Review

Anatomy and Physiology Protocols

Motion to approve as a group [REDACTED], Seconded [REDACTED]

Compound Action Potential

(Discussion on all 4 Put Animal Ages as adult

Cardiovascular Physiology

to put CITI #s

Smooth Muscle Physiology

Remove Reference #s)

Skeletal Muscle Physiology

Motion carries with no abstentions

Review of Semi-Annual Inspection of Facilities (conducted 3-17-2017) No Discussion

Review of Semi-Annual Program Review(conducted 3-31-17) No Discussion

Adjournment: Meeting Adjourned @ 11:49 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday October 5th, 2017

Call To Order: Meeting called to order @ 11:02 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]

Jim Scott, [REDACTED]

Absent: [REDACTED]

Minutes Approval: Minutes of September 7, 2017, Motion to approve [REDACTED]
, Seconded [REDACTED] Motion Carried

Semi-Annual Facilities Inspection conducted 9-15-17

Semi-Annual Review of Program 9-30-17 Occupational Health for Trades and Vendors
mentioned

Discussions: Training Ideas

Reminders/Announcements:

Adjournment: Meeting Adjourned @ 11:36 by Chair Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday September 7, 2017

Call To Order: Meeting called to order @ 11:04 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]
Jim Scott, [REDACTED]

Absent: [REDACTED]

Minutes Approval: Minutes of April 6, 2017, Motion to approve [REDACTED]
, Seconded [REDACTED] Motion Carried [REDACTED] abstained

Discussions: Meeting Schedules First Thursday of the Month

Annual Report: Differential Value and Equivalence in Pigeons

Transfer of Chair to [REDACTED]

Motion to Approve: [REDACTED]

Seconded: Jim Scott

Motion: Carried

Transfer of Chair back to Janice Weaver

Semi-Annual inspection of facilities: [REDACTED] Janice Weaver, [REDACTED]
Friday September 15th 11-1 Pharmacy Building

Semi-Annual Program Review: [REDACTED] [REDACTED] by September 30th

Training [REDACTED] will search for Disaster Preparedness Presenter

Develop SOP

Adjournment: Meeting Adjourned @ 11:33 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday December 7, 2017

Call To Order: Meeting called to order @ 11:02 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]

Jim Scott [REDACTED]

Absent: [REDACTED]

Guests:

Minutes Approval: Minutes of October 5, 2017, Motion to approve [REDACTED]
, Seconded Jim Scott Motion Carries

Discussions:

Policy of Who can be a PI question? Discussion about Level 1 Adjuncts. Move to table [REDACTED] Motion Carries

Training

Tackling Investigator Non-Compliance

How should the IACUC balance an efficient approval process with minimizing risk?

Finish CITI

Adjournment: Meeting Adjourned @ 11:55 by Chair Janice Weaver,

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday February 1, 2018

Call To Order: Meeting called to order @ 11:00am by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]

[REDACTED] Jim Scott, [REDACTED]

Absent: [REDACTED]

Minutes Approval: Minutes of December 7, 2017, Motion to approve [REDACTED]

Seconded [REDACTED]

Motion Carried Abstained: [REDACTED]

Discussions:

New Protocols:

Mark Recapture Fish

[REDACTED] Moved to Accept, [REDACTED] Seconded

Discussion for review # of Students to #Students/Section

Change wording to No Longer than for minutes and hours

Appendix 3 How long between capture and recapture

Page 3 add recapture to question regarding capture.

Motion Carried

Annual Reports/Renewals:

Zebrafish Breeding

[REDACTED] Moved to accept [REDACTED] Seconded Motion Carried
Transfer of Chairmanship to [REDACTED]

Rat Behavior

[REDACTED] Moved to accept [REDACTED] Seconded Motion Carried
Transfer of Chairmanship back to Janice Weaver

Discussion of PI Restrictions Policy

Changes were submitted to [REDACTED] to update the policy and submit
“clean” final draft for approval at next meeting.

Considering changing March meeting to March 15th

Adjournment: Meeting Adjourned @ 11:46 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday March 15, 2018

Call To Order: Meeting called to order @ 11:02 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]

[REDACTED] Jim Scott, [REDACTED]
[REDACTED]

Absent: [REDACTED]

Minutes Approval: Minutes of February 1st, 2018, Motion to approve [REDACTED]
, Seconded [REDACTED] Motion Carried

Discussions:

Protocol Review

BIOL 476- The Production-Isolation, and Characterization of Rabbit Anti-bovine Serum Albumin(BSA)
and of Rabbit Anti-bacteriophage (T4) Polyclonal Antibodies

Motion to approve [REDACTED] Seconded [REDACTED] Motion Carried

Change language for Dates. Change language for Dosing Include Concentration and maximum
injected volume

Semi Annual Inspection Schedule: Friday March 16th, 2018 11am [REDACTED]

Semi Annual Review of Program: April 5, 2018

P1 Policy Discussion

Move to accept [REDACTED] Seconded [REDACTED] Motion Carried

Reminders/Announcements:

Letters to be posted to Groups Page

Adjournment: Meeting Adjourned @ 11:31 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday April 5, 2018

Call To Order: Meeting called to order @ 11:02 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]

[REDACTED] Jim Scott, [REDACTED]

Absent: [REDACTED]

Minutes Approval: Minutes of March 15th, 2018, Motion to approve [REDACTED]

, Seconded [REDACTED]

Motion Carried

Abstaining [REDACTED]

Discussions:

Annual Reports:

17-008-0520 Compound Action Potential Frog

17-009-0520 Cardiovascular Physiology Turtle

17-007-0520 Smooth Muscle Physiology Rat

17-010-0520 Skeletal Muscle Physiology Frog

Motion to Approve as a Group [REDACTED], Seconded [REDACTED]

Motion Carried

Correction of Computation Sheet while leaving Protocol at Maximum number.

Review Semi-Annual Inspection of Facilities (Conducted 3-16-2018)

Vans were not done as they were in use each time we attempted to review.

Work Order for [REDACTED] Electrical issue

Review Program Review (Conducted 3-23-2018)

Mark IACUC training as Acceptable.

Review IACUC member training SOP [REDACTED]

Motion to accept [REDACTED] Seconded [REDACTED]

New OSHA form [REDACTED]

Adjournment: Meeting Adjourned @ 11:48 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday October 4, 2018

Call To Order: Meeting called to order @ 11:02 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]
[REDACTED]

Absent: [REDACTED], Jim Scott, [REDACTED]

Minutes Approval: Minutes of September 13, 2018, Motion to approve [REDACTED]
Seconded [REDACTED] Motion Carried

Discussions:

Review Facilities Inspections

Conduct Program Review

Discuss Review of SOPs

Update on Occupational Health Assessment Program

Adjournment: Meeting Adjourned @ 11:33 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday September 13, 2018

Call To Order: Meeting called to order @ 11:06 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]
[REDACTED]

Absent: [REDACTED], Jim Scott, [REDACTED]
[REDACTED]

Minutes Approval:

Minutes of April 5th, 2018

Motion to approve [REDACTED] Seconded [REDACTED] Motion carried

Discussions:

Meeting schedule First Thursday of the Month

Rabbit Protocol Modification "Change of PI"

Motion to Approve [REDACTED] Seconded [REDACTED] Motion Carried

Switch Chair for Pigeon protocol to [REDACTED]

Differential Value and Equivalence in Pigeons Protocol

Motion to Approve [REDACTED] Seconded [REDACTED] Motion Carried

Changing to Simultaneous Presentations with spelling modification and signatures

Chair transferred back to Janice Weaver

Discussion of Vet Issue

Janice will follow up with Jim and then possibly [REDACTED]

Schedule Semi-annual Inspection

Friday September 21st [REDACTED] Janice 12pm [REDACTED]

Schedule Program Review

Full IACUC Committee Review with comments at next scheduled meeting

Reminders/Announcements:

This is the year preceding AAALAC Visit. Please prepare for AAALAC

Adjournment: Meeting Adjourned @ 11:36 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday December 6, 2018

Call To Order: Meeting called to order @ 11:02 by Chair Janice Weaver

Present: Janice Weaver [REDACTED]

Jim Scott, [REDACTED]

Absent: [REDACTED]

Minutes Approval: Minutes of October 4, 2018, Motion to approve [REDACTED]
, Seconded [REDACTED] Motion Carried

Discussions:

IACUC ANNUAL TRAINING "How should the IACUC balance an efficient approval process with minimizing risk" Jerald Silverman, DVM From Lab Animal Magazine

AAALAC Discussion regarding cost/value

Adjournment: Meeting Adjourned @ 11:51 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday February 7, 2019

Call To Order: Meeting called to order @ 11:04 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED]

[REDACTED] Jim Scott, [REDACTED]

Absent: [REDACTED]

Guests:

Minutes Approval: Minutes of December 6, 2018, Motion to approve [REDACTED]
, Seconded [REDACTED] Motion Carried

Discussions:

New Protocols Review

Mark Recapture Fish BIOL 442 Motion to Approve [REDACTED] Seconded [REDACTED]

Times interval between capture and maximum number of times of recapture, Collectors permit attached.

Motion Carried

Transfer of Chair ship to [REDACTED]

Rat Laboratory Exercises for PSYC 410(Behavior Modification) and PSYC 370(Principles of Learning)

Motion to Approve [REDACTED], Seconded [REDACTED] Motion Carried

Transfer of Chair ship back to Janice Weaver

Theater group requested use for live animals in a production. IACUC consensus was to recommend that they use stuffed animals. Theater group agreed

Reminders/Announcements:

Adjournment: Meeting Adjourned @ 11:45 by Chair, Janice Weaver

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

MINUTES OF Thursday March 7, 2019

Call To Order: Meeting called to order @ 11:07 by Chair Janice Weaver

Present: Janice Weaver, [REDACTED] Jim Scott,
[REDACTED]

Absent: [REDACTED]

Minutes Approval: Minutes of February 7, 2019, Motion to approve [REDACTED]
, Seconded [REDACTED] Motion Carried

Discussions:

Semi-annual review of facilities Friday March 22nd [REDACTED] Jim Scott, Janice Weaver

Semi-annual review of Program Scheduled for next Meeting April 4th, 2019

Adjournment: Meeting Adjourned @ 11:25 by Chair, Janice Weaver

Instructions

This Protocol Application form shall be submitted to the Institutional Animal Care and Use Committee (IACUC) by all Principle Investigators (PI) prior to:

1. The use of any animal that will be held on the University's property for more than 12 hours;
2. The use of an animal for anything other than typical pet treatment and/or
3. A field study involving the trapping or handling of animals.

A protocol using animals covered by United States Department of Agriculture (USDA) shall submit a full protocol annually. If changes are needed to an approved protocol use the Modification to an Approved Protocol form. The IACUC will notify the PI of the application results.

(This is a fillable Word document form. However, it does not accept electronic signatures. Mac users to mark check boxes, place cursor in front of the check box, hold down the space bar and x to place an x in the check box.)

Protocol Information

Protocol No.: Click here to enter text.

Approval Date: Click here to enter a date.

Start Date: Click here to enter a date. **End Date:** Click here to enter a date.

Protocol Title: Click here to enter text.

Principal Investigators and Staff Information

Role on Protocol Identify the role each individual has associated with this protocol	Information
☐ PI ☐ Investigator Tech Staff ☐ Co-PI ☐ Student	Name: Click here to enter text. CITI Membership ID: Click here to enter text. Department: Click here to enter text. Contact Number: Click here to enter text.
☐ PI ☐ Investigator Tech Staff ☐ Co-PI ☐ Student	Name: Click here to enter text. CITI Membership ID: Click here to enter text. Department: Click here to enter text. Contact Number: Click here to enter text.
☐ PI ☐ Investigator Tech Staff ☐ Co-PI ☐ Student	Name: Click here to enter text. CITI Membership ID: Click here to enter text. Department: Click here to enter text. Contact Number: Click here to enter text.
☐ PI ☐ Investigator Tech Staff ☐ Co-PI ☐ Student	Name: Click here to enter text. CITI Membership ID: Click here to enter text. Department: Click here to enter text. Contact Number: Click here to enter text.

Type of Project (Select ALL that apply)

Identify the area of study this protocol will serve.

- ☐ Research; *Complete this form and all applicable appendices*
- ☐ Teaching; *Complete this form and all applicable appendices*
- ☐ Field Study; *Complete this form and all applicable appendices*
- ☐ Breeding Colony ONLY
-

Animals

Identify the animals involved with this protocol.

Species/Strain	Age or Weight	No. of Females	No. of Males	Total	Enter Pain*Category
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	

Pain Categories (Complete Appendix 1 for C or D pain categories)

Identify the pain category.

Pain Category	Descriptions
B	Breeding or Holding Colony Protocols – no pain or distress
C	No more than momentary or slight pain or distress; and no use of pain-relieving drugs, or no pain or distress. For example: euthanized for tissues; just observed under normal conditions; positive reward projects; routine procedures; injections; and blood sampling.
D	Pain or distress appropriately relieved with anesthetics, analgesics and/or tranquilizers or other methods of relieving pain or distress.
E	Pain or distress, or potential pain or distress, that is not relieved with anesthetics, analgesics and/or tranquilizer drugs or other methods for relieving pain or distress

In order for a category C or D protocol to be approved, appropriate analgesia/anesthesia must be used if the animal will experience more than momentary slight pain. Momentary slight pain is defined as no greater than the level and duration of pain associated with routine injections.

Surgery Details

Will surgical procedures be performed in this study? ☐ Yes ☐ No

If 'Yes', complete Appendix 5.

Housing and Use Requirements

Where will animals be housed? Click here to enter text.

Where will animals be located during exposure? (check all that apply)

☐ Standard Housing

Bldg: Click here to enter text.

Room: Click here to enter text.

☐ Chemical Fume hood

Bldg: Click here to enter text.

Room: Click here to enter text.

☐ Bio safety cabinet

Bldg: Click here to enter text.

Room: Click here to enter text.

☐ Animal Care Facility

Bldg: Click here to enter text.

Room: Click here to enter text.

☐ In PI's lab

Bldg: Click here to enter text.

Room: Click here to enter text.

Will animals be used in this room for more than 12 hours? ☐ Yes ☐ No

Source of animals: ☐ FSU Animal Facilities ☐ Outside Vendor: Click here to enter text.

Special instructions for maintenance or purchase*: Click here to enter text.

***All rodents and rabbits should be specific pathogen free (SPF).** Should investigators require non-SPF rodents or rabbits, contact Animal Care at [REDACTED] to discuss health status and/or quarantine requirements.

Identify non-SPF potential hazards including housing and handling requirements.

Click here to enter text.

Protocol Details

Purpose of the research/teaching plan: In layperson's language, describe the overall purpose of the protocol.

Click here to enter text.

Scientific background: For research protocol ONLY, describe the scientific basis of the research protocol.

Click here to enter text.

Rationale for using the animals: Describe the rationale for using live animals in this protocol? Include an explanation of why alternatives to the use of animals, such as *in vitro* methods, computer models, or cell culture are not appropriate.

[Click here to enter text.](#)

Justification of species/strain: Describe the scientific reasons for selecting the species/strain for the proposed protocol?

[Click here to enter text.](#)

Study Design: Describe in detail your study design involving the use of experimental animals. Include detail as appropriate concerning, the anesthetics/analgesics to be used, procedures to be performed, post-procedural care, duration of experiment including methods of euthanasia, study endpoints, etc. In appendix 6, describe all hazardous material used. It is not necessary to include a detailed surgical description in this section (see Appendix 5). However, an indication of the procedure in the context of the study design should be included in this section.

[Click here to enter text.](#)

Justification of numbers: Provide a justification for the number of animals to be used in the proposed protocol. Investigators are strongly encouraged to include a table or flow chart if large numbers or if multiple groups will be used.

[Click here to enter text.](#)

Personnel and Qualification Details

Provide the following information for ALL personnel who will be handling and using animals in this protocol. ***If more than 3 individuals, attach separate page(s) as needed***

Person 1

Full name: [Click here to enter text.](#)

Email: [Click here to enter text.](#)

Degree: [Click here to enter text.](#)

Years of Experience: [Click here to enter text.](#)

Procedures: [Click here to enter text.](#)

Training: [Click here to enter text.](#)

Qualifications: [Click here to enter text.](#)

Person 2

Full name: [Click here to enter text.](#)

Email: [Click here to enter text.](#)

Degree: [Click here to enter text.](#)

Years of Experience: [Click here to enter text.](#)

Procedures: [Click here to enter text.](#)

Training: [Click here to enter text.](#)

Qualifications: [Click here to enter text.](#)

Person 3

Full name: Click here to enter text.

Email: Click here to enter text.

Degree: Click here to enter text.

Years of Experience: Click here to enter text.

Procedures: Click here to enter text.

Training: Click here to enter text.

Qualifications: Click here to enter text.

Disposition of Sick or Dead animals (Check ALL that apply)

Sick Animals	Dead Animals
☐ Call Investigator ☐ Euthanize ☐ Veterinarian to treat ☐ Other (specify): Click here to enter text.	☐ Call Investigator ☐ Discard ☐ Save, freeze ☐ Necropsy ☐ Refrigerate ☐ Other (specify): Click here to enter text.

Euthanasia Details

List by species all methods to be used, include dose and route of administration. **If any methods other than those classified as Acceptable by the American Veterinary Medical Association are to be used, supply the additional requested information.*

Euthanasia

Species/Strain	Euthanasia Method List all that apply	Dose	Route of Administration	Other Methods as Acceptable by American Veterinary Medical Association
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.

Describe the method of euthanasia if it is not classified as Acceptable by the AVMA. (Justify the use of any not classified methods.)[Click here to enter text.](#)

Describe and justify the disposition of animals other than by euthanasia, including their use in additional experimental studies, adoption, etc. [Click here to enter text.](#)

Breeding Colony Details

Will a breeding colony be required for this protocol? ☐ Yes ☐ No

If 'Yes', complete Appendix 4 or see Breeding Protocol.

Use of Compounds, Organisms, Biologicals, Anesthetic Gases, Recombinant DNA, and Medical Materials.

Mark any of the following materials that will be used or generated during the protocol. *For any materials marked, complete Appendix 6.*

- | | |
|--|--|
| ☐ Carcinogens | ☐ Anesthetic gases |
| ☐ Biohazard | ☐ Liquid anesthetics (ex. MS-222) |
| ☐ Chemical Hazard | ☐ Expired Medical Materials |
| ☐ Recombinant DNA | ☐ Non-Pharmaceutical Grade |
| ☐ Murine Biologicals (tumor lines, serum, cell lines, etc.) | Medication |

Literature Search Details

Provide a literature search demonstrating that appropriate alternatives such as less sentient animal models, computer models, tissue cultures, and/or refinement of techniques were not available and/or appropriate for this protocol. Typical databases consulted include, but are not limited to, Biological Abstracts, Index Medicus, PubMed, Current Research Information Service (CRIS), AGRICOLA, and the Animal Welfare Information Center (AWIC).

Databases Used: [Click here to enter text.](#)

Date of Search: Choose a building block.

Years Covered by Search: [Click here to enter text.](#)

Key Words/Search Terms Used: [Click here to enter text.](#)

Were Alternatives found? ☐ Yes ☐ No

If alternatives were found, justify why they are not being used. Additional relevant sources that may be supportive of your efforts are scientific meetings, scientific discussions, consultation with veterinarians, and federal law or other legal guidelines. The narrative should be such that the IACUC can readily assess whether the search topics were appropriate and whether the search was thorough. [Click here to enter text.](#)

Funding Support Details

For multiple grants, complete appendix 8

Funding Agency: Click here to enter text.

Account Number: Click here to enter text.

Funding Status: ☐Funded ☐Pending ☐Not Submitted Yet

Assurances Details

This project does not unnecessarily duplicate previous experiments and will be performed in compliance with the Public Health Service (PHS) Policy on Humane care and Use of Laboratory Animals, USDA rules, and Ferris State Academic Affairs' regulations governing the use of live vertebrate animals.

☐ Yes ☐ No

I have designed my experimental protocol with careful attention to using the appropriate number of animals and have considered the appropriate statistical methods used to reduce the number of animals in the study.

☐ Yes ☐ No

I have considered the use of alternatives, including the use of other species and/or the use of non-animal models, and have found them to be unacceptable.

☐ Yes ☐ No

I understand that I am responsible for all work conducted under this protocol; all personnel are or will be properly trained and certified to handle and/or use the animals indicated in this protocol.

☐ Yes ☐ No

I affirm the accuracy of all the information provided in this protocol and the appendices.

☐ Yes ☐ No

I agree that animal usage cannot start until the following has occurred, in listed order below.

- 1) The IACUC has approved this protocol application and appendices that describe the use of animal.
- 2) A specific hazard assessment has been conducted by the Animal Care Coordinator, Academic Affairs Director of Laboratory Safety, and Principle Investigator.
- 3) All personnel associated with the protocol have received an Animal Care Occupational Assessment, have been notified of the finding and received training applicable with identified hazard exposures

Protocol Name: Click here to enter text.

Principal Investigator's Signature

I affirm that any variance from what is written in this protocol constitutes a violation of Animal Welfare guidelines. Any revisions to animal care and use procedures in this protocol will be forwarded promptly to the IACUC for review. Revisions to protocols will not be implemented until IACUC approval has been obtained.

Signature:

Date:

Veterinarian's Signature

Signature of FSU veterinarian or designee signifies that s/he has been consulted during the preparation of this protocol, and s/he will supervise the medical care of the animals covered in this protocol.

Signature:

Date:

Animal Facilities Manager's Signature

Signature of the manager of the FSU Animal Facility or designee signifies that s/he has been consulted concerning the housing of the animals in the facility and s/he will supervise the care of the animals.

Signature:

Date:

Academic Affairs Director of Laboratory Safety's Signature

Signature of Director of Laboratory Safety signifies that s/he has reviewed all documentation provided. A physical review of the housing or use location for the purpose of conducting a hazard assessment, will be performed on an as needed basis.

Signature:

Date:

Dean, Department Head or Chair's Signature

As dean or department head, I have been informed as to the nature of this protocol, and have no objections to the approval of this protocol.

Signature:

Date:

Appendix Details

Indicate all appendices that are included with protocol by checking the applicable boxes

- ☐ Appendix 1; Pain and Distress
 - ☐ Appendix 2; Teaching
 - ☐ Appendix 3; Field Study
 - ☐ Appendix 4; Maintenance of Breeding Colony
 - ☐ Appendix 5; Surgical Procedures
 - ☐ Appendix 6; Hazardous Materials
 - ☐ Appendix 7; Modification to an Approved Protocol
-

Appendix 1 – Pain and Distress

Instructions

Provide information concerning the pain and distress that might be experienced by the animal and the methods that will be used to control it.

(This is a fillable Word document form. Mac users to mark check boxes, place cursor in front of the check box, hold down the space bar and x to place an x in the check box.)

Protocol Information

Protocol No: Click here to enter text. **Approval Date:** Click here to enter a date.

Start Date: Click here to enter a date. **End Date:** Click here to enter a date.

Protocol Title: Click here to enter text.

Principle Investigator: Click here to enter text.

Procedures to be Performed

The following procedures are considered to produce minimal or transient pain when performed by competent individuals using recognized material. Please indicate the methods and/or substances used and only where a procedure will be performed, check whether anesthetics will be needed to perform the procedure.

Procedure	Methods/Substances to be used	Will anesthetics be used?
Blood Collection	Click here to enter text.	☐ Yes ☐ No
Catheterization	Click here to enter text.	☐ Yes ☐ No
Fluid and electrolyte therapy	Click here to enter text.	☐ Yes ☐ No
Food/water restriction	Click here to enter text.	☐ Yes ☐ No
Gastric gavage	Click here to enter text.	☐ Yes ☐ No
Immunization	Click here to enter text.	☐ Yes ☐ No
Oral medication	Click here to enter text.	☐ Yes ☐ No
Tail tipping	Click here to enter text.	☐ Yes ☐ No
Collection of other biological samples	Click here to enter text.	☐ Yes ☐ No
Other treatment (specify)	Click here to enter text.	☐ Yes ☐ No

Procedures Requiring Pain Control

List of tranquilizers, analgesics, and or anesthetics to be used.

Species	Drug	Dose	Route
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.

Procedures Causing Prolonged Discomfort

Will the procedures to be performed cause more than minimal or transient pain, or involve food/water restriction?

☐ Yes ☐ No

If 'Yes', provide a description of the procedures, including monitoring and methods to minimize pain.

Click here to enter text.

Will the procedures to be performed require prolonged restraint in the conscious animal?

☐ Yes ☐ No

If 'Yes', provide a description (include methods, acclimation, duration, and monitoring of restraint) and justify use of procedure.

Will the procedures cause significant natural or experimental disease or pathologic conditions (e.g., tumor-bearing mice, experiments that increase the risk of illness, etc.), which would be maintained for an extended period of time?

☐ Yes ☐ No

Procedures Causing Unalleviated Pain or Distress

Will the procedures cause or serve as model systems for unalleviated pain or distress?

☐ Yes ☐ No

List the animals to be subjected to unalleviated pain or distress

Species	Number
Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.

Instructions

Provide information concerning the teaching approach that will be used with this protocol.

(This is a fillable Word document form. Mac users to mark check boxes, place cursor in front of the check box, hold down the space bar and x to place an x in the check box.)

Protocol Information

Protocol No. Click here to enter text. **Approval Date:** Click here to enter a date.

Start Date: Click here to enter a date. **End Date:** Click here to enter a date.

Protocol Title: Click here to enter text.

Principle Investigator: Click here to enter text.

Course Information

Course Number: Click here to enter text.

Course Title: Click here to enter text.

Number of sections: Click here to enter text.

Number of students: Click here to enter text.

Animal Strain: Click here to enter text.

Number of animals/section: Click here to enter text.

Number of students/animal: Click here to enter text.

Will this teaching protocol involve:

- ☐ Demonstration only (no student contact)
- ☐ Students will have only casual contact with animals. (No direct contact with animal, animal traps, and/or equipment associated with animals.)
- ☐ Students will have direct contact with animals (will handle animals, animal tissues, and/or equipment associated with animals). *If there is direct contact with animals, the professor will supply each student with the Occupational Health form and notify Birkam Health Center.*
- ☐ Preparation for video

Identify the alternative instructional approaches you have considered and/or using to augment this exercise.

Click here to enter text.

Justify why the use of live animals is preferable to the alternatives indicated.

Click here to enter text.

Instructions

The IACUC recognizes that it is not always possible to predict at the initiation of field studies all potential observation or collection sites. The PI must inform the IACUC of new location opportunities as they develop by submitting Appendix 7, Modification to an Approved Protocol form.

(This is a fillable Word document form. Mac users to mark check boxes, place cursor in front of the check box, hold down the space bar and x to place an x in the check box.)

Protocol Information

Protocol No.: Click here to enter text. Approval Date: Click here to enter text.

Start Date: Click here to enter a date. End Date: Click here to enter a date.

Protocol Title: Click here to enter text.

Principle Investigator: Click here to enter text.

Off-Campus Study Location Detail

Describe below the anticipated off-campus location(s) including landmarks or nearest cross roads where the field study will be performed.

Click here to enter text.

Permits Details

Have you applied for the necessary regulatory permitting for all the animals under study, including whether they are considered endangered or threatened, and will obtain all applicable permits before initiating the study?

☐ Yes ☐ No

A copy of each applicable permit must remain on file in the office of the Animal Care Facility.

Occupational Health

Do you have knowledge or an awareness of all zoonotic diseases that may be contracted from wild animals while working on this study, including, but not limited to, rabies, Hantavirus, and avian flu?

☐ Yes ☐ No

Identify all zoonotic diseases (and list references on the identified zoonotic diseases):

Click here to enter text.

Who may have the potential of zoonotic exposure?

☐ PI/Faculty/Staff/Laboratory Manager

☐ Students

Will this exposure be direct?

☐ Yes ☐ No

Will this exposure be casual?

☐ Yes ☐ No

Study Design Detail

Are the species to be used in this protocol endangered?

☐ Yes ☐ No

Does the study involve alterations in habitat?

☐ Yes ☐ No

If 'Yes', how will this affect the species being studied? [Click here to enter text.](#)

Will this study consist only of unobtrusive observation of free-ranging animals?

☐ Yes ☐ No

If 'Yes', stop here. This appendix is complete.

Capture and Restraint Detail

Will capture and restraint be involved in this protocol?

☐ Yes ☐ No

Briefly describe the technique(s) of animal capture, including the type of trap or caging to be used. [Click here to enter text.](#)

Will the method of capture or restraint cause more than momentary discomfort, pain, or distress?

☐ Yes ☐ No

If 'Yes', describe the methods to be used to alleviate pain or distress. If tranquilization, analgesia, or anesthesia will be used, list drug, dose, and route of administration.

[Click here to enter text.](#)

How long will animals remain in the cage or trap? [Click here to enter text.](#)

Does this duration put the animal at risk of dehydration, self-mutilation or other forms of distress?

☐ Yes ☐ No

If 'Yes', what methods will be used to alleviate discomfort.

How will animals be restrained when removed from traps or at other times during the course of the study? [Click here to enter text.](#)

Are species other than the target species likely to be caught? ☐ Yes ☐ No

If 'Yes', what species and what will be done about them? [Click here to enter text.](#)

Will the animals be euthanized **immediately** at the moment of capture?

☐ Yes ☐ No

If 'Yes', please describe the method to be used; where appropriate, include dose and route of administration. [Click here to enter text.](#)

Will captured live animals ever be transported back to the University?

☐ Yes ☐ No

If 'Yes' please contact Animal Care at (231)591-2246 to discuss health status and quarantine requirements.

Marking the Animal

After capture, will animals need to be identified or marked in some manner?

☐ Yes ☐ No

If 'Yes', describe the marking technique that will be used, the nature and duration of restraint required during marking, the amount of tissue affected by the technique, and whether the method of marking will cause animals momentary or prolonged distress. [Click here to enter text.](#)

After marking, will the animals be at greater than normal risk of infection, predation or have reduced reproductive fitness?

☐ Yes ☐ No

If 'Yes' please justify why this marking technique must be used, and why other techniques that have less impact on the animal cannot be used. [Click here to enter text.](#)

Are specimens, (tissues, blood, etc.) collected from the captured animals prior to their release?

☐ Yes ☐ No

If 'Yes', please describe what specimens will be collected, the method used to collect them, and methods used to minimize pain and distress to the animal during the procedure. [Click here to enter text.](#)

Are test substances, other than those used for marking, tranquilization, analgesia, or anesthesia, administered to the animals prior to their release?

☐ Yes ☐ No

If 'Yes', please indicate what substance(s) will be administered, the dose, and the route of administration. [Click here to enter text.](#)

Study Endpoint Detail

Does animal use end with the release of the animals, with no planned recapture?

☐ Yes ☐ No

Will the same marked animals be recaptured again one or more times?

☐ Yes ☐ No

If 'Yes', please indicate the anticipated number of times that the animals will need to be recaptured, the time interval between each recapture, and whether specimens will be collected, or test substances will be administered during each episode of restraint. [Click here to enter text.](#)

Will the animals be euthanized at the end of this study?

☐ Yes ☐ No

If 'Yes', please describe the method to be used; where appropriate, include dose and route of administration. [Click here to enter text.](#)

Appendix 4 – Maintenance of Breeding Colony**Instructions**

Provide information concerning the approach used for maintaining the breeding colony. *(This is a fillable Word document form. Mac users to mark check boxes, place cursor in front of the check box, hold down the space bar and x to place an x in the check box.)*

Protocol Information

Protocol No.: Click here to enter text. Approval Date: Click here to enter a date.

Purpose

Describe the reason(s) for developing and maintaining a breeding colony.

Click here to enter text.

Characteristics

List the species, stock or strain, and genotype (or standard genetic nomenclature, if known) of the breeding colony.

Species	Stock/Strain	Genotype/Genetic Nomenclature
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.

Breeding Scheme

☐ Monogamous

☐ Harem

If harem breeding, how many females per male? Click here to enter text.

☐ Inbred

☐ Parent/Offspring

☐ Brother/Sister

☐ Outbred

☐ Line bred (selection for specific trait, as needed)

☐ Crossbred

Strains to be crossed: Click here to enter text.

Additional Requirements

☐ Timed mating

Age of pups: Click here to enter text.

Date needed for project: Click here to enter a date.

☐ Separate housing

☐ Male removed after parturition

☐ Male removed hours after post-partum copulation

☐ Male removed hours after initial copulation

For any additional requirements not listed above, please describe: [Click here to enter text.](#)

Breeding Colony Oversight

Indicate who will be responsible for breeding, monitoring, weaning, and records.

[Click here to enter text.](#)

Phenotype

Will these animals have characteristics that will potentially cause them discomfort, pain, or distress?

☐ Yes ☐ No

If 'Yes', describe procedure for monitoring and methods to minimize pain or distress, or provide justification of why intervention conflicts with the purpose of the colony.

[Click here to enter text.](#)

Disposition of Offspring

Euthanize offspring with genotypes not of interest

☐ Yes ☐ No

If 'Yes', indicate method of euthanasia, including dose and route if a chemical agent.

Disposition of Sick or Dead Animals

Sick Animals	Dead Animals
☐ Call investigator ☐ Euthanize ☐ Veterinarian to treat ☐ Other (specify): Click here to enter text.	☐ Call investigator ☐ Discard ☐ Save, freeze ☐ Necropsy ☐ Refrigerate ☐ Other (specify): Click here to enter text.

If 'Euthanize' was checked, indicate method of euthanasia, including dose and route if a chemical agent.

Species/Strain	Euthanasia Method List all that apply	Dose	Route of Administration	Other Methods as Acceptable by American Veterinary Medical Association
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.

Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
---------------------------	---------------------------	---------------------------	---------------------------	---------------------------

Instructions

Provide information concerning the surgical procedures used in this protocol.

(This is a fillable Word document form. Mac users to mark check boxes, place cursor in front of the check box, hold down the space bar and x to place an x in the check box.)

Protocol Information

Protocol No.: Click here to enter text. **Approval Date:** Click here to enter a date.

Start Date: Click here to enter a date. **End Date:** Click here to enter a date.

Protocol Title: Click here to enter text.

Principle Investigator: Click here to enter text.

Category of Surgery (Check all that apply)

☐ Non-Survival

☐ Survival

☐ Multiple

If 'multiple' and 'survival' were checked, include a justification of the intended multiple survival procedures. Click here to enter text.

Surgical Description

Provide a description of the preparation of the skin at the surgical/incision site.

Click here to enter text.

Provide a description of the surgical procedures, including anesthesia, the methods used to monitor the state of anesthesia, suture material and skin closures.

Click here to enter text.

Indicate which of the following aseptic techniques will be used

☐ Sterile instruments

☐ Surgeon scrub

☐ Gloves

☐ Gown

☐ Mask

☐ Cap

Method of instrument sterilization: Click here to enter text.

If chemical, indicate contact time: Click here to enter text.

If chemical, describe the process that will be used to eliminate chemical. Click here to enter text.

Post-Surgical Care and Monitoring

Provide a description of the post-surgical care and monitoring, including use of post-operative analgesics and suture/wound clip removal.

Click here to enter text.

If post-operative analgesics will not be used, then a justification as to why they are not necessary and/or appropriate must be provided.

Click here to enter text.

Pain Control

List of tranquilizers, analgesics, and anesthetics to be used

Species	Drug	Dose	Route
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.

Instructions

Use this form to document the review of any hazardous materials used in IACUC protocol.

(This is a fillable Word document form. Mac users to mark check boxes, place cursor in front of the check box, hold down the space bar and x to place an x in the check box.)

Protocol Information

Protocol No.: Click here to enter text. Approval Date: Click here to enter a date.

Start Date: Click here to enter a date. End Date: Click here to enter a date.

Project Title: Click here to enter text.

Principle Investigator: Click here to enter text.

Identify Hazardous Materials

Identify all hazardous materials. Check all that apply for this protocol. Complete the appropriate sections of this form.

- ☐ Radioisotope (Complete section 1)
 - ☐ Chemical (Complete section 2)
 - ☐ Infectious (Complete section 3)
 - ☐ Device/instrument (Complete section 4)
 - ☐ Pharmaceutical (Complete section 5)
 - ☐ Waste Disposal Arrangements (Complete section 6 for all chemical, biological, and radioisotope wastes streams.)
-

Section 1: Radioisotope

Will radioisotopes be used? ☐ Yes ☐ No

Name of isotope: Click here to enter text. Dose (activity) per animal (uCi): Click here to enter text.

Name of parent compound: Click here to enter text.

Half-life – Physical: Click here to enter text. Route of Administration: Click here to enter text.

Half-life – Biological: Click here to enter text. Duration of Exposure: Click here to enter text. Duration of Care: Click here to enter text.

Have you been issued an authorization by the Ferris State University Radiation Safety Officer to use this isotope? ☐ Yes ☐ No ☐ Application submitted, awaiting approval

Who will be involved in the care of radioactive animals? List names
Click here to enter text.

Type of Radiation used: ☐ Alpha ☐ Gamma Beta: ☐ Soft ☐ Hard

Route of Excretion:

- ☐ Respiratory
- ☐ Milk
- ☐ Feces

- ☐ Saliva
☐ Other Click here to enter text.
☐ Not Excreted

Rate: Click here to enter text. Percent Excreted: Click here to enter text.

Section 2: Chemicals

Will Chemicals be used? ☐ Yes ☐ No

Identify all chemicals which are used in this protocol.

Chemical Name No formulas or abbreviations	Vendor Name	Product Number	Indicate SDS is included with this appendix
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.

Preparation of the dose

What will be combined with the chemical to make the dose (food, water, alcohol, etc.)?

Click here to enter text.

☐ Used as provided by manufacturer

Will the dose be prepared in a chemical fume hood? ☐ Yes ☐ No, explain: Click here to enter text.

Explain the administration of the experimental chemical

Dose(s): Click here to enter text. Route of administration: Click here to enter text.

Frequency of dose: Click here to enter text. How many days will the chemical be administered? Click here to enter text.

Is the chemical or any hazardous metabolite expected to be released after dosing through any of the following? (check all that apply)

☐ Urine ☐ Skin ☐ Expired Air ☐ Feces ☐ Not given in literature ☐ None will be released

Personal Protective Equipment (PPE)

PPE needed for personnel who prepare the chemical for dosing (check all that apply):

☐ Gloves ☐ Shoe Covers ☐ Gown ☐ Mask ☐ Safety Goggles ☐ Respirator* ☐ Other: Click here to enter text.

If gloves are to be worn, what type: Click here to enter text.

Latex is not recommended for all chemical hazards. Please use a glove manufacturer's chart to determine the best glove.

PPE needed for personnel who **administer** hazardous chemicals (check all that apply):

☐ Gloves ☐ Shoe Covers ☐ Gown ☐ Mask ☐ Safety Goggles ☐ Respirator* ☐ Other: Click here to enter text.

If gloves are to be worn, what type: Click here to enter text.

Latex is not recommended for all chemical hazards. Please use a glove manufacturer's chart to determine the best glove.

PPE needed for **animal care staff** attending the exposed animals (check all that apply):

☐ Gloves ☐ Shoe Covers ☐ Gown ☐ Mask ☐ Safety Goggles ☐ Respirator* ☐ Other: Click here to enter text.

If gloves are to be worn, what type: Click here to enter text.

Latex is not recommended for all chemical hazards. Please use a glove manufacturer's chart to determine the best glove.

***In order to wear a respirator the person must be medically qualified, fit-tested and trained. Consult with the Academic Affairs's Director of Laboratory Safety prior to wearing a respirator.**

Section 3: Infectious

Will infectious material be used? ☐ Yes ☐ No

Identify the infectious agent(s) and/or tissue of human/animal origin.

Agent Name: Click here to enter text.

Immunization/treatment: ☐ Yes ☐ No ☐ Not applicable

If 'Yes', list: Click here to enter text.

CDC Biosafety Level: ☐ 1 ☐ 2

Infectious for: ☐ Human ☐ Animal

Indicate whether transmission of infectious agent may occur.

Transmission from animal to animal: ☐ Yes ☐ No ☐ Not Known

Transmission from animal to human: ☐ Yes ☐ No ☐ Not Known

Environmental transmission (to feral population): ☐ Yes ☐ No ☐ Not Known

Transmission by natural vector: ☐ Yes ☐ No ☐ Not Known

If yes, please list: Click here to enter text.

Route of transmission (check all that apply):

By Urine: ☐ Yes ☐ No ☐ Not Known

By Feces: ☐ Yes ☐ No ☐ Not Known

By Saliva: ☐ Yes ☐ No ☐ Not Known

Tissue of Animal Origin (explain): Click here to enter text.

Tissue of Human Origin (explain): Click here to enter text.

Blood Draw:

☐ Retro orbital bleed

☐ Tail Vein

☐ Other: Click here to enter text.

Necropsy:

☐ Yes

☐ No

If yes, what tissues will be harvested/collected: [Click here to enter text.](#)

Will the project involve working with arthropods or insects? ☐ Yes ☐ No

If yes, list species: [Click here to enter text.](#)

How will the pathogen be inoculated into arthropod/insect? [Click here to enter text.](#)

Will Animal Care be involved in the care of infectious animals? ☐ Yes ☐ No

Section 4: Devices/Instrumentation

Describe or list the devices/instrumentation that will be used in this protocol. [Click here to enter text.](#)

Section 5: Pharmaceuticals

Is an FDA approved drug available for clinical use (human or veterinarian)?

☐ Yes ☐ No

If a non-pharmaceutical product will be used, it must be compounded from the highest available quality of non-pharmaceutical product. Provide scientific justification.

[Click here to enter text.](#)

Is/are clinical formulation appropriate for experimental use?

☐ Yes ☐ No

Supply Clinical Formulation

[Click here to enter text.](#)

Can the clinical formulations be compounded into one appropriate for experimental use?

☐ Yes ☐ No

Is the drug compounded from highest grade non-pharmaceutical product?

☐ Yes ☐ No

Supply SDS

Section 6: Waste Disposal Arrangements

Decontamination Procedures

Describe the procedures for decontaminating surfaces contaminated with the chemicals, radioisotopes, biological and/or infectious materials. Including counters, cages, etc.

[Click here to enter text.](#)

Disposal of contaminated items and chemicals

Describe the procedures of disposing of contaminated items listed below

Carcasses: [Click here to enter text.](#)

Bedding: [Click here to enter text.](#)

Other items: [Click here to enter text.](#)

Describe the procedures for disposing of chemical remaining after doses have been administered.

[Click here to enter text.](#)

Emergency Procedures

Medical Consultation

Describe the procedures to be followed if an **accidental exposure** to this chemical occurs to personnel (e.g., researchers, animal care staff).

Immediate action: Click here to enter text.

Where to take for medical attention: Click here to enter text.

What information should be taken for medical attention: Click here to enter text. Describe the procedures to be followed if a **spill** of the chemical occurs. It is assumed that this will most likely happen when the dose is being prepared or when the dose is being transported to the location of the animal(s).

Location of spill clean-up materials

Bldg: Click here to enter text.

Room: Click here to enter text.

Location Within Room: Click here to enter text.

Procedure to prevent others from being exposed to the spill: Click here to enter text.

What PPE should be worn to clean-up spill? Click here to enter text.

Spill Clean-Up Procedures: Click here to enter text.

What should be done with contaminated clean-up materials? Click here to enter text.

What should be done if spill is too large to clean-up? Click here to enter text.

Power Outage Procedures

Describe the procedures to be followed in the event of a power outage. The plan shall include but not be limited to: Click here to enter text.

List of essential equipment that may be damaged by a power surge when power is restored, or that may have an automatic or default "ON" when power is restored. Click here to enter text.

Name of equipment/instrument	Laboratory room number and location	Identify if it may be damaged by power surge or has a automatic default to ON
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.

List all temperature sensitive specimens and approximate time period before specimens will adversely affected by temperature rise.

Name of Specimen	Location	Temperature range to maintain specimen	Temperature sensitive range, requiring immediate action
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.

List all the equipment/instruments that may contain the specimen (such as refrigerators, freezers)

Name of specimen contain	Equipment/instruments that contain specimen	What steps can be taken to monitor the specimen within the equipment/instrument (Freezers keep close)
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.

Describe the plan that will be used to keep the specimen safe. (Such as splitting the storage of the specimens, separating the specimens, storing the two separate collections in different locations not subject to the same power outage. Click here to enter text.

Identify any equipment/instruments in the PI's laboratory that have back-up power. Click here to enter text.

Develop a procedure that outlines what to do with specimen and how to shut down the laboratory or work area in the event of an emergency. Click here to enter text.

Appendix 7 – Modification to an Approved Protocol

Instructions

When changes are needed to an approved protocol use this Modification to an Approved Protocol Form *(This is a fillable Word document form. However, it does not accept electronic signatures. Mac users to mark check boxes, place the cursor in front of the check box, hold down the space bar and x to place an x in the check box.)*

Protocol Information

Protocol No.: Click here to enter text. **Approval Date:** Click here to enter a date.

Start Date: Click here to enter a date. **End Date:** Click here to enter a date.

Protocol Title: Click here to enter text.

Principle Investigator: Click here to enter text.

Nature of Modification

☐ Animal Species/Strain

☐ Transfer of Animals

☐ Other: Click here to enter text.

☐ Number of Animals

☐ Principle Investigator

☐ Experimental Procedures

☐ Personnel

☐ Animal Care Procedures

☐ Project Title

Summary of Requested Modification

Additional Animal Species/Strain

New Species Strain: Click here to enter text.

No. of Animals: Click here to enter text.

Provide a justification for the new species/strain, a complete description of how animals will be used and a justification for the number of animals requested. Indicate if this species will replace the species originally requested. (If new breeding colony will be established, complete appropriate section of Appendix 4.)

Click here to enter text.

Additional Animals of Approved Species

Species: Click here to enter text.

No. of Animals: Click here to enter text.

Provide a justification for the additional need for animals, and a justification for the number of animals requested. (If new breeding colony will be established, complete appropriate section of Appendix 4.)

Change in/or Addition of Experimental Procedures

Provide a detailed description of the changes requested and the need for these changes.

Click here to enter text.

Change in Animal Care Procedures

Provide a detailed description of the changes requested and the need for these changes.

Click here to enter text.

Transfer of Animals

Species: Click here to enter text.

No. of Animals: Click here to enter text.

Provide a reason for the transfer and the PI, institution, and/or protocol number to which animals will be transferred or from which the animals are being transferred.

Change in Principle Investigator

Name: Click here to enter text.

Department: Click here to enter text.

Email: Click here to enter text.

Campus Phone: Click here to enter text.

Campus Fax: Click here to enter text.

Campus Address: Click here to enter text.

Emergency Contact: Click here to enter text.

CITI Member ID.: Click here to enter text.

Funding Agency: Click here to enter text.

Has the funding agency been notified?

☐ Yes ☐ No

Change in Personnel

For all new personnel list the following:

Full Name Click here to enter text.

Email Click here to enter text.

Degree Click here to enter text.

Years of experience with species and procedure Click here to enter text.

Specific procedures or techniques they will be performing in this protocol Click here to enter text.

Training or expertise with species and procedures. If the individual is not trained, the personnel responsible for training must be indicated along with that person's expertise with the species/procedures if not listed on original protocol. Click here to enter text.

A copy of the final approved version of this protocol and any subsequently approved modifications involving the use of animals must be made available to all personnel added in this modification, and the Birkam Health Center Nursing Supervisor. The principle investigator must ensure that all personnel are familiar with the protocol.

Change in Project Title

New Title: Click here to enter text.

Reason for request: Click here to enter text.

Assurance

The principle investigator assures that the above information is accurate and no changes described in this modification will be initiated until approval is granted by the IACUC. In the event of an animal change, Birkam Health will be made aware of the animal species change and protocol health hazards. The PI will not reapply for the protocol until the Animal Care Occupation Assessment has been completed. The PI also assures that all other aspects of the protocol that are not described in this modification will be conducted as in the approved protocol or a previously approved modification.

Signature:

Date:

Annual Report to an Approved Protocol

Instructions

All principle investigators must submit an annual report for approved protocols to the IACUC and a new protocol is required after two annual reports.

Investigators who are using animals covered by the USDA must submit a full protocol annually.

Principle investigators with approved protocols who have significant changes must submit a new protocol or an annual report and Appendix 7 with a description of any and all desired changes and a justification for them. Approval must be granted before changes are implemented.

Principle investigators with approved protocols and no changes occurring must submit an annual report only.

(This is a fillable Word document form. However, it does not accept electronic signatures. Mac users to mark check boxes, place cursor in front of the check box, hold down the space bar and x to place an x in the check box.)

Protocol Information

Protocol No.: Click here to enter text. **Approval Date:** Click here to enter a date.

Start Date: Click here to enter a date. **End Date:** Click here to enter a date.

Protocol Title: Click here to enter text.

Principal Investigators and Staff Information

Role on Protocol Identify the role each individual has associated with this protocol	Information
☐ PI ☐ Investigator Tech Staff ☐ Co-PI ☐ Student	Name: Click here to enter text. IACUC Certification No.: Click here to enter text. Department: Click here to enter text. Contact Number: Click here to enter text.
☐ PI ☐ Investigator Tech Staff ☐ Co-PI ☐ Student	Name: Click here to enter text. IACUC Certification No.: Click here to enter text. Department: Click here to enter text. Contact Number: Click here to enter text.
☐ PI ☐ Investigator Tech Staff ☐ Co-PI ☐ Student	Name: Click here to enter text. IACUC Certification No.: Click here to enter text. Department: Click here to enter text. Contact Number: Click here to enter text.
☐ PI ☐ Investigator Tech Staff ☐ Co-PI ☐ Student	Name: Click here to enter text. IACUC Certification No.: Click here to enter text. Department: Click here to enter text. Contact Number: Click here to enter text.
☐ PI ☐ Investigator Tech Staff ☐ Co-PI ☐ Student	Name: Click here to enter text. IACUC Certification No.: Click here to enter text.

	Department: Click here to enter text. Contact Number: Click here to enter text.
--	--

Type of Project (Select ALL that apply)

- ☐ Research
☐ Teaching
☐ Field Study
☐ Breeding Colony ONLY

Animals

Identify the animals involved with this protocol.

Species/Strain	Age or Weight	No. of Females	No. of Males	Total	Pain*Category

Pain Categories

Pain Category	Description
B	Breeding or Holding Colony Protocols – no pain or distress
C	No more than momentary or slight pain or distress; and no use of pain relieving drugs, or no pain or distress. For example: euthanized for tissues; just observed under normal conditions; positive reward projects; routine procedures; injections; and blood sampling.
D	Pain or distress appropriately relieved with anesthetics, analgesics and/or tranquilizers or other methods of relieving pain or distress.
E	Pain or distress, or potential pain or distress, which is not relieved with anesthetics, analgesics and/or tranquilizer drugs or other methods for relieving pain or distress.

In order for a category C or D protocol to be approved, appropriate analgesia/anesthesia must be used if the animal will experience more than momentary slight pain. Momentary slight pain is defined as no greater than the level and duration of pain associated with routine injections.

***Complete Appendix 1 for C or D pain categories.**

Surgery Details Click here to enter text.

Principal Investigator's Signature

I understand that any variance from what is written in this protocol constitutes a violation of Animal Welfare guidelines. Any revisions to animal care and use procedures in this protocol will be forwarded promptly to the IACUC for review. Revisions to protocols will not be implemented until IACUC approval has been obtained.

Signature:

Date:

Veterinarian's Signature

Signature of FSU veterinarian or designee signifies that s/he has been consulted during the preparation of this protocol, and s/he will supervise the medical care of the animals covered in this protocol.

Signature:

Date:

Animal Facilities Manager's Signature

Signature of the manager of the FSU Animal Facility or designee signifies that s/he has been consulted concerning the housing of the animals in the facility and s/he will supervise the care of the animals.

Signature:

Date:

Academic Affairs Director of Laboratory Safety

Signature of Director of Laboratory Safety signifies that s/he has reviewed all documentation provided. A physical review of the housing or use location for the purpose of conducting a hazard assessment, will be performed on an as needed basis.

Signature:

Date:

Dean, Department Head or Chair's Signature

As dean or department head, I have been informed as to the nature of this protocol, and have no objections to the approval of this protocol.

Signature:

Date:

Memorandum to: Paul Blake, PhD, Institutional Official

From: Institutional Animal Care and Use Committee [REDACTED]
Janice Weaver, Chair

Subject: Semiannual Review of Animal Care and Use Program and
Inspection of Facilities

Date: October 07, 2016

This represents the Semiannual Report of the Institutional Animal Care and Use Committee (IACUC) to the Institutional Official, as required by the PHS Policy on Humane Care and Use of Laboratory Animals, as a condition of this institution's Animal Welfare Assurance with the Office of Laboratory Animal Welfare (OLAW), and the Animal Welfare Act and Animal Welfare Regulations, as applicable. Signatures of all members present at the October 6, 2016 regular scheduled meeting of IACUC appear on the signature sheet.

Review of Animal Care and Use Program

The semiannual review of the institution's animal care and use program was conducted on 9/30/2016, using the *Guide for the Care and Use of Laboratory Animals (Guide)*, and, as applicable, 9 CFR Chapter I, 2.31.

No deficiencies were noted.

Inspection of Animal Facilities

The IACUC inspected the animal facilities on September 23, 2016, using the *Guide*, and, as applicable, 9 CFR Chapter I, 2.31.

All minor deficiencies from the previous semiannual report on facilities have been addressed. The following minor deficiencies were found in the animal facilities:

- [REDACTED]
 - Eyewash was not receiving regular checks. Principle investigator was [REDACTED] led to check eyewash on 9/23/2016.
- [REDACTED]
 - Fire extinguisher not checked monthly. It was checked on 9/27/2016.
- [REDACTED]
 - [REDACTED] is in need of repair. Repair was completed 9/29/2016.
- [REDACTED]
 - Two bags of rat chow were expired and marked do not use. Unusable food was removed from facility on 10/04/2016.

Departures from the *Guide* - No departures from the *Guide* have been noted.

Minority Views - No minority views were expressed at the discussion of this report or communicated via email

Signatures -Signatures indicate acceptance of the program review and inspection. See attached signature sheet.

SEMIANNUAL PROGRAM REVIEW CHECKLIST ¹

Institutional Policies and Responsibilities

DATE: 9/30/2016

and Jim Scott

*A M S

1. IACUC Membership and Functions

- institution provides training and resources to assist IACUC members in understanding and evaluating issues brought before the committee	✓		
- at least 5 members, appointed by IO	✓		
- members include veterinarian, scientist, non-scientist, and non-affiliated non-lab animal user ²	✓		
- responsible for oversight and evaluation of institution's program	✓		
- reports to Institutional Official (IO)	✓		
- conducts semiannual evaluations of institutional animal care and use program	✓		
- conducts semiannual inspections of institutional animal facilities	✓		
- reviews and investigates concerns about animal care and use at institution ³	✓		
- procedures for review, approval and suspension of animal activities ⁴	✓		
- procedures for review & approval of significant changes to approved activities	✓		
- policies for special procedures (e.g. restraint, multiple survival surgery, fluid restriction) ⁵	✓		

2. IACUC Records and Reporting Requirements ⁶

Reports to Institutional Official (IO)

- reports of semiannual program reviews & facility inspections are submitted to IO ⁷	✓		
- include minority IACUC views	✓		
- describe departures from <i>Guide</i> or PHS Policy and reasons for departure ⁸	✓		
- distinguish significant from minor deficiencies	✓		
- include plan and schedule for correction of each deficiency identified ⁹	✓		

Reports to Office of Laboratory Animal Welfare (OLAW)

- reports include any minority IACUC views	✓		
- annual report to OLAW documents program changes & dates of IACUC semiannual review	✓		
- promptly advises OLAW of serious/ongoing <i>Guide</i> deviations or <i>PHS Policy</i> noncompliance	✓		
- promptly advises OLAW of any suspension of activity by the IACUC	✓		

Reports to United States Department of Agriculture (USDA)

- annual report contains required information	✓		
- reporting mechanism in place for IACUC-approved exceptions to the regulations and standards	✓		
- reports within 15 days failure to adhere to timetable for correction of deficiencies	✓		
- reports suspension of activity by the IACUC to USDA and any Federal funding agency	✓		

Records

- minutes of IACUC meetings and semiannual reports maintained for 3 years	✓		
- IACUC review documentation maintained for 3 years after end of study	✓		
- IACUC review of activities involving animals includes all required information ¹⁰	✓		

3. Veterinary Care (See also next section - Veterinary Medical Care)

- institutional arrangement for veterinarian with training or experience in lab animal medicine ¹¹	✓		
- veterinary access to all animals	✓		
- provision for backup veterinary care	✓		
- must provide guidance on handling, immobilization, sedation, analgesia, anesthesia, euthanasia	✓		
- must provide guidance/oversight on surgery programs and oversight of postsurgical care	✓		
- veterinary authority to oversee all aspects of animal care and use	✓		

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL PROGRAM REVIEW CHECKLIST

Institutional Policies and Responsibilities (cont.)

DATE:

*A M S

4. Personnel Qualifications and Training			
- institution has established and implemented an effective training program	✓		
- includes professional/management/supervisory personnel	✓		
- includes animal care personnel	✓		
- includes research investigators, instructors, technicians, trainees, students	✓		
Training program content			
- humane practices of animal care (e.g., housing, husbandry, handling) ¹²	✓		
- humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care) ¹³	✓		
- research/testing methods that minimize numbers necessary to obtain valid results	✓		
- research/testing methods that minimize animal pain or distress	✓		
- use of hazardous agents, including access to OSHA chemical hazard notices where applicable	✓		
5. Occupational Health and Safety of Personnel			
Institutional program for a safe and healthy workplace			
- program is established and implemented	✓		
- covers <i>all</i> personnel who work in laboratory animal facilities	✓		
- based on hazard identification and risk assessment	✓		
- personnel training (e.g., zoonoses, hazards, pregnancy/illness/immunosuppression precautions)	✓		
- personal hygiene procedures (e.g., work clothing, eating/drinking/smoking policies)	✓		
- procedures for use, storage and disposal of hazardous biologic, chemical and physical agents	✓		
- specific procedures for personnel protection (e.g., shower/change facilities, injury prevention)	✓		
Program for medical evaluation and preventive medicine for personnel			
- pre-employment evaluation including health history	✓		
- immunizations as appropriate (e.g., rabies, tetanus) and tests	✓		
- zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague)	✓		
- procedures for reporting and treating injuries, including bites etc.	✓		
Special precautions for personnel who work with primates (<i>No primate work done</i>)			
- tuberculosis screening includes all exposed personnel	✓		
- training and implementation of procedures for bites and scratches	✓		
- education regarding <i>Cercopithecine herpesvirus 1</i> (Herpes B)	✓		
Notes:			

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL PROGRAM REVIEW CHECKLIST

Veterinary Medical Care

DATE: _____

*A M S

1. Preventive Medicine / Animal Procurement and Transportation			
- evaluation of animal vendors	✓		
- procedures for lawful animal procurement, evaluation of animals and transport	✓		
- procedures for quarantine, stabilization	✓		
- policies on separation by species, source, health status	✓		
- policies for isolation of sick animals	✓		
- program of surveillance, diagnosis, treatment and control of disease	✓		
- availability of diagnostic resources for preventive health program	✓		
- provision for emergency, weekend and holiday veterinary care	✓		
2. Surgery			
- procedures for monitoring surgical anesthesia and analgesia	✓		
- pre-surgical plan (e.g., identify space, supplies, conduct pre-op exam, define post-op care)	✓		
- appropriate training or experience of personnel in surgery and anesthesia	✓		
- major procedures distinguished from minor	✓		
- use of effective aseptic procedures for survival surgery	✓		
- implemented procedures for use of surgical facility	✓		
- implemented procedures for using/scavenging volatile anesthetics	✓		
- effective procedures for sterilizing instruments & monitoring expiration dates on sterile packs	✓		
- documentation of post-operative monitoring and care	✓		
3. Pain, Distress, Analgesia and Anesthesia			
- guidelines for assessment and categorization of pain	✓		
- IACUC guidelines for avoiding unnecessary pain and distress	✓		
- appropriate anesthetics, analgesics, tranquilizers used for each species	✓		
- special precautions for the use of paralytics ¹⁴	✓		
- veterinary input in the choice of drugs	✓		
4. Euthanasia			
- compliance with current AVMA Panel on Euthanasia unless approved by the IACUC	✓		
- guidance provided on appropriate methods for each species	✓		
- training available for personnel in humane methods of euthanasia	✓		
5. Drug Storage and Control			
- safe, secure, storage arrangement	✓		
- record keeping meets regulations	✓		
- procedures exist for ensuring drugs are within expiration date	✓		
Notes:			

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL FACILITY REVIEW REPORT

Date: 9/23/2016

Team Members: [REDACTED] and Janice Weaver

Deficiency Category (M or S)	*	Location	Deficiency and Plan for Correction	Responsible Party	Correction Schedule and Interim Status	Date Complete
M		[REDACTED]	Eyewash not regularly checked recently.	Janice Weaver will remind PI	10/23/2016	9/23/2016
M		[REDACTED]	Fire extinguisher not checked monthly	[REDACTED] will remind staff	10/23/2016	9/27/2016
M		[REDACTED]	Faucet leaks. Repair leak to faucet.	[REDACTED] will prepare work order	12/23/2016	9/29/2016
M		[REDACTED]	Food bags – two were expired and marked do not use. Remove unusable food from facility.	[REDACTED] will oversee removal.	12/23/2016	10/04/2016

M= minor deficiency; S = significant deficiency (A significant deficiency is or may be a threat to animal health or safety)

*Check if repeat deficiency

Notes. – Overall facility was clean and tidy. Vet clinic is preparing to move to a new location and was not visited during this inspection. Transport vans were not present.

IACUC committee signatures

Semi-Annual report of 9/23/2016 Facilities Inspection and 9/27/2016 Animal Care Program Review.

A majority of the members must sign the report. Any member that disagrees is asked to provide a minority opinion in writing so that the concern can be documented in the report to the IO.

**Name of IACUC
Voting Member**

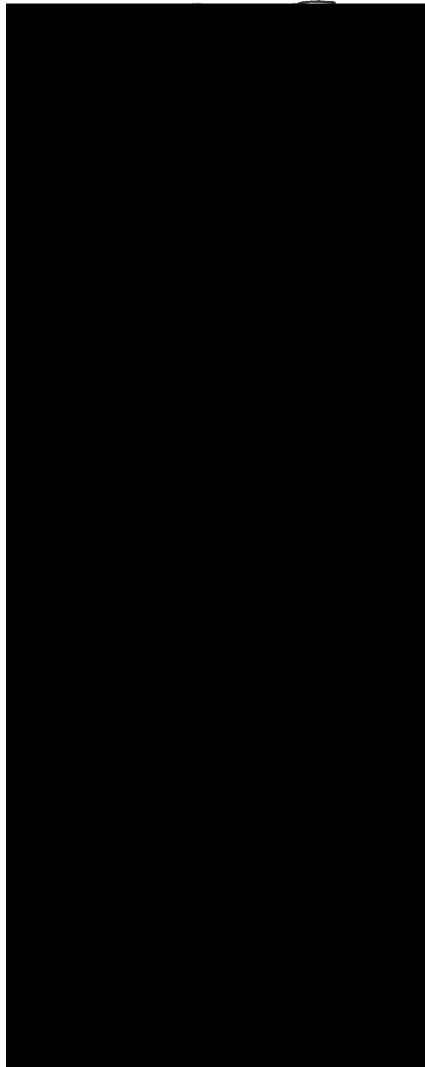
Agree

Disagree



James Scott

Janice Weaver





Memorandum to: Paul Blake, IO [REDACTED]
From: Janice Weaver, Chair
Institutional Animal Care and Use Committee
Subject: Semiannual Review of Animal Care and Use Program and
Inspection of Facilities
Date: 10/06/2017

This represents the Semiannual Report of the Institutional Animal Care and Use Committee (IACUC) to the Institutional Official, as required by the PHS Policy on Humane Care and Use of Laboratory Animals, as a condition of this institution's Animal Welfare Assurance with the Office of Laboratory Animal Welfare (OLAW), and the Animal Welfare Act and Animal Welfare Regulations, as applicable.

Review of Animal Care and Use Program

The IACUC conducted its semiannual review of the institution's animal care and use program on 9/29/2017, using the *Guide for the Care and Use of Laboratory Animals (Guide)*, and, as applicable, 9 CFR Chapter I, 2.31.

The following deficiencies were found in the animal care and use program:

Minor deficiency - The committee is currently working on an SOP for IACUC member training. We expect to have this completed by the end of the academic year.

Minor deficiency - The committee has determined that we need to improve the training provided to skilled trade supervisory personnel and skilled trade technicians. [REDACTED] have lead this effort. [REDACTED] was determined that relevant personnel will receive the following: information concerning the potential hazard exposure, opportunity for training, and personal protective equipment appropriate to the hazard involved.

Inspection of Animal Facilities

The IACUC inspected the animal facilities on 9/15/2017, using the *Guide*, and, as applicable, 9 CFR Chapter I, 2.31. The following deficiencies were found in the animal facilities:

Minor deficiency in [REDACTED] - Boxes were stacked above the shelving units. There was concern about injury when access them. It was determined that the unit should be labeled to indicate the importance of ladder use in retrieving items from the top shelf. [REDACTED] will correct by 12/05/2017.

Minor deficiency in [REDACTED] – A small amount of rat bedding material (wood chips) was found in the electrical outlets. It was determined that the debris should be blown out. This deficiency was corrected on 10/02/2017.

Minor deficiency in [REDACTED] – Substances (with no immediate use) were found in the top shelf of the refrigerator door. Substances were removed and properly disposed of on 9/18/2017.

Departures from the *Guide*

There were **no departures** from the *Guide* in this evaluation.

Minority Views

There were **no minority views** expressed concerning this report. All present at the meeting have agreed to the findings and recommendations included here.

Signatures

See attached signature sheet.

IACUC committee signatures

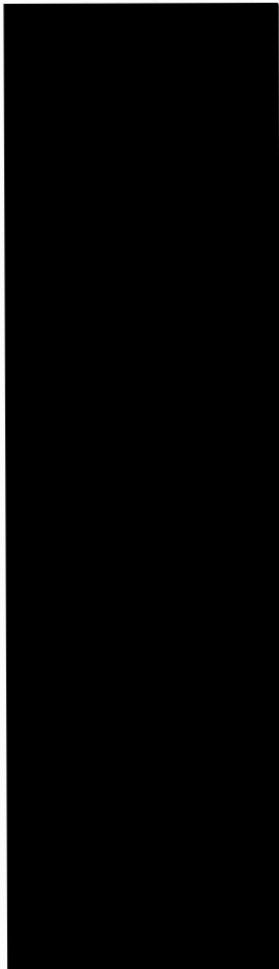
Semi-Annual report of 9/15/2017 Facilities Inspection and 9/29/2017 Animal Care Program Review.

A majority of the members must sign the report. Any member that disagrees is asked to provide a minority opinion in writing so that the concern can be documented in the report to the IO.

Name of IACUC
Voting Member

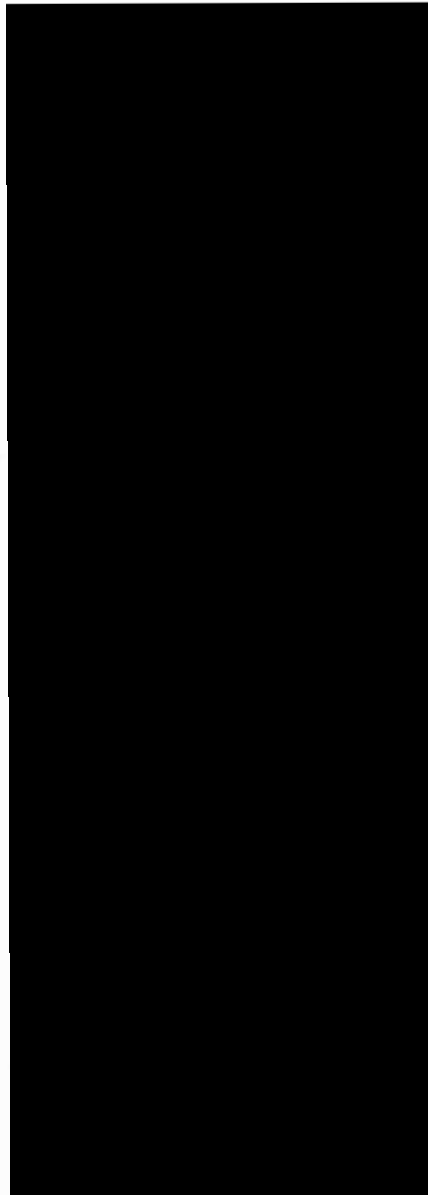
Agree

Disagree



James Scott

Janice Weaver



SEMIANNUAL PROGRAM REVIEW CHECKLIST ¹

Institutional Policies and Responsibilities

DATE: 9/29/2017

*A M S

1. IACUC Membership and Functions

- institution provides training and resources to assist IACUC members in understanding and evaluating issues brought before the committee
- at least 5 members, appointed by IO
- members include veterinarian, scientist, non-scientist, and non-affiliated non-lab animal user²
- responsible for oversight and evaluation of institution's program
- reports to Institutional Official (IO)
- conducts semiannual evaluations of institutional animal care and use program
- conducts semiannual inspections of institutional animal facilities
- reviews and investigates concerns about animal care and use at institution³
- procedures for review, approval and suspension of animal activities⁴
- procedures for review & approval of significant changes to approved activities
- policies for special procedures (e.g. restraint, multiple survival surgery, fluid restriction)⁵

	X		
X			
X			
X			
X			
X			
X			
X			
X			
X			
X			

2. IACUC Records and Reporting Requirements ⁶

Reports to Institutional Official (IO)

- reports of semiannual program reviews & facility inspections are submitted to IO⁷
- include minority IACUC views
- describe departures from *Guide* or PHS Policy and reasons for departure⁸
- distinguish significant from minor deficiencies
- include plan and schedule for correction of each deficiency identified⁹

X			
X			
X			
X			
X			

Reports to Office of Laboratory Animal Welfare (OLAW)

- reports include any minority IACUC views
- annual report to OLAW documents program changes & dates of IACUC semiannual review
- promptly advises OLAW of serious/ongoing *Guide* deviations or *PHS Policy* noncompliance
- promptly advises OLAW of any suspension of activity by the IACUC

X			
X			
X			
X			

Reports to United States Department of Agriculture (USDA)

- annual report contains required information
- reporting mechanism in place for IACUC-approved exceptions to the regulations and standards
- reports within 15 days failure to adhere to timetable for correction of deficiencies
- reports suspension of activity by the IACUC to USDA and any Federal funding agency

X			
X			
X			
X			

Records

- minutes of IACUC meetings and semiannual reports maintained for 3 years
- IACUC review documentation maintained for 3 years after end of study
- IACUC review of activities involving animals includes all required information¹⁰

X			
X			
X			

3. Veterinary Care (See also next section - Veterinary Medical Care)

- institutional arrangement for veterinarian with training or experience in lab animal medicine¹¹
- veterinary access to all animals
- provision for backup veterinary care
- must provide guidance on handling, immobilization, sedation, analgesia, anesthesia, euthanasia
- must provide guidance/oversight on surgery programs and oversight of postsurgical care
- veterinary authority to oversee all aspects of animal care and use

X			
X			
X			
X			
X			
X			

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL PROGRAM REVIEW CHECKLIST

Institutional Policies and Responsibilities (cont.)

DATE: 9/29/2017

*A M S

4. Personnel Qualifications and Training

- institution has established and implemented an effective training program	X		
- includes professional/management/supervisory personnel		X	
- includes animal care personnel	X		
- includes research investigators, instructors, technicians, trainees, students	X		
Training program content			
- humane practices of animal care (e.g., housing, husbandry, handling) ¹²	X		
- humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care) ¹³	X		
- research/testing methods that minimize numbers necessary to obtain valid results	X		
- research/testing methods that minimize animal pain or distress	X		
- use of hazardous agents, including access to OSHA chemical hazard notices where applicable	X		

5. Occupational Health and Safety of Personnel

Institutional program for a safe and healthy workplace

- program is established and implemented	X		
- covers <i>all</i> personnel who work in laboratory animal facilities	X		
- based on hazard identification and risk assessment	X		
- personnel training (e.g., zoonoses, hazards, pregnancy/illness/immunosuppression precautions)		X	
- personal hygiene procedures (e.g., work clothing, eating/drinking/smoking policies)	X		
- procedures for use, storage and disposal of hazardous biologic, chemical and physical agents	X		
- specific procedures for personnel protection (e.g., shower/change facilities, injury prevention)	X		

Program for medical evaluation and preventive medicine for personnel

- pre-employment evaluation including health history	X		
- immunizations as appropriate (e.g., rabies, tetanus) and tests	X		
- zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague)	X		
- procedures for reporting and treating injuries, including bites etc.	X		

Special precautions for personnel who work with primates (*No primate work done*)

- tuberculosis screening includes all exposed personnel	X		
- training and implementation of procedures for bites and scratches	X		
- education regarding <i>Cercopithecine herpesvirus 1</i> (Herpes B)	X		

Notes:

Section 1 Training – The committee is currently working on an SOP for IACUC member training.

Sections 3 and 4 – The committee has determined that we need to improve the training provided to skilled trade supervisory personnel and skilled trade technicians. [REDACTED] have lead this effort. It was determined that relevant personnel will receive the following: information concerning the potential hazard exposure, opportunity for training, and personal protective equipment appropriate to the hazard involved.

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL PROGRAM REVIEW CHECKLIST

Veterinary Medical Care

DATE: 9/29/2017

_____ and _____

*A M S

1. Preventive Medicine / Animal Procurement and Transportation

- evaluation of animal vendors	X		
- procedures for lawful animal procurement, evaluation of animals and transport	X		
- procedures for quarantine, stabilization	X		
- policies on separation by species, source, health status	X		
- policies for isolation of sick animals	X		
- program of surveillance, diagnosis, treatment and control of disease	X		
- availability of diagnostic resources for preventive health program	X		
- provision for emergency, weekend and holiday veterinary care	X		

2. Surgery

- procedures for monitoring surgical anesthesia and analgesia	X		
- pre-surgical plan (e.g., identify space, supplies, conduct pre-op exam, define post-op care)	X		
- appropriate training or experience of personnel in surgery and anesthesia	X		
- major procedures distinguished from minor	X		
- use of effective aseptic procedures for survival surgery	X		
- implemented procedures for use of surgical facility	X		
- implemented procedures for using/scavenging volatile anesthetics	X		
- effective procedures for sterilizing instruments & monitoring expiration dates on sterile packs	X		
- documentation of post-operative monitoring and care	X		

3. Pain, Distress, Analgesia and Anesthesia

- guidelines for assessment and categorization of pain	X		
- IACUC guidelines for avoiding unnecessary pain and distress	X		
- appropriate anesthetics, analgesics, tranquilizers used for each species	X		
- special precautions for the use of paralytics ¹⁴	X		
- veterinary input in the choice of drugs	X		

4. Euthanasia

- compliance with current AVMA Panel on Euthanasia unless approved by the IACUC	X		
- guidance provided on appropriate methods for each species	X		
- training available for personnel in humane methods of euthanasia	X		

5. Drug Storage and Control

- safe, secure, storage arrangement	X		
- record keeping meets regulations	X		
- procedures exist for ensuring drugs are within expiration date	X		

Notes:

SEMIANNUAL FACILITY REVIEW REPORT

Date: 9/15/2017

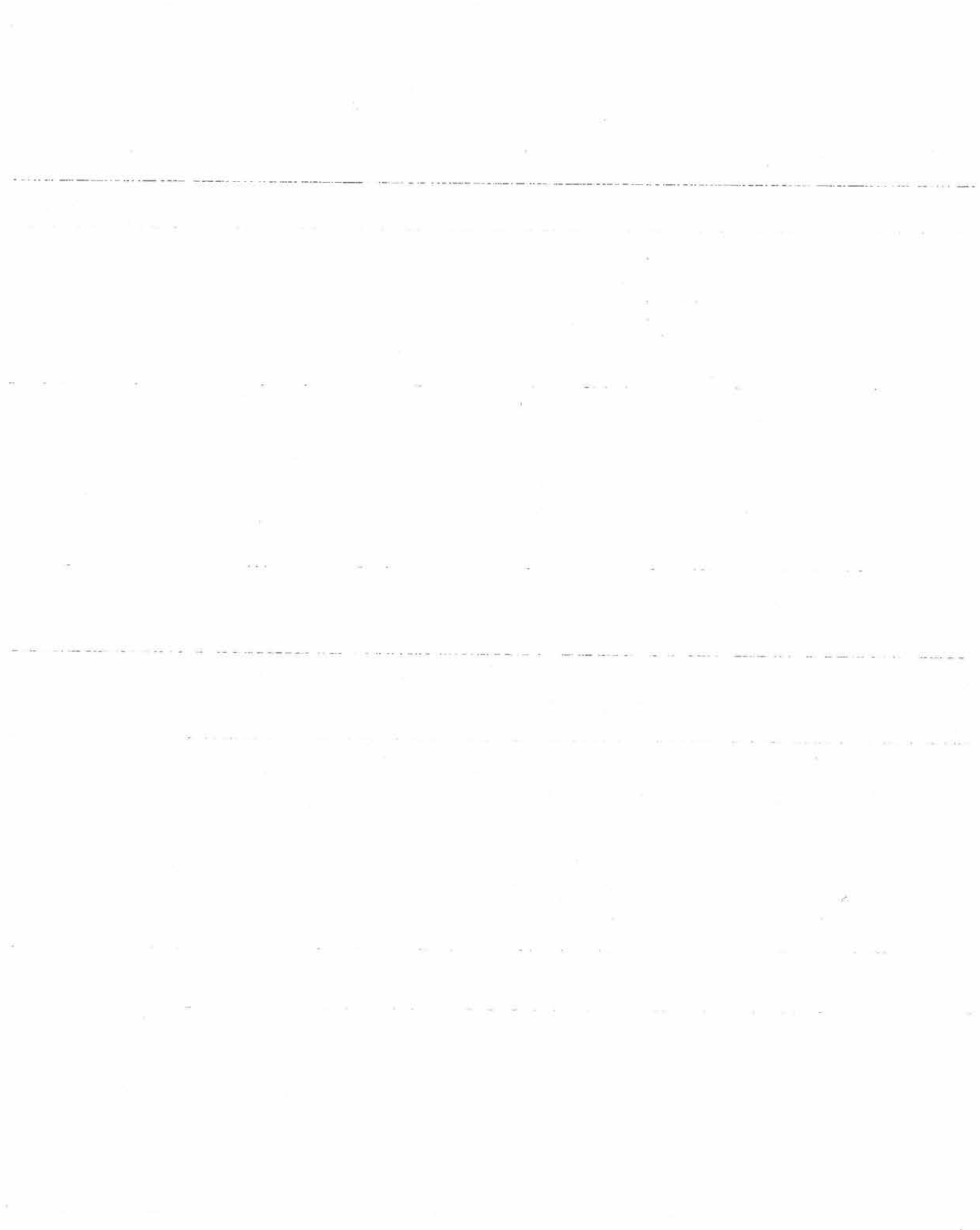
Team Members: [REDACTED] and Janice Weaver

Deficiency Category (M or S)	*	Location	Deficiency and Plan for Correction	Responsible Party	Correction Schedule and Interim Status	Date Complete
M		[REDACTED]	Boxes stacked above shelves – Concern about injury in getting access to them. Provide label that indicates importance of ladder use in retrieving items from top shelf.	[REDACTED] will affix instructional label.	12/15/2017	
M		[REDACTED]	Small amount of rat bedding material found in electrical outlets. Blow debris out of electrical outlets.	[REDACTED]	12/15/2017	10/02/2017
M		[REDACTED]	Remove substances in top shelf of refrigerator door.	[REDACTED]	09/23/2017	9/18/2017

M= minor deficiency; S = significant deficiency (A significant deficiency is or may be a threat to animal health or safety)

*Check if repeat deficiency

Notes. – Issues with flooring in [REDACTED] (Cage Cleaning) and [REDACTED] (Rabbit housing areas) noted in last semi-annual inspection (March) have been resolved.



Memorandum to: Paul Blake, IO [REDACTED]
From: Janice Weaver, Chair [REDACTED]
Institutional Animal Care and Use Committee
Subject: Semiannual Review of Animal Care and Use Program and
Inspection of Facilities
Date: 10/05/2018

This represents the Semiannual Report of the Institutional Animal Care and Use Committee (IACUC) to the Institutional Official, as required by the PHS Policy on Humane Care and Use of Laboratory Animals, as a condition of this institution's Animal Welfare Assurance with the Office of Laboratory Animal Welfare (OLAW), and the Animal Welfare Act and Animal Welfare Regulations, as applicable.

Review of Animal Care and Use Program

The IACUC conducted its semiannual review of the institution's animal care and use program on 10/04/2018, using the *Guide for the Care and Use of Laboratory Animals (Guide)*, and, as applicable, 9 CFR Chapter I, 2.31.

The following deficiency was found in the animal care and use program:

Minor deficiency – Occupational Health and Safety of Personnel requirement that program includes *all* personnel who work in laboratory animal facilities was marked as a minor deficiency. Compliance of relevant physical plant employees in completing the health assessment remains a struggle.

Inspection of Animal Facilities

The IACUC inspected the animal facilities on 9/21/2018, using the *Guide*, and, as applicable, 9 CFR Chapter I, 2.31. The following deficiencies were found in the animal facilities:

Minor deficiency in [REDACTED] – Exposed wire where clock is located. Cover exposed wire (e.g. screw-on cap). This is a repeat deficiency that was noted in our last semi-annual review. Problem has now been fixed and a new clock installed on 9/24/2018.

Minor deficiency in [REDACTED] – Weekly eyewash checks were not documented so far this semester (week 3). [REDACTED] informed Animal Care Staff of the deficiency and directed to conduct and document the weekly checks.

All deficiencies from the last semi-annual report have now been resolved.

Departures from the *Guide*

There were **no departures** from the Guide in this evaluation.

Minority Views

There were **no minority views** expressed concerning this report. All present at the meeting have agreed to the findings and recommendations included here.

Signatures

See attached signature sheet.

SEMIANNUAL FACILITY REVIEW REPORT

Date: 9/21/2018

Team Members: [REDACTED] and Janice Weaver

Deficiency Category (M or S)	*	Location	Deficiency and Plan for Correction	Responsible Party	Correction Schedule and Interim Status	Date Complete
M	*	[REDACTED]	Exposed wire where clock was located. Wire should not be exposed.	[REDACTED] filed a work order on 9/21/2018	12/21/2018	Fixed 9/24/18
M		[REDACTED]	Eyewash checks not documented so far this semester.	[REDACTED] will inform Animal Care Staff to conduct and record weekly checks.	10/05/2018	Fixed 10/03/2018

M= minor deficiency; S – significant deficiency (A significant deficiency is or may be a threat to animal health or safety)

*Check if repeat deficiency

Notes. –

SEMIANNUAL PROGRAM REVIEW CHECKLIST ¹

Institutional Policies and Responsibilities

DATE: 10/04/2018

All Present at October Meeting

*A M S

1. IACUC Membership and Functions

- institution provides training and resources to assist IACUC members in understanding and evaluating issues brought before the committee	X		
- at least 5 members, appointed by IO	X		
- members include veterinarian, scientist, non-scientist, and non-affiliated non-lab animal user ²	X		
- responsible for oversight and evaluation of institution's program	X		
- reports to Institutional Official (IO)	X		
- conducts semiannual evaluations of institutional animal care and use program	X		
- conducts semiannual inspections of institutional animal facilities	X		
- reviews and investigates concerns about animal care and use at institution ³	X		
- procedures for review, approval and suspension of animal activities ⁴	X		
- procedures for review & approval of significant changes to approved activities	X		
- policies for special procedures (e.g. restraint, multiple survival surgery, fluid restriction) ⁵	X		

2. IACUC Records and Reporting Requirements ⁶

Reports to Institutional Official (IO)

- reports of semiannual program reviews & facility inspections are submitted to IO ⁷	X		
- include minority IACUC views	X		
- describe departures from <i>Guide</i> or PIIS Policy and reasons for departure ⁸	X		
- distinguish significant from minor deficiencies	X		
- include plan and schedule for correction of each deficiency identified ⁹	X		

Reports to Office of Laboratory Animal Welfare (OLAW)

- reports include any minority IACUC views	X		
- annual report to OLAW documents program changes & dates of IACUC semiannual review	X		
- promptly advises OLAW of serious/ongoing <i>Guide</i> deviations or <i>PHS Policy</i> noncompliance	X		
- promptly advises OLAW of any suspension of activity by the IACUC	X		

Reports to United States Department of Agriculture (USDA)

- annual report contains required information	X		
- reporting mechanism in place for IACUC-approved exceptions to the regulations and standards	X		
- reports within 15 days failure to adhere to timetable for correction of deficiencies	X		
- reports suspension of activity by the IACUC to USDA and any Federal funding agency	X		

Records

- minutes of IACUC meetings and semiannual reports maintained for 3 years	X		
- IACUC review documentation maintained for 3 years after end of study	X		
- IACUC review of activities involving animals includes all required information ¹⁰	X		

3. Veterinary Care (See also next section - Veterinary Medical Care)

- institutional arrangement for veterinarian with training or experience in lab animal medicine ¹¹	X		
- veterinary access to all animals	X		
- provision for backup veterinary care	X		
- must provide guidance on handling, immobilization, sedation, analgesia, anesthesia, euthanasia	X		
- must provide guidance/oversight on surgery programs and oversight of postsurgical care	X		
- veterinary authority to oversee all aspects of animal care and use	X		

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL PROGRAM REVIEW CHECKLIST

Institutional Policies and Responsibilities (cont.)

DATE: 10/04/2018

All Present at October Meeting

*A M S

4. Personnel Qualifications and Training			
- institution has established and implemented an effective training program	X		
- includes professional/management/supervisory personnel	X		
- includes animal care personnel	X		
- includes research investigators, instructors, technicians, trainees, students	X		
Training program content			
- humane practices of animal care (e.g., housing, husbandry, handling) ¹²	X		
- humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care) ¹³	X		
- research/testing methods that minimize numbers necessary to obtain valid results	X		
- research/testing methods that minimize animal pain or distress	X		
- use of hazardous agents, including access to OSHA chemical hazard notices where applicable	X		
5. Occupational Health and Safety of Personnel			
Institutional program for a safe and healthy workplace			
- program is established and implemented	X		
- covers <i>all</i> personnel who work in laboratory animal facilities		X	
- based on hazard identification and risk assessment	X		
- personnel training (e.g., zoonoses, hazards, pregnancy/illness/immunosuppression precautions)	X		
- personal hygiene procedures (e.g., work clothing, eating/drinking/smoking policies)	X		
- procedures for use, storage and disposal of hazardous biologic, chemical and physical agents	X		
- specific procedures for personnel protection (e.g., shower/change facilities, injury prevention)	X		
Program for medical evaluation and preventive medicine for personnel			
- pre-employment evaluation including health history	X		
- immunizations as appropriate (e.g., rabies, tetanus) and tests	X		
- zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague)	X		
- procedures for reporting and treating injuries, including bites etc.	X		
Special precautions for personnel who work with primates (<i>No primate work done</i>)			
- tuberculosis screening includes all exposed personnel	X		
- training and implementation of procedures for bites and scratches	X		
- education regarding <i>Cercopithecine herpesvirus 1</i> (Herpes B)	X		
Notes:			
<i>Compliance of relevant physical plant employees in completing health assessments remains a struggle.</i>			

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL PROGRAM REVIEW CHECKLIST

Veterinary Medical Care

DATE: 10/04/2018

All Present at October Meeting

*A M S

1. Preventive Medicine / Animal Procurement and Transportation

- evaluation of animal vendors	X		
- procedures for lawful animal procurement, evaluation of animals and transport	X		
- procedures for quarantine, stabilization	X		
- policies on separation by species, source, health status	X		
- policies for isolation of sick animals	X		
- program of surveillance, diagnosis, treatment and control of disease	X		
- availability of diagnostic resources for preventive health program	X		
- provision for emergency, weekend and holiday veterinary care	X		

2. Surgery

- procedures for monitoring surgical anesthesia and analgesia	X		
- pre-surgical plan (c.g., identify space, supplies, conduct pre-op exam, define post-op care)	X		
- appropriate training or experience of personnel in surgery and anesthesia	X		
- major procedures distinguished from minor	X		
- use of effective aseptic procedures for survival surgery	X		
- implemented procedures for use of surgical facility	X		
- implemented procedures for using/scavenging volatile anesthetics	X		
- effective procedures for sterilizing instruments & monitoring expiration dates on sterile packs	X		
- documentation of post-operative monitoring and care	X		

3. Pain, Distress, Analgesia and Anesthesia

- guidelines for assessment and categorization of pain	X		
- IACUC guidelines for avoiding unnecessary pain and distress	X		
- appropriate anesthetics, analgesics, tranquilizers used for each species	X		
- special precautions for the use of paralytics ¹⁴	X		
- veterinary input in the choice of drugs	X		

4. Euthanasia

- compliance with current AVMA Panel on Euthanasia unless approved by the IACUC	X		
- guidance provided on appropriate methods for each species	X		
- training available for personnel in humane methods of euthanasia	X		

5. Drug Storage and Control

- safe, secure, storage arrangement	X		
- record keeping meets regulations	X		
- procedures exist for ensuring drugs are within expiration date	X		

Notes:

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

IACUC committee signatures

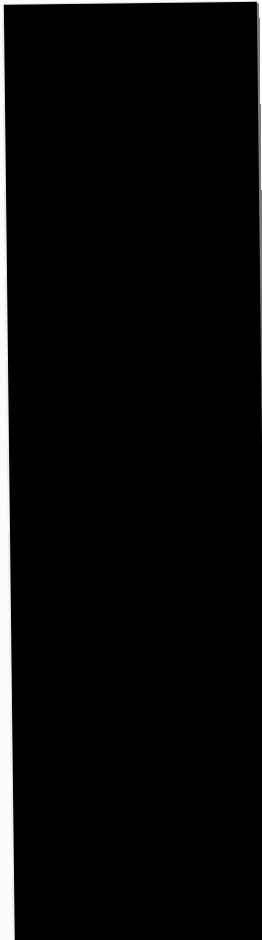
Semi-Annual report of Facilities Inspection and Animal Care Program Review presented at
October 4, 2018 meeting.

A majority of the members must sign the report. Any member that disagrees is asked to provide a minority opinion in writing so that the concern can be documented in the report to the IO.

Name of IACUC
Voting Member

Agree

Disagree



James Scott

Janice Weaver



Memorandum to: Paul Blake, PhD, Institutional Official [REDACTED]

From: Institutional Animal Care and Use Committee
Janice Weaver, Chair [REDACTED]

Subject: Semiannual Review of Animal Care and Use Program and
Inspection of Facilities

Date: May 03, 2017

This represents the Semiannual Report of the Institutional Animal Care and Use Committee (IACUC) to the Institutional Official, as required by the PHS Policy on Humane Care and Use of Laboratory Animals, as a condition of this institution's Animal Welfare Assurance with the Office of Laboratory Animal Welfare (OLAW), and the Animal Welfare Act and Animal Welfare Regulations, as applicable. Signatures of all members of IACUC appear on the signature sheet. The semi-annual inspection of facilities and program review were accepted at our April 6, 2017 meeting.

Review of Animal Care and Use Program

The semiannual review of the institution's animal care and use program was conducted on 3/31/2017, using the *Guide for the Care and Use of Laboratory Animals (Guide)*, and, as applicable, 9 CFR Chapter I, 2.31.

The committee acknowledges a minor deficiency in making sure the Occupational Health and Safety of Personnel encompasses all at risk. Specifically the committee is reviewing the process to determine whether training on hazardous materials and personnel protection involves the PI and everyone else (e.g., students) and that such training is documented.

Inspection of Animal Facilities

The IACUC inspected the animal facilities on March 23, 2017, using the *Guide*, and, as applicable, 9 CFR Chapter I, 2.31.

The following minor deficiencies were found in the animal facilities:

- [REDACTED]
 - Eyewash was not receiving regular checks. Principle investigator was reminded to check eyewash. This is a repeated deficiency.
- [REDACTED]
 - Floor coating is deteriorating near the drain. It needs a new application of coating. [REDACTED] has filed a work order.
- [REDACTED]

- Need to redo paint and sealant on floors and walls. [REDACTED] has filed a work order.

Departures from the *Guide* - No departures from the *Guide* have been noted.

Minority Views - No minority views were expressed at the discussion of this report or communicated via email

Signatures -Signatures indicate acceptance of the program review and inspection. See attached signature sheet.

SEMIANNUAL PROGRAM REVIEW CHECKLIST ¹

Institutional Policies and Responsibilities

DATE: 3/31/2017

and Janice Weaver

*A M S

1. IACUC Membership and Functions

- institution provides training and resources to assist IACUC members in understanding and evaluating issues brought before the committee	X		
- at least 5 members, appointed by IO	X		
- members include veterinarian, scientist, non-scientist, and non-affiliated non-lab animal user ²	X		
- responsible for oversight and evaluation of institution's program	X		
- reports to Institutional Official (IO)	X		
- conducts semiannual evaluations of institutional animal care and use program	X		
- conducts semiannual inspections of institutional animal facilities	X		
- reviews and investigates concerns about animal care and use at institution ³	X		
- procedures for review, approval and suspension of animal activities ⁴	X		
- procedures for review & approval of significant changes to approved activities	X		
- policies for special procedures (e.g. restraint, multiple survival surgery, fluid restriction) ⁵	X		

2. IACUC Records and Reporting Requirements ⁶

Reports to Institutional Official (IO)

- reports of semiannual program reviews & facility inspections are submitted to IO ⁷	X		
- include minority IACUC views	X		
- describe departures from <i>Guide</i> or PHS Policy and reasons for departure ⁸	X		
- distinguish significant from minor deficiencies	X		
- include plan and schedule for correction of each deficiency identified ⁹	X		

Reports to Office of Laboratory Animal Welfare (OLAW)

- reports include any minority IACUC views	X		
- annual report to OLAW documents program changes & dates of IACUC semiannual review	X		
- promptly advises OLAW of serious/ongoing <i>Guide</i> deviations or <i>PHS Policy</i> noncompliance	X		
- promptly advises OLAW of any suspension of activity by the IACUC	X		

Reports to United States Department of Agriculture (USDA)

- annual report contains required information	X		
- reporting mechanism in place for IACUC-approved exceptions to the regulations and standards	X		
- reports within 15 days failure to adhere to timetable for correction of deficiencies	X		
- reports suspension of activity by the IACUC to USDA and any Federal funding agency	X		

Records

- minutes of IACUC meetings and semiannual reports maintained for 3 years	X		
- IACUC review documentation maintained for 3 years after end of study	X		
- IACUC review of activities involving animals includes all required information ¹⁰	X		

3. Veterinary Care (See also next section - Veterinary Medical Care)

- institutional arrangement for veterinarian with training or experience in lab animal medicine ¹¹	X		
- veterinary access to all animals	X		
- provision for backup veterinary care	X		
- must provide guidance on handling, immobilization, sedation, analgesia, anesthesia, euthanasia	X		
- must provide guidance/oversight on surgery programs and oversight of postsurgical care	X		
- veterinary authority to oversee all aspects of animal care and use	X		

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL PROGRAM REVIEW CHECKLIST

Institutional Policies and Responsibilities (cont.)

DATE: 3/31/2017

and Janice Weaver

*A M S

4. Personnel Qualifications and Training

- institution has established and implemented an effective training program	X		
- includes professional/management/supervisory personnel	X		
- includes animal care personnel	X		
- includes research investigators, instructors, technicians, trainees, students	X		

Training program content

- humane practices of animal care (e.g., housing, husbandry, handling) ¹²	X		
- humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care) ¹³	X		
- research/testing methods that minimize numbers necessary to obtain valid results	X		
- research/testing methods that minimize animal pain or distress	X		
- use of hazardous agents, including access to OSHA chemical hazard notices where applicable	X		

5. Occupational Health and Safety of Personnel

Institutional program for a safe and healthy workplace

- program is established and implemented	X		
- covers <i>all</i> personnel who work in laboratory animal facilities	X		
- based on hazard identification and risk assessment	X		
- personnel training (e.g., zoonoses, hazards, pregnancy/illness/immunosuppression precautions)	X		
- personal hygiene procedures (e.g., work clothing, eating/drinking/smoking policies)	X		
- procedures for use, storage and disposal of hazardous biologic, chemical and physical agents		X	
- specific procedures for personnel protection (e.g., shower/change facilities, injury prevention)		X	

Program for medical evaluation and preventive medicine for personnel

- pre-employment evaluation including health history	X		
- immunizations as appropriate (e.g., rabies, tetanus) and tests	X		
- zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague)	X		
- procedures for reporting and treating injuries, including bites etc.	X		

Special precautions for personnel who work with primates (*No primate work done*)

- tuberculosis screening includes all exposed personnel	X		
- training and implementation of procedures for bites and scratches	X		
- education regarding <i>Cercopithecine herpesvirus 1</i> (Herpes B)	X		

Notes:

The committee is reviewing the process to determine whether training on hazardous materials and personnel protection training involves the PI and everyone else (e.g., students) and is documented.

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL PROGRAM REVIEW CHECKLIST

Veterinary Medical Care

DATE: 3/31/2017

and Janice Weaver

*A M S

1. Preventive Medicine / Animal Procurement and Transportation

- evaluation of animal vendors	X		
- procedures for lawful animal procurement, evaluation of animals and transport	X		
- procedures for quarantine, stabilization	X		
- policies on separation by species, source, health status	X		
- policies for isolation of sick animals	X		
- program of surveillance, diagnosis, treatment and control of disease	X		
- availability of diagnostic resources for preventive health program	X		
- provision for emergency, weekend and holiday veterinary care	X		

2. Surgery

- procedures for monitoring surgical anesthesia and analgesia	X		
- pre-surgical plan (e.g., identify space, supplies, conduct pre-op exam, define post-op care)	X		
- appropriate training or experience of personnel in surgery and anesthesia	X		
- major procedures distinguished from minor	X		
- use of effective aseptic procedures for survival surgery	X		
- implemented procedures for use of surgical facility	X		
- implemented procedures for using/scavenging volatile anesthetics	X		
- effective procedures for sterilizing instruments & monitoring expiration dates on sterile packs	X		
- documentation of post-operative monitoring and care	X		

3. Pain, Distress, Analgesia and Anesthesia

- guidelines for assessment and categorization of pain	X		
- IACUC guidelines for avoiding unnecessary pain and distress	X		
- appropriate anesthetics, analgesics, tranquilizers used for each species	X		
- special precautions for the use of paralytics ¹⁴	X		
- veterinary input in the choice of drugs	X		

4. Euthanasia

- compliance with current AVMA Panel on Euthanasia unless approved by the IACUC	X		
- guidance provided on appropriate methods for each species	X		
- training available for personnel in humane methods of euthanasia	X		

5. Drug Storage and Control

- safe, secure, storage arrangement	X		
- record keeping meets regulations	X		
- procedures exist for ensuring drugs are within expiration date	X		

Notes:

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL FACILITY REVIEW REPORT

Date: 9/23/2017

Team Members: [REDACTED] and Janice Weaver

Deficiency Category (M or S)	* Location	Deficiency and Plan for Correction	Responsible Party	Correction Schedule and Interim Status	Date Complete
M	* [REDACTED]	Eyewash not checked recently. PI should develop and implement a plan for regular checks and documentation.	Janice Weaver reminded PI	05/16/2017	
M	[REDACTED]	Floor coating deteriorating near the drain – Needs reapplication of coating.	[REDACTED] will oversee work order	7/31/2017	
M	[REDACTED]	Need to redo paint and sealant on floors and walls of rabbit colony rooms	[REDACTED] will oversee work order	7/31/2017	

M= minor deficiency; S = significant deficiency (A significant deficiency is or may be a threat to animal health or safety)

*Check if repeat deficiency

Notes. —

IACUC committee signatures

Semi-Annual report of 3/17/2017 Facilities Inspection and 3/31/2017 Animal Care Program Review.

A majority of the members must sign the report. Any member that disagrees is asked to provide a minority opinion in writing so that the concern can be documented in the report to the IO.

Name of IACUC
Voting Member

Agree

Disagree

[Redacted Name]

James Scott

Janice Weaver

[Redacted Signature]

Memorandum to: Paul Blake, IO [REDACTED]
From: Janice Weaver, Chair [REDACTED]
Institutional Animal Care and Use Committee
Subject: Semiannual Review of Animal Care and Use Program and
Inspection of Facilities
Date: 04/11/2018

This represents the Semiannual Report of the Institutional Animal Care and Use Committee (IACUC) to the Institutional Official, as required by the PHS Policy on Humane Care and Use of Laboratory Animals, as a condition of this institution's Animal Welfare Assurance with the Office of Laboratory Animal Welfare (OLAW), and the Animal Welfare Act and Animal Welfare Regulations, as applicable.

Review of Animal Care and Use Program

The IACUC conducted its semiannual review of the institution's animal care and use program on 3/23/2018, using the *Guide for the Care and Use of Laboratory Animals (Guide)*, and, as applicable, 9 CFR Chapter I, 2.31.

The following deficiencies were found in the animal care and use program:

Minor deficiency - The plan to provide training to skilled trade supervisory personnel and skilled trade technicians has been determined but we await implementation.

Update – As suggested in the last semi-annual report, we have approved the Standard Operation Procedure (SOP) for IACUC member training.

Inspection of Animal Facilities

The IACUC inspected the animal facilities on 3/16/2018, using the *Guide*, and, as applicable, 9 CFR Chapter I, 2.31. The following deficiencies were found in the animal facilities:

Minor deficiency in [REDACTED] – Room needed mop mount which was installed on April 2nd.

Minor deficiency in [REDACTED] – Exposed wire where clock is located. Cover exposed wire (e.g. screw-on cap). [REDACTED] will file the work order.

Minor deficiency in [REDACTED] – Rabbits had recently been moved and previous housing was cleaned later that day.

Minor deficiency in [REDACTED] – Water in sink is constantly running. Head of Plumbing, [REDACTED] is to investigate the issue.

Minor deficiency in [REDACTED] – Eyewash does not have sufficient pressure. Head of Plumbing, [REDACTED] is to investigate the issue.

Departures from the *Guide*

There were **no departures** from the Guide in this evaluation.

Minority Views

There were **no minority views** expressed concerning this report. All present at the meeting have agreed to the findings and recommendations included here.

Signatures

See attached signature sheet.

SEMIANNUAL PROGRAM REVIEW CHECKLIST ¹

Institutional Policies and Responsibilities

DATE: 3/23/2018

and Janice Weaver

*A M S

1. IACUC Membership and Functions

- institution provides training and resources to assist IACUC members in understanding and evaluating issues brought before the committee	X		
- at least 5 members, appointed by IO	X		
- members include veterinarian, scientist, non-scientist, and non-affiliated non-lab animal user ²	X		
- responsible for oversight and evaluation of institution's program	X		
- reports to Institutional Official (IO)	X		
- conducts semiannual evaluations of institutional animal care and use program	X		
- conducts semiannual inspections of institutional animal facilities	X		
- reviews and investigates concerns about animal care and use at institution ³	X		
- procedures for review, approval and suspension of animal activities ⁴	X		
- procedures for review & approval of significant changes to approved activities	X		
- policies for special procedures (e.g. restraint, multiple survival surgery, fluid restriction) ⁵	X		

2. IACUC Records and Reporting Requirements ⁶

Reports to Institutional Official (IO)

- reports of semiannual program reviews & facility inspections are submitted to IO ⁷	X		
- include minority IACUC views	X		
- describe departures from <i>Guide</i> or PHS Policy and reasons for departure ⁸	X		
- distinguish significant from minor deficiencies	X		
- include plan and schedule for correction of each deficiency identified ⁹	X		

Reports to Office of Laboratory Animal Welfare (OLAW)

- reports include any minority IACUC views	X		
- annual report to OLAW documents program changes & dates of IACUC semiannual review	X		
- promptly advises OLAW of serious/ongoing <i>Guide</i> deviations or <i>PHS Policy</i> noncompliance	X		
- promptly advises OLAW of any suspension of activity by the IACUC	X		

Reports to United States Department of Agriculture (USDA)

- annual report contains required information	X		
- reporting mechanism in place for IACUC-approved exceptions to the regulations and standards	X		
- reports within 15 days failure to adhere to timetable for correction of deficiencies	X		
- reports suspension of activity by the IACUC to USDA and any Federal funding agency	X		

Records

- minutes of IACUC meetings and semiannual reports maintained for 3 years	X		
- IACUC review documentation maintained for 3 years after end of study	X		
- IACUC review of activities involving animals includes all required information ¹⁰	X		

3. Veterinary Care (See also next section - Veterinary Medical Care)

- institutional arrangement for veterinarian with training or experience in lab animal medicine ¹¹	X		
- veterinary access to all animals	X		
- provision for backup veterinary care	X		
- must provide guidance on handling, immobilization, sedation, analgesia, anesthesia, euthanasia	X		
- must provide guidance/oversight on surgery programs and oversight of postsurgical care	X		
- veterinary authority to oversee all aspects of animal care and use	X		

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL PROGRAM REVIEW CHECKLIST

Institutional Policies and Responsibilities (cont.)

DATE: 3/23/2018

██████████ and Janice Weaver

*A M S

4. Personnel Qualifications and Training

- institution has established and implemented an effective training program	X		
- includes professional/management/supervisory personnel		X	
- includes animal care personnel	X		
- includes research investigators, instructors, technicians, trainees, students	X		

Training program content

- humane practices of animal care (e.g., housing, husbandry, handling) ¹²	X		
- humane practices of animal use (e.g., research procedures, use of anesthesia, pre- and post-operative care) ¹³	X		
- research/testing methods that minimize numbers necessary to obtain valid results	X		
- research/testing methods that minimize animal pain or distress	X		
- use of hazardous agents, including access to OSHA chemical hazard notices where applicable	X		

5. Occupational Health and Safety of Personnel

Institutional program for a safe and healthy workplace

- program is established and implemented	X		
- covers <i>all</i> personnel who work in laboratory animal facilities	X		
- based on hazard identification and risk assessment	X		
- personnel training (e.g., zoonoses, hazards, pregnancy/illness/immunosuppression precautions)		X	
- personal hygiene procedures (e.g., work clothing, eating/drinking/smoking policies)	X		
- procedures for use, storage and disposal of hazardous biologic, chemical and physical agents	X		
- specific procedures for personnel protection (e.g., shower/change facilities, injury prevention)	X		

Program for medical evaluation and preventive medicine for personnel

- pre-employment evaluation including health history	X		
- immunizations as appropriate (e.g., rabies, tetanus) and tests	X		
- zoonosis surveillance as appropriate (e.g., Q-fever, tularemia, Hantavirus, plague)	X		
- procedures for reporting and treating injuries, including bites etc.	X		

Special precautions for personnel who work with primates (*No primate work done*)

- tuberculosis screening includes all exposed personnel	X		
- training and implementation of procedures for bites and scratches	X		
- education regarding <i>Cercopithecine herpesvirus 1</i> (Herpes B)	X		

Notes:

Sections 3 and 4 – The committee has determined that we need to improve the training provided to skilled trade supervisory personnel and skilled trade technicians. ██████████ have led this effort. Process to include them has been developed and details of implementation are being worked out.

*A = acceptable; M = minor deficiency; S = significant deficiency (is or may be a threat to animal health or safety)

SEMIANNUAL PROGRAM REVIEW CHECKLIST

Veterinary Medical Care

DATE: 3/23/2018

██████████ and Janice Weaver

*A M S

1. Preventive Medicine / Animal Procurement and Transportation			
- evaluation of animal vendors	X		
- procedures for lawful animal procurement, evaluation of animals and transport	X		
- procedures for quarantine, stabilization	X		
- policies on separation by species, source, health status	X		
- policies for isolation of sick animals	X		
- program of surveillance, diagnosis, treatment and control of disease	X		
- availability of diagnostic resources for preventive health program	X		
- provision for emergency, weekend and holiday veterinary care	X		
2. Surgery			
- procedures for monitoring surgical anesthesia and analgesia	X		
- pre-surgical plan (e.g., identify space, supplies, conduct pre-op exam, define post-op care)	X		
- appropriate training or experience of personnel in surgery and anesthesia	X		
- major procedures distinguished from minor	X		
- use of effective aseptic procedures for survival surgery	X		
- implemented procedures for use of surgical facility	X		
- implemented procedures for using/scavenging volatile anesthetics	X		
- effective procedures for sterilizing instruments & monitoring expiration dates on sterile packs	X		
- documentation of post-operative monitoring and care	X		
3. Pain, Distress, Analgesia and Anesthesia			
- guidelines for assessment and categorization of pain	X		
- IACUC guidelines for avoiding unnecessary pain and distress	X		
- appropriate anesthetics, analgesics, tranquilizers used for each species	X		
- special precautions for the use of paralytics ¹⁴	X		
- veterinary input in the choice of drugs	X		
4. Euthanasia			
- compliance with current AVMA Panel on Euthanasia unless approved by the IACUC	X		
- guidance provided on appropriate methods for each species	X		
- training available for personnel in humane methods of euthanasia	X		
5. Drug Storage and Control			
- safe, secure, storage arrangement	X		
- record keeping meets regulations	X		
- procedures exist for ensuring drugs are within expiration date	X		

Notes:

SEMIANNUAL FACILITY REVIEW REPORT

Date: 3/16/2018

Team Members: Renee Kent, Daisy Daubert, Karen Barkel and Janice Weaver

Deficiency Category (M or S)	*	Location	Deficiency and Plan for Correction	Responsible Party	Correction Schedule and Interim Status	Date Complete
M			Room needs place to hang mop. Work order should be placed to provide a mop mount.	██████████ will complete work order	6/15/2018	04/02/2018
M			Exposed wire where clock was located. Cover exposed wire (e.g., screw-on cap)	██████████ will file work order	6/15/2018	
M			Rabbits recently moved to ██████████ to be cleaned.	██████████ will oversee correction.	3/23/2018	3/16/2018 Done later that day
M			Constant running water in sink. Plumbing indicates that this must remain running. Complete work order and possibly invite plumbing to next IACUC meeting to explain why they cannot.	██████████ to complete work order & possible invite plumbing to explain the problem	6/15/2018 Head of plumbing ██████████ to investigate	
M	*		Eyewash does not have sufficient pressure. This safety device needs to function at a proper pressure. Although a work order was placed when noted in a prior report, plumbing indicates it cannot alter the pressure.	██████████ to discuss issue with plumbing.	6/15/2018 Head of plumbing ██████████ to investigate	

M= minor deficiency; S = significant deficiency (A significant deficiency is or may be a threat to animal health or safety)

*Check if repeat deficiency

Notes. – Transport vans not checked during inspection as Biology office was closed at that time and in use during the next 2 attempts.

IACUC committee signatures

Semi-Annual report of Facilities Inspection and Animal Care Program Review presented at April 5, 2018 meeting.

A majority of the members must sign the report. Any member that disagrees is asked to provide a minority opinion in writing so that the concern can be documented in the report to the IO.

<u>Name of IACUC</u>	<u>Voting Member</u>

Agree

Disagree

James Scott

Janice Weaver

Appendix 11

Forthcoming
Upon
Completion
Of
Evaluation

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**
Mice	11" x 7" x 5" Cage	10	<i>The Guide</i>	Poly Carbonate Cage Wire Bar Lid Static Micro-Isolator Lid
Rat	18" x 9" x 8" Cage	3	<i>The Guide</i>	Poly Carbonate Cage Wire Bar Lid
Turtles	145 ga. Pond	10	<i>The Guide</i>	Polyethylene Pond Liner
Frogs	50ga Pond	30	<i>The Guide</i>	Polyethylene Pond Liner
Birds	5' x 5' x 6.5' Social 11" x "15 x 12" Individual	Social Housing 25 Birds Individual Housing 1/Cage	<i>The Guide</i>	Stainless Steel Construction

*For aquatic species, provide tank volume.

**Include descriptors such as open-topped, static microisolator, individually-ventilated cage systems (IVCS).

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 circulation, e.g., static, re-circulated, constant flow, or some combination of these. If applicable, indicate water exchange frequency and amount (percentage).
- (6) Provide a key word for filtration employed, e.g., biological, chemical, mechanical, etc. 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	Circulation (5)	Filtration (6)	Disinfection (e.g., UV, ozone)
	Frogs(A)	Group Tanks	Fresh	None	Static/ 100% Water Change 3x Weekly	None	None
	Turtles(A)	Group Tanks	Fresh	None	Static/ 100%Water Change 3x Weekly	None	None

*Records of equipment maintenance (filter changes, UV bulb changes, probe changes, calibrations, etc.) should be available for review.

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	Other Comments
Micro-environment			
Solid-bottom cages (static)	Mechanical Washer	1 x/wk	
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	Mechanical Washer	1 x/2wk	
Filter tops	Mechanical Washer	1 x/2wk	
Cage racks and shelves	Hand Washing	1 x/2wk	
Cage pans under suspended cages	High Pressure Sprayer	1 x/2wk See Comments	Pans are Lined with disposable absorbent liners which are changed every other day.
Play pens, floor pens, stalls, etc.	High Pressure Sprayer	1 x/2wk	Also contact foam sanitization
Corrals for primates or outdoor paddocks for livestock	N/A	N/A	N/A
Aquatic, amphibian, and reptile tanks and enclosures	Hand Washing	1 x-2x/wk	Tanks are fully sanitized between groups. Alkaline soap, followed by Bleach rinse, followed by DI multiple rinses
Feeders	Hand Washing or Mechanical Washer	1 x/2wk or as Needed	If it's soiled, it gets washed sooner.
Watering Devices	Hand Washing or Mechanical Washer	1 x/2wk or as Needed	If it's soiled, it gets washed sooner
Exercise devices and manipulanda used in environmental enrichment programs, etc.	Hand Washing or Mechanical Washer	1 x/2wk or as needed	If it's soiled, it gets washed sooner
Transport cages	Hand Washing or Mechanical Washer	1 x/wk or as needed	If it's soiled, it gets washed sooner

Operant Conditioning & Recording Chambers, Mechanical Restraint Devices (chairs, slings, etc.)	Hand Washing	1 x/wk or as needed	If it's soiled, it gets washed sooner
Euthanasia Chambers	Hand Washing	After each Euthanasia Series	

Area	Washing/Sanitizing Method (mechanical washer, hand washing, high-pressure sprayers, etc.)	Washing/ Sanitizing Frequency	Other Comments
Macro-Environment			
ANIMAL ROOMS			
Floors	High-pressure sprayers or Mopping	3x-5x/wk See Comments	Non-contact floors are mopped during the week. Contact floors are cleaned Bi-Weekly.
Walls	High-pressure sprayers or Mopping	See Comments	Bi-Weekly for Birds and Rabbits Quarterly for all Others
Ceilings	High-pressure sprayers or Mopping	See Comment	Bi-Weekly for Birds and Rabbits Quarterly for all Others
Ducts/Pipes	N/A	See Comment	Not Exposed.
Fixtures	Hand Wash	Weekly	
CORRIDORS			
Floors	Mopping	Weekly or as Needed	
Walls	Hand Wash	Quarterly	
Ceilings	Hand Wash	Quarterly	
Ducts/Pipes	<u>N/A</u>	See Comment	Not Exposed
Fixtures	<u>Hand Wash</u>	Weekly	
SUPPORT AREAS (e.g., surgery, procedure rooms, etc.) Complete for each area:			
Floors	<u>Mopping</u>	3x-5x/wk	
Walls	<u>Hand Washing</u>	Quarterly or as Needed needed <u>ed</u>	
Ceilings	<u>Hand Washing</u>	Quarterly or as Needed needed <u>ed</u>	

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Ducts/Pipes	<u>N/A</u>	See Comment	Not Exposed	Formatted: Centered
Fixtures	Hand Washing	Weekly		
IMPLEMENTS (note whether or not shared)				
Mops	<u>Bleach Soak</u>	<u>Weekly</u>	<u>Not Shared</u>	Formatted: Centered
Mop buckets	<u>Bleach Soak</u>	<u>Weekly</u>	<u>Not Shared</u>	Formatted: Centered
Aquaria nets	<u>Aquanox Soak</u>	<u>Weekly</u>	<u>Not Shared</u>	Formatted: Centered
Other	<u>N/A</u>	<u>N/A</u>		Formatted: Centered
OTHER	<u>N/A</u>	<u>N/A</u>		Formatted: Centered
Vehicle(s)	<u>Protective cover</u> <u>Disposable</u>	<u>As used</u>	<u>Shared</u>	Formatted: Centered
Other transport equipment (list)	N/A	N/A	N/A	

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
		Cage and Bottle washer	Emergency “off” button; labeled exit door, de-energizing cord on both sides, instructional signage	Guarantee 180-degree hot water rinse; temperature-sensitive tape used weekly; ATP of caging tested semi-annually
		None – hand-washing area	Limited to PPE	Visual assessment
Both		Pressure washer	Off Button/Cord GFI	RODAC plating

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:	Ferris Main Campus
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[Note: Please remove the examples provided in the Table below.]

Room Type ^(a)	Light Intensity Range	Lighting Fixture Construction Features ^(b)	Photo-period (hrs) ^(c)	Photoperiod and Lighting Control
All Animal Holding Rooms	130-300 lux	Surface mounted, or recessed water resistant	12:12	Automatic Timers
Surgery	500 lux	Surface mounted, water resistant; arm-mounted, water resistant	NA	N/A
Cage-Washing Room	Not measured	Surface mounted, water proof	NA	N/A

FREEDOM OF INFORMATION ACT SECTION 10

15.240. amended Options by requesting person; appeal; actions by public body; receipt of written appeal; judicial review; civil action; venue; de novo proceeding; burden of proof; private view of public record; contempt; assignment of action or appeal for hearing, trial, or argument; attorneys' fees, costs, and disbursements; assessment of award; damages.

Sec. 10. (1) If a public body makes a final determination to deny all or a portion of a request, the requesting person may do 1 of the following at his or her option:

(a) Submit to the head of the public body a written appeal that specifically states the word "appeal" and identifies the reason or reasons for reversal of the denial.

(b) Commence a civil action in the circuit court, or if the decision of a state public body is at issue, the court of claims, to compel the public body's disclosure of the public records within 180 days after a public body's final determination to deny a request.

(2) Within 10 business days after receiving a written appeal pursuant to subsection (1)(a), the head of a public body shall do 1 of the following:

(a) Reverse the disclosure denial.

(b) Issue a written notice to the requesting person upholding the disclosure denial.

(c) Reverse the disclosure denial in part and issue a written notice to the requesting person upholding the disclosure denial in part.

(d) Under unusual circumstances, issue a notice extending for not more than 10 business days the period during which the head of the public body shall respond to the written appeal. The head of a public body shall not issue more than 1 notice of extension for a particular written appeal.

(3) A board or commission that is the head of a public body is not considered to have received a written appeal under subsection (2) until the first regularly scheduled meeting of that board or commission following submission of the written appeal under subsection (1)(a). If the head of the public body fails to respond to a written appeal pursuant to subsection (2), or if the head of the public body upholds all or a portion of the disclosure denial that is the subject of the written appeal, the requesting person may seek judicial review of the nondisclosure by commencing a civil action under subsection (1)(b).

(4) In an action commenced under subsection (1)(b), a court that determines a public record is not exempt from disclosure shall order the public body to cease withholding or to produce all or a portion of a public record wrongfully withheld, regardless of the location of the public record. Venue for an action against a local public body is proper in the circuit court for the county in which the public record or an office of the public body is located has venue over the action. The court shall determine the matter de novo and the burden is on the public body to sustain its denial. The court, on its own motion, may view the public record in controversy in private before reaching a decision. Failure to comply with an order of the court may be punished as contempt of court.

(5) An action commenced under this section and an appeal from an action commenced under this section shall be assigned for hearing and trial or for argument at the earliest practicable date and expedited in every way.

(6) If a person asserting the right to inspect, copy, or receive a copy of all or a portion of a public record prevails in an action commenced under this section, the court shall award reasonable attorneys' fees, costs, and disbursements. If the person or public body prevails in part, the court may, in its discretion, award all or an appropriate portion of reasonable attorneys' fees, costs, and disbursements. The award shall be assessed against the public body liable for damages under subsection (7).

(7) If the court determines in an action commenced under this section that the public body has arbitrarily and capriciously violated this act by refusal or delay in disclosing or providing copies of a public record, the court shall order the public body to pay a civil fine of \$1,000.00, which shall be deposited into the general fund of the state treasury. The court shall award, in addition to any actual or compensatory damages, punitive damages in the amount of \$1,000.00 to the person seeking the right to inspect or receive a copy of a public record. The damages shall not be assessed against an individual, but shall be assessed against the next succeeding public body that is not an individual and that kept or maintained the public record as part of its public function.

15.240a.added Fee in excess of amount permitted under procedures and guidelines or MCL 15.234.

Sec. 10a. (1) If a public body requires a fee that exceeds the amount permitted under its publicly available procedures and guidelines or section 4, the requesting person may do any of the following:

(a) If the public body provides for fee appeals to the head of the public body in its publicly available procedures and guidelines, submit to the head of the public body a written appeal for a fee reduction that specifically states the word "appeal" and identifies how the required fee exceeds the amount permitted under the public body's available procedures and guidelines or section 4.

(b) Commence a civil action in the circuit court, or if the decision of a state public body is at issue, in the court of claims, for a fee reduction. The action must be filed within 45 days after receiving the notice of the required fee or a

determination of an appeal to the head of a public body. If a civil action is commenced against the public body under this subdivision, the public body is not obligated to complete the processing of the written request for the public record at issue until the court resolves the fee dispute. An action shall not be filed under this subdivision unless 1 of the following applies:

- (i) The public body does not provide for appeals under subdivision (a).
- (ii) The head of the public body failed to respond to a written appeal as required under subsection (2).
- (iii) The head of the public body issued a determination to a written appeal as required under subsection (2).

(2) Within 10 business days after receiving a written appeal under subsection (1)(a), the head of a public body shall do 1 of the following:

(a) Waive the fee.

(b) Reduce the fee and issue a written determination to the requesting person indicating the specific basis under section 4 that supports the remaining fee. The determination shall include a certification from the head of the public body that the statements in the determination are accurate and that the reduced fee amount complies with its publicly available procedures and guidelines and section 4.

(c) Uphold the fee and issue a written determination to the requesting person indicating the specific basis under section 4 that supports the required fee. The determination shall include a certification from the head of the public body that the statements in the determination are accurate and that the fee amount complies with the public body's publicly available procedures and guidelines and section 4.

(d) Issue a notice extending for not more than 10 business days the period during which the head of the public body must respond to the written appeal. The notice of extension shall include a detailed reason or reasons why the extension is necessary. The head of a public body shall not issue more than 1 notice of extension for a particular written appeal.

(3) A board or commission that is the head of a public body is not considered to have received a written appeal under subsection (2) until the first regularly scheduled meeting of that board or commission following submission of the written appeal under subsection (1)(a).

(4) In an action commenced under subsection (1)(b), a court that determines the public body required a fee that exceeds the amount permitted under its publicly available procedures and guidelines or section 4 shall reduce the fee to a permissible amount. Venue for an action against a local public body is proper in the circuit court for the county in which the public record or an office of the public body is located. The court shall determine the matter de novo, and the burden is on the public body to establish that the required fee complies with its publicly available procedures and guidelines and section 4. Failure to comply with an order of the court may be punished as contempt of court.

(5) An action commenced under this section and an appeal from an action commenced under this section shall be assigned for hearing and trial or for argument at the earliest practicable date and expedited in every way.

(6) If the requesting person prevails in an action commenced under this section by receiving a reduction of 50% or more of the total fee, the court may, in its discretion, award all or an appropriate portion of reasonable attorneys' fees, costs, and disbursements. The award shall be assessed against the public body liable for damages under subsection (7).

(7) If the court determines in an action commenced under this section that the public body has arbitrarily and capriciously violated this act by charging an excessive fee, the court shall order the public body to pay a civil fine of \$500.00, which shall be deposited in the general fund of the state treasury. The court may also award, in addition to any actual or compensatory damages, punitive damages in the amount of \$500.00 to the person seeking the fee reduction. The fine and any damages shall not be assessed against an individual, but shall be assessed against the next succeeding public body that is not an individual and that kept or maintained the public record as part of its public function.

(8) As used in this section, "fee" means the total fee or any component of the total fee calculated under section 4, including any deposit.