Program Description
Animal Care and Use Program

11301 Wilshire Boulevard

Los Angeles, CA 90073

AAALAC accreditation number VA-068

August 1, 2020

(amended 9/16/2020)

For

AAALAC International

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Appendices

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.

VA Greater Los Angeles Healthcare System, Department of Veterans Affairs (AKA: VAGLAHS)

North Hills Location:

- Sepulveda Ambulatory Care Center (AKA: Sepulveda, Sepulveda/VMU, SACC, or Splvd).

West Los Angeles Location:

- West Los Angeles Healthcare Center (AKA: West Los Angeles, WLA/VMU, or WLA)

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.

The VA Greater Los Angeles Healthcare System (VAGLAHS) is one of the largest and most complex healthcare systems within the Department of Veterans Affairs. VAGLAHS consists of five ambulatory care centers throughout Southern California and a tertiary care facility located in West Los Angeles. The geographic distribution of the ambulatory care centers allows VAGLAHS to serve Veterans residing throughout five counties: Los Angeles, Ventura, Kern, Santa Barbara, and San Luis Obispo. The organization is affiliated with the University of California Los Angeles (UCLA) David Geffen School of Medicine and the University of Southern California (USC) Keck School of Medicine, as well as more than 45 colleges, universities, and vocational schools in 17 different medical, nursing, paramedical and administrative programs.

The animal research program is centered at the . The research supports the overall goals of the Veterans Administration by providing a means for talented professionals to contribute to increasing scientific knowledge in fields that are particularly important to the VA patient population, including Alzheimer's disease, cancer, traumatic brain injury, epilepsy, bone healing, infectious disease, drug addiction, sleep disorders, and gastrointestinal disorders. In addition, VAGLAHS supports researchers based at ,

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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 (pertinent local and national 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.

VAGLAHS uses the standards of the Guide, PHS Policy, and VA Handbook 1200.07 for all animals, and the Animal Welfare Act regulations for covered species.

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

Title	Name	Degree(s)
CEO and Institutional Official Chief of Staff (COS)	Steven E. Braverman Steven R. Simon	M.D. MD, MPH
Associate COS – Research and Development (ACOS/R&D)	[redacted] (as of 9/6/2020)	M.D., Ph.D.

Deputy ACOS/R&D	[redacted] (as of 9/6/2020)	Ph.D.
Administrative Officer (AO)-Research and Development	[redacted]	Dr. P.H.
Animal Program Compliance Officer (APCO)	[redacted]	Ph.D.
Chief, Veterinary Medical Officer (VMO)	[redacted]	D.V.M., M.A., DACLAM
Clinical Veterinarian	[redacted]	D.V.M.

Title	Number of Employees
VMU Facilities Manager/Veterinary Technician	1
Animal Care Technicians	7
Total Technical Staff	8

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.

Title
Director (Institutional Official)
Chief of Staff
Associate Chief of Staff, Research and Development
Deputy ACOS, R&D
Institutional Animal Care and Use Committee (IACUC) Chair
Veterinary Medical Officer
Veterinary Medical Unit Facilities Manager
Clinical Veterinarian
Administrative Officer, Research and Development
Animal Program Compliance Officer
Chief of Communications and External Affairs
Occupational Health Physician
Subcommittee for Research Safety (SRS) Chair
Research Biosafety Officer (RBSO)
Chief, Industrial Hygiene

IACUC Coordinator

SRS Coordinator

Radiation Safety Officer

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 research programs at VAGLAHS are Medical Research, Neurology, Rehab Medicine, and Psychiatric research. The research portfolio includes nationally and internationally recognized programs in several important areas. There is a very active group of investigators whose research focus is on sleep disorders and narcolepsy at the campus. Other groups study cancer, epilepsy, and bone metabolism and repair. The program at the campus includes the CURE: Digestive Diseases Research Center group, a highly regarded collaboration between and the VA. Another highly recognized group studies Alzheimer's disease, focusing on strategies for prevention using state of the art techniques to examine the effect of anti-inflammatory agents and dietary interventions on plaque formation and cognitive decline. In addition, this institution is home to a nationally ranked Cancer Research program, and is one of six sites selected nationally for a Parkinson's Research and Education program. Other research at this campus looks at epilepsy, infectious diseases (Cryptococcus and Leptospirosis), and heart disease.

The animal research program at VAGLAHS supports the work of 55 Principal Investigators with 86 animal use protocols.

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

The research is funded by grants from the Department of Veterans Affairs, as well as , private foundations, corporate sponsored research, departmental grants, and research funded by private individuals.

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.

N/A

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 contractor's relevant 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.

N/A

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

N/A

Section 2. Description

I. Animal Care and Use Program

A. Program Management

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

a. The Institutional Official [*Guide* pp. 13-14]
Describe how program needs are clearly and regularly communicated to the Institutional Official by the Attending Veterinarian, IACUC/OB, and others associated with the program.

The IO is an ex officio member of the Research and Development Committee (RDC). As a member, the IO regularly receives the minutes, compliance and other IACUC reports on the monthly RDC agenda. In addition, twice each year a meeting is held with the Institutional Official to review the semi-annual Program Review and Facilities Inspection reports. Present at that meeting are the Veterinary Medical Officer, the IACUC Chair and the Animal Program Compliance Officer, along with other members of the IACUC and Research Administration, if available. A representative of the Medical Center Research Compliance Office is also usually present.

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 VMO is responsible for the health and wellbeing of all laboratory animals used at VAGLAHS. The institution has provided the VMO with access to all animals, resources to manage the program of veterinary care and sufficient authority to oversee all aspects of animal care and use (e.g., husbandry, housing) to insure that the program complies with the Guide.

There are three levels of animal monitoring by the VMU staff. Caretakers check all VMU animals every day. VMU veterinary staff check all animals inside the VMU and animals housed in the labs on a weekly basis. In addition, VMU veterinary staff checks all animals requiring a health check, as requested by laboratory or VMU personnel, on a daily basis. Laboratory staff members are required to check on their animals daily and report any health or behavioral concerns to the veterinarian.

	Plans/Advises	Oversees	Condu
1) Disease detection and surveillance, prevention diagnosis, treatment, and resolution	X	X	X
2) Handling and restraint; anesthetics, analgesics and tranquilizer drugs; and methods of euthanasia	X	X	X
3) Surgical and post-surgical care	X	X	X
4) Promotion and monitoring of animal's physical and psychological well-being	X	X	X
5) Oversees adequacy of the husbandry program	X	X	X
6) Involved in the review and approval of all animal care and use, e.g., via a role on the IACUC	X	X	X
7) Training of institutional staff in the care and use of laboratory animals	X	X	X
8) Assists in establishment and/or monitoring of occupational health and safety program	X		
9) Monitors for zoonotic diseases	X	X	X
10) Advises on and monitors biohazard control policies and procedures relevant to the animal care and use program	X	X	

Name of veterinarian(s)	If full time, indicate time dedicated to animal care and use program
VMO	100%

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.

None

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.

MOUs are maintained with and the , (the one with is currently being renewed). These documents specify the respective IACUC oversight responsibilities at the off-site locations. Interinstitutional Assurances are in place with , Inc., and with

Animal care and use responsibility is specified in each ACORP.

Ownership of animals at off-site locations is determined by the funding source. For example, animals purchased with a VA grant remain VA property even if they are at an off-site location.

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.

All research staff working with animals (Principal Investigators, students, laboratory staff, visiting scholars, etc.) are required to pass the test for the general VA on-line course "Working with the VA IACUC" at http://www.citiprogram.org every three years. In addition, every three years all research personnel are required to pass the species-specific exams at http://www.citiprogram.org for the particular species they work with as listed on animal-use protocols.

Training is checked by the IACUC coordinator when a new protocol is submitted, when a protocol is submitted for triennial review, and when new staff are added. We have recently transitioned to using the IMEDRIS on-line protocol submission system which allows PIs to check the training of their staff anytime.

In some instances the IACUC may conclude that training has been inadequate or ineffective. These may be cases in which issues of noncompliance have been brought to the IACUC. The IACUC may then require individuals to re-take the relevant training or take additional deficiency-specific training as part of the remediation. In other cases a widespread problem will be seen as requiring new or revised training.

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.

Title	Describe qualifications, training, continuing education
Veterinary Medical Officer	Diplomate, American College of Laboratory Animal Medicine DVM - Cornell University, NYSCVM MA- Anthropology- New York University Over 25 years of experience in the field of Laboratory Animal Medicine.Previous experience as Clinical Veterinarian at the National Institutes of Health (NIH) Animal Center and Clinical/Research Veterinarian at the Animal Resources Center and Neurobiological Institute of the University of Puerto Rico. Previously the Clinical/Research Veterinarian at the VAGLAHS/UCLA Vervet Research Colony (VRC). MA degree field research conducted on free ranging and captive macaques (Caribbean Primate Research Center, University of Puerto Rico, Wisconsin National Primate Research Center). Member of Association of Primate Veterinarians, American Society of Primatologists, CLAMS, AVMA, AALAS and ACLAM.
Clinical Veterinarian	Diplomate, American College of Laboratory Animal Medicine DVM - Cornell University, NYSCVM MA- Anthropology- New York University Over 25 years of experience in the field of Laboratory Animal Medicine.Previous experience as Clinical Veterinarian at the National Institutes of Health (NIH) Animal Center and Clinical/Research Veterinarian at the Animal Resources Center and Neurobiological Institute of the University of Puerto Rico. Previously the Clinical/Research

Veterinarian at the VAGLAHS/UCLA Vervet Research Colony (VRC). MA degree field research conducted on free ranging and captive macaques (Caribbean Primate Research Center, University of Puerto Rico, Wisconsin National Primate Research Center). Member of Association of Primate Veterinarians, American Society of Primatologists, CLAMS, AVMA, AALAS and ACLAM.

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

1) Indicate the number of animal care personnel.

8

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.

Caretaker	Training	Certification	Experience	Continuing Education Opportunities
Caretaker 1	Animal Care & Husbandry	LATg	29 yrs.	On-line courses provided by the VA at www.researchtraining.org, and continuing education provided by the supervisory staff.
Caretaker 2	Animal Care & Husbandry	None	20 yrs.	On-line courses provided by the VA at www.researchtraining.org, and continuing education provided by the supervisory staff.
Caretaker 3	Animal Care & Husbandry	ALAT	20 yrs.	On-line courses provided by the VA at www.researchtraining.org, and continuing education provided by the supervisory staff.
Caretaker 4	Animal Care & Husbandry	None	33 yrs.	On-line courses provided by the VA at www.researchtraining.org, and continuing education provided by the supervisory staff
Caretaker 5	Animal Care & Husbandry	LAT	26 yrs.	On-line courses provided by the VA at www.researchtraining.org, and

Caretaker 6	Animal Care & Husbandry	LAT	27 yrs.	continuing education by the supervisory On-line courses pro the VA at www.researchtraining continuing education by the supervisory
Caretaker 7	Animal Care & Husbandry	None	20 yrs.	On-line courses pro the VA at www.researchtraining continuing education by the supervisory
Facilities Manager/Supervisor	Veterinary technician	RVT, RLATg, CMAR	20 yrs.	On-line courses provi the VA at www.researchtraining continuing education by the supervisory sta AALAS meeting atte

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.

Each person working with animals is required to take on-line training at http://www.citiprogram.org as described under part a) below.

The records of the http://www.citiprogram.org training for researchers at VAGLAHS are regularly downloaded to our IMEDRIS on-line submission system. Ongoing monitoring of training is carried out by the IACUC Coordinator. The IACUC Coordinator checks the CITIProgram.org IACUC-specific training of each person on the protocol for each submission received for review by the IACUC, whether a new, three year continuation, renewal, or a modification. The IACUC Coordinator verifies that all persons listed on the protocol are current on their CITI Program.org training. If anyone listed on the submission is not current on their IACUC-specific training, in the IACUC review decision memo the IACUC notifies the PI that the person(s) in question may not work on this protocol until his/her training is up to date.

In addition, the IACUC requires the training and experience of each person doing a particular procedure with animals to be described in the research protocol. If the IACUC has concerns about the competency of any person to perform a procedure, the IACUC review decision memo includes a stipulation that the veterinary medical officer or clinical veterinarian must be present to observe the procedure the first time it is performed by the person(s).

In some cases (such as work with a hazardous agent), the Subcommittee for Research Safety (SRS) may require the RBSO or other person with relevant

expertise to be present, require an SOP be developed and approved by the SRS or make other requirements before granting SRS approval.

a) Briefly describe the content of any required training.

Each person working with animals is required to take on-line training at CITIProgram.org (http://www.citiprogram.org). Required courses include "Working with the VA IACUC" and the species-specific courses. In addition, each person who works on protocols involving rodent surgery is required to take "Post-Procedural Care of Rodents." Persons who will work with gas anesthetics must take "Waste Anesthetic Gases Training for Research Staff."

The researchers listed on the protocol may be required to have additional training by appropriate staff for specific procedures. For example, they may be required to be trained by the veterinary staff for a blood-sampling technique or by the RBSO for proper handling of a hazardous agent.

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

The PI and their staff listed in the animal research protocol are required to complete all required on-line training before beginning work. In some cases, as noted above, they will also be required to complete hands-on training for particular procedures either before performing that procedure, or at the beginning of the study, as determined by the IACUC.

c) Describe continuing education opportunities offered.

As noted above, all researchers working with animals are expected to complete on-line CITI Program.org species-specific training every three years. In addition, they must take an annual Laboratory Hazard Communication and Research Safety CITI Program course.

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]

The IACUC reviews the credentials and experience level of all investigators at the time of protocol review and requires specific information be provided

concerning who will train staff who are not already trained to perform the surgeries.

Non-rodent surgeries: A VMU veterinary technician or veterinarian attends all non-rodent surgeries, generally acting as the anesthetist and in some cases as a general assistant. These VMU staff members are therefore in a good position to evaluate and supervise non-rodent surgery.

Rodent surgeries: Rodent surgery is under the direction of an investigator who has been authorized by the IACUC to conduct the work in question.

In some cases a VMU staff member such as a veterinarian or veterinary technician will attend the surgery when someone is performing it for the first time, to provide assistance or to confirm that surgical procedures are being conducted correctly.

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

Staff performing anesthesia are required to be current on the relevant CITI Program.org courses as described above, and to describe their experience with the method(s) of anesthesia they are to use in the species indicated.

The VMU staff routinely provides training in anesthesia methods to any laboratory staff members who request it.

If either the veterinarian or the IACUC have concerns about the training and competency of the research staff to perform the anesthesia, training by the veterinary staff is required before work may commence.

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

Anyone listed as doing euthanasia on a protocol is required to be current on the relevant CITI Program.org courses as described above.

The IACUC requires the training and experience of each person working with animals to be described in the research protocol, section E (Current Qualifications and Training).

The protocol undergoes a veterinary pre-review during which the veterinarian notes any concerns, including concerns about euthanasia technique or training. These notes are provided to the PI and the IACUC in writing.

If upon review the IACUC has concerns about the competency of the researchers to perform the euthanasia technique(s), the IACUC review decision memo includes a stipulation that either the research staff must be

trained by the veterinarian before work begins, or a veterinarian must be present to observe the procedure the first time it is performed.

There is an SOP "CO2 euthanasia instructions" which gives detailed instructions on this form of euthanasia. Equipment is setup for CO2 euthanasia in both the VMUs and detailed instructions are posted on the wall in both units.

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).

Entities involved in the Occupational Health and Safety Program are: Administrative Medicine (employee health), Research and Development Service Administration, the IACUC, the Subcommittee on Research Safety (SRS) and the Medical Center Industrial Hygiene Office

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 nonaffiliated 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.].

An Annual Workplace Evaluation (AWE) in which a site-visit team inspects the VMU and the labs with our RBSO specifically looks for work-related hazards. We are required to remediate any hazards found.

Employees are evaluated by our Occupational Health program, with distinctions between employee types as noted below.

Total amount of contact time with animals in the past year (include contact with animal tissues, waste, body fluids, carcasses, or animal quarters):

More than one hour per week

One hour or less per week

Other (to be explained by the employee)

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

The AWE is an annual inspection of the labs and VMU.
The medical evaluation of employees is also annual.

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]

All workplace injuries, exposures, accidents, etc., are to be reported to the Research Biosafety Officer (RBSO). The RBSO helps the person fill out an on-line VA report called ECOMP that automatically tracks these incidents. The RBSO gives a monthly injury report to the IACUC and SRS. In the last ten years, there has only been one animal research-related injury and that was a mouse bite.

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.

No exposure or risk from laboratory animals. (These people do not receive a personal medical evaluation as a component of individual risk assessment.)

All these other categories do receive a personal medical evaluation as a component of individual risk assessment.

Total amount of contact time with animals in the past year (include contact with animal tissues, waste, body fluids, carcasses, or animal quarters):

More than one hour per week

One hour or less per week

Other (to be explained by the employee)

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

People are required to participate in the VA program or an equivalent one at our affiliate (such as UCLA). They are permitted to decline particular services (such as vaccinations).

c) Describe provisions for assuring confidentiality of medical information.

The employee fills out a medical questionnaire (see appendix 6 below) which is given to employee health. Information in employee health has the same protections as health information for any Veteran patient. If there are any issues, Employee Health contacts the person directly. If the person is cleared for animal research work, Employee Health then sends an email to Research Administration that just states they are cleared for this work.

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

We have no open laboratories.

Inside the VMU the VMU staff let contractors and such in and should alert them to any specific hazards and what precautions to take and PPE to wear. In addition, there are signs on the doors for the required PPE to wear.

Animal labs and satellite housing areas are monitored by the laboratory staff who should alert contractors and such to any specific hazards and what precautions to take and PPE to wear

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.

Everyone gets a pre-employment physical, plus annual follow up evaluations. We have no potentially hazardous species such as nonhuman primates, sheep, or venomous species. Employee health provides immunizations for free. The employee health physicians communicate directly with the employees about health-related issues.

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.

Our West LA campus has an emergency room as part of the VA hospital that employees can go to for emergency care or if injured outside of working hours. If they are our Sepulveda campus they are supposed to go to the nearest emergency room.

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.

People are supposed to take the on-line CITI Program Course "Laboratory Hazard Communication and Research Safety / Biosafety Annual Refresher every year. People working with animals are supposed to be current on the CITI Program species-specific courses which cover zoonoses, allergies, etc.

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.

Face masks (ear-loop type), disposable gowns, gloves, hair bonnets, booties.

b) Describe arrangements for laundering work clothing.

The VMU has its own washers and driers for the VMU staff members' uniforms.

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.

After removing gloves, people are expected to use hand sanitizer (dispensers are strategically placed on the walls in certain areas) or to wash their hands at the sink.

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

None of these are permitted in the animal facilities. There are breakrooms where the VMU staff can eat and drink. Smoking is not permitted inside VA buildings.

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).

Noisy areas: People have a choice of using earmuffs or disposable foam earplugs.
Chemicals: Cage wash chemicals are in closed plastic barrels with tubing for pumping the chemicals directly to the cage washer so staff never need to pour out and measure chemicals. For Clidox preparation we use Clidox mixing stations for the same reason. Where the chemicals are stored there is warning signage and a spill kit.
Ergonomics: Staff are provided with ergonomic keyboards and mice, and back belts for heavy lifting. Heat-resistant gloves are provided for work with hot items (such as the autoclave) and boots for working in wet areas. Staff can request an ergonomic evaluation if desired.
Animals: We have no non-human primates or farm animals. We have occasionally had animals that were very aggressive (certain mouse strains, or certain rat epilepsy models) where staff were provided with heavy bite-proof gloves.

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

Main allergen source is from rodent dander and cage litter. Many of our rodents are in ventilated racks which minimize staff exposure. PPE, including boxes of ear loop masks, are always provided and people are supposed to put them on before entering an animal room.

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

We have rodent models of Helicobacter pylori, Cryptococcus neoformans, and Leptospirosis species. We also have cancer models using human and animal tumor lines in immunocompromised mice. At we have two ABSL-2 suites of this work, one for the pathogens and one for the immunocompromised mouse tumor work.

1) Each suite has an anteroom between the hallway and the ABSL-2 rooms.

2) A special security code is needed to enter the anteroom from the hallway.
3) Inside each ABSL-2 room housing is a biosafety cabinet – the cages are to be opened inside the biosafety cabinet.
4) Each suite has an ABSL-2 procedure room with a biosafety cabinet and isoflurane anesthesia system.
5) One of the ABSL-2 housing rooms has a ventilated rack, with is specifically used for the leptospirosis work.
6) As people exit the suite PPE that was used with these animals is removed and disposed of in the anteroom, and hand sanitizer applied and fresh PPE put on to enter the hallway.
7) All cages and related materials from these rooms are bagged and autoclaved before cleaning.

Our campus has one room inside a laboratory that is used for cancer models using human and animal tumor lines in immunocompromised mice. People must don PPE before entering this room and upon leaving, and animal cages must only be opened inside the biosafety cabinet that is inside the room.

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

Eyewash stations are flushed weekly.
Autoclaves have a monthly spore test.
Dump stations, fume hoods, and biosafety cabinets are tested every six months by an outside testing company.

e) Respiratory Protection

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

N95 respirators are required for cage dumping at cage dumping stations. Standard PPE is available for use in cage wash areas and required in small animal rooms. Personnel identified as developing or having laboratory animal allergies are strongly recommended to use the N95 respirator type identified by IH and are fit and trained by IH in its use.

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

Medical Clearance is done by the office of Administrative Medicine (employee health). Fit-testing and training on respirators are done by Industrial Hygiene. VMU staff are fit tested annually by IH.

Recommendations on what type of mask is appropriate is made according to the nature of exposure and health status of the individual.

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

Selection of appropriate respiratory protective equipment is determined by IH and reassessed annually by IH staff.

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).

The VMU maintains a Lynx cagewash, a Steris cagewash and a Steris autoclave in . In we have a Steris cagewash and autoclave. All VMU staff are trained with three VMU SOPs describing safety, maintenance and use of this equipment. VMU staff are trained on how to get out of the cagewash in an emergency and abort wash cycles. All units are supplied with informational and safety signage. All personnel on the clean side of the cage wash are required to use heat resistant gloves to remove equipment from the cagewash and autoclaves.

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.

We have a large transport truck (1.5 tons) for the purpose of transporting large equipment (not animals). VMU personnel are trained on the VMU Vehicle Use Log and Maintenance SOP, and sign off as having been trained. Maintenance logs and mileage check sheets are maintained for this vehicle. Drivers must be licensed and trained to drive this truck.

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.

We have climate-controlled vans which are used to transport animals between buildings, and between campuses. Although is no divider in the vans to separate the driver from the animals, rodents are maintained exclusively in microisolator cages to minimize allergen exposure. The interior of the van is wiped down with an ammonium hypochlorite solution following every animal transport use. Occasionally investigators or lab staff personnel will be transported with their animals to their destinations.

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

The only volatile anesthetic used is isoflurane, and everyone using it is required to take an on-line training course on safe usage. Where possible, waste gas is either removed by vacuum or the surgery is done in a fume hood. If this is not possible, then charcoal canisters are used to scavenge the isoflurane and are supposed to be changed when they have gained a specific amount of weight. (50 grams for the standard f/air canisters).

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.

Biological Agents	BSL level
3LL murine lung tumor cells	1
AAV DJ-EF1-DIO mCherry and AAV DJ-EF1-DIO hChR2 (H134R)-mCherry	1

AAV-DJ-EF1-DIO- mCherry and AAV DJ0EF1-DIO hChR2(H134R)-mCherry	1
AAV-hSyn1-GcamP6f/s-P2A-nls-dTomato	1
AAV-hSyn-DIO-hM3Dq-mCherry	1
AAV-hSyn-DIO-hM4Di-mCherry	1
AAV-hSyn-DIO-mCherry	1
ARCaPM cells	2
CAL27 and CCL23	2
Collagen Glycosaminoglycan Scaffolds	1
Collagen Glycosaminoglycan Scaffolds with adult human stem cells	2
Collagen Glycosaminoglycan Scaffolds with rabbit BMSCS	1
Cryptococcus neoformans	2
CST6 cells (HeLa cells containing the CST6 gene plasmid)	2
CWR22Rv1	2
DREADD viral vectors	1
Excitatory DREADD EF1a-DIO-hM3Dq-mCherry-AAV-10	1
Fibrin	1
Helicobater pylori mutants	2
Helicobater pylori ATCC 43504	2
Human adipose stromal cells	2
Human feces (gut microbiota)	2
Human GBM cell lines (ATCC)	2
Human head and neck cancer cells	2
Human Liver cancer tissue sample	2
Human MM cell lines	2
Human Ovarian Cancer cell from patients	2
Human Ovarian Cancer cell line (SKOV)	2
Inhibitory DREADD EF1a-DIO-hM3Dq-mCherry-AAV-10	1
Leptospira	2
LNCaP cells	2
Mineralized Collagen Glycosaminoglycan Scaffolds	2
Mineralized Collagen Glycosaminoglycan Scaffolds with adult human stem cells	2
Mineralized Collagen Glycosaminoglycan Scaffolds with rabbit BMSCS	2
Mouse cancer cells	2
Mouse mesenchymal cells (BSN)	1
Mouse mesenchymal cells (mk3/mk4)	1
Mouse stem cell	1
Mouse ureteric bud cells (CMUB1)	1
mouse ureteric bud cells (mlMCD)	1
Murine bone marrow dendritic cells gene modified to express CCL21	1
Myeloma cell line	2
pAAV.Syn.GcaMP5/7s,m,f.WPRe.SV40 or similar	1
pAAV-hSyn-DIO-EGFP	1

pAAV-hSyn-DIO-hM3Dq-mCherry and AAV-hSyn-DIO-mCherry	1
pAAV-hSyn-DIO-hM4Di-mCherry (viral vector)	1
pAAV-hSyn-DIO-hM4Di-mCherry and AAV-hSyn-DIO-mCherry	1
pAAV-hSyn-DIO-mCherry	1
pAAV-hSyn-DIO-mCherry (viral vector)	1
pAAV-Syn.Flex.NES-jRCaMP1b.WP.RE.SV40	1
Pathogenic leptospiral mutants (transposon mutagenesis)	2
Pathogenic leptospiral spp	2
Patient derived tissues	2
pGP-AAV-syn-FLEX-jGCaMP7f-WPRE	1
pGP-AAV-syn-FLEX-jGCaMP7f-WPRE and pAAV-hSyn-DIO-EGFP	1
Primary mouse mesenchymal cells	1
Primary mouse ureteric bud cells	1
Recombinant adeno-associated virus,type 9 replication-deficient carrying GFP	1
Recombinant adeno-associated virus,type 9 replication-deficient carrying td Tomato	1
Recombinant adeno-associated virus,type 9 replication-deficient carrying YFP	1
Recombinant cholrea toxin unit B-Alexa Fluor 488	1
Recombinant cholrea toxin unit B-Alexa Fluor 555	1
Recombinant cholrea toxin unit B-Alexa Fluor 647	1
SCC1 (oral cancer cell line)	2
Tumor cell lines (HeLa, CST6 and SiHa)	2
Various gene deletion strains of Helicobater pylori ATCC 43504	2
Virus encoding a humanized Renilla green fluoresent protein (AAV10-ChR2-GFP)	1
Virus encoding a red fluorescent protein mCherry tagged with ChR2-mCherry)	1

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

Chemical Agents	Category of hazard (toxicant, toxin, irritant, carcinogen, etc.)
6-OHDA	Neurotoxin
9-cis-retinoic acid (9-cis-RA)	Teratogen
A beta 40	Neurotoxin
A beta 42	Neurotoxin
Alexa568-LPS	Inflammatory
Alpha Synuclein	Neurotoxin

Amphotericin B	Breaks down cell membranes
Azoxymethane	Carcinogen/tumor promoter
Bexarotene	Teratogen
Bicuculline	Seizure inducer/promoter
Bortezomib	Chemotherapy agent
BrdU	Mutagen
BTP	Permeabilize blood brain barrier
Carboplatin	Chemotherapy agent
Carboxymethyl celloulose	Inflammatory
Cardiotoxin	Cardiotoxic
cerulein	Pancreatitis inducer
CGP46381	Seizure inducer/promoter
CID 363085 (YAP Inhibitor)	Chemotherapy agent
cisplatin	Chemotherapy agent
C-Myc IRES Inhibitor	Chemotherapy agent
Colchicine	Spindle poison in cells
CWR22Rv1	Carcinogen/tumor promoter
Cyclosporine A	Immunosupressant
Cytosine-beta-D-arabinoflurandie (Ara-C)	Chemotherapy agent
Dasatinib	Chemotherapy agent
Dextran Sulfate	Inflammatory
Dihydrocapsaicin	Irritant
Diisopropyl fluorophosphate	Neurotoxin
DNA-targeting polyamide	Chemotherapy agent
Drug 43 (DEPTOR Inhibitor)	Chemotherapy agent
Drug B (DEPTOR Inhibitor)	Chemotherapy agent
D-TLKIVW (D-peptide)	inhibits protein aggregation
EdU	Mutagen
EPZ015666 (PRMT5 Inhibitor)	Chemotherapy agent
Ethanol	Pancreatitis inducer
Ethionine	Pancreatitis inducer
FITC-LPS	Inflammatory
Fluorodeoxyglucose	Radioactive tracer
GDF-11	Carcinogen/tumor promoter
Givinostat	Chemotherapy agent
GW4689	Sphingomyelinase inhibitor
Harmaline	Tremor inducer
HCl pH 2	Corrosive
I-124-iodine	Radioactive tracer
Incobotulinum toxin A	Neurotoxin
JR-AB2-011 (m(TORC2 Inhibitor)	Chemotherapy agent
L-798, 106	Chemotherapy agent

Lipopolysaccharides	Inflammatory
Lipopolysaccharides (LPS)	Inflammatory
Lithium Chloride	Seizure inducer/promoter
M1043	Chemotherapy agent
MK-801 (Dizocipline)	Neurotoxin
Navitoclax	Chemotherapy agent
NMDA	Neurotoxin
PET/CT probes	Radioactive tracer
Phaseolus vulgaris leucoagglutinin (PHA-L)	Gastrointestinal toxin
Pilocarpine	Seizure inducer/promoter
Pilocarpine HCl	Seizure inducer/promoter
PP242	Chemotherapy agent
PP242 (mTORC1/mTORC2 inhibitor)	Chemotherapy agent
Prednisolone	Immunosupressant
Propylithiouracil	Induce hyperthyroidism
Rapamycin	Chemotherapy agent
ReACp53	Chemotherapy agent
Sabioporide	Chemotherapy agent
SAHA (suberoylanilide hydroxamic acid)	Chemotherapy agent
Scopolamine	Seizure inducer/promoter
Streptozotocin	Diabetes inducer
Strychnine	Neurotoxin
Sulfonamide	Chemotherapy agent
Tau	Neurotoxin
Temsirolimus (CCI-779)	Chemotherapy agent
Temsiromus (CCL-779)	Chemotherapy agent
TNF-alpha	Inflammatory
TRC105	Chemotherapy agent
Trichostatin A (TSA)	Chemotherapy agent
Troglitazone (PPARg agonist)	PPARg agonist, liver toxicity
Uric acid	Can crystallize in vivo
Zoledronate	Chemotherapy agent

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

We have only one project with a physical agent. In this project which mice are irradiated with 400 rad in a single dose to induce immunosuppression

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.

All research protocols that involve lab work or animal work are reviewed by our SRS. If required, there is also an IBC review. In addition, the RBSO attends the IACUC meetings and is invited to give input on all animal research protocols.

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.

The SRS, IACUC, and RBSO assess the risks as part of the protocol review and may require SOPs be developed to manage the risks. If needed, the Industrial Hygiene Office and the Radiation Safety Office may also be involved. In some cases there may be an issue with locating appropriate space for the project, or with renovating current space to create appropriate containment. In these cases, the RBSO works with the Research Space Advisory Group to identity/renovate appropriate space for the research.

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.

- Infectious waste – goes into an autoclave bag and is put in the biohazard waste closet for pickup.
- Toxic waste – put in a labeled container, and a request is filed with Industrial Hygiene to come take it away. (Toxic wastes should not be accumulating in the lab for more than 3 months)
- Radioactive carcasses are stored in a freezer in the Radiation Safety Office's storage shed until 10+ half-lives have passed.
- Bedding: At and most cages are returned to the VMU with the bedding still in them. However, a few labs have studies in satellite housing with custom-made cages that the labs clean cages themselves. In these cases, at they put the dirty bedding in a bag that is put in a bin outside of where the VMU staff come pick it up and dispose of it, while at it is put in a bag and put in the dumpster outside

- Cages: at in they are put in special bins for the VMU staff to come pick up. At the cages are returned directly to the VMU cage washing area.
- Medical sharps – the labs and VMU rooms all have medical sharps containers. When the container gets more than about 2/3 full people are supposed to ask the Environmental Management Service to take it away for incineration and bring a new medical sharps container.
- Glass – put broken glass into a sturdy cardboard box labeled "Broken Glass" and ask the Environmental Management Service to take it away

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

Personnel would discuss it directly with the physician at employee health

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.

If a protocol involves work with hazardous agents in animals (pathogens, toxic drugs such as streptozotocin, etc.) where special precautions are needed, the PI will be asked to write an SOP for people working with the agent and animals. This SOP has to be approved by the SRS and IACUC, and the RBSO normally assists in developing it. In some cases, Industrial Hygiene and/or the radiation Safety Office may also be involved in developing and reviewing the SOP.

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.

- : housing for animals that have been PET-scanned. They stay here while the radiolabel (usually F-18 fluorodeoxyglucose) decays to background levels and then they go to the VMU.
- . This is our ABSL-2 suite for animals used in studies of infectious pathogens.

- : This is our ABSL-2 housing for animals implanted with human tumor cells.
- : This is our ABSL-2 housing for animals implanted with human tumor cells.

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.

The ABSL-2 rooms all have biosafety cabinets, and the cages are only supposed to be opened inside those cabinets. They are tested/certified every 6 months.

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

For the ABSL-2 rooms we have the following:

1) Inside each ABSL-2 room housing is a biosafety cabinet – the cages are to be opened inside the biosafety cabinet.
2) One of the ABSL-2 housing rooms has a ventilated rack, with is specifically used for our leptospirosis work.
3) As people exit the suite PPE that was used with these animals is removed and disposed of in the anteroom, and hand sanitizer applied and fresh PPE put on to enter the hallway.
4) All cages and related materials from these rooms are bagged and autoclaved before cleaning.

For the room where animals are housed during radioactive decay, the research personnel take care of them for the day or so it takes for radiation to decay to background levels. There is a Geiger counter in the room, and the research staff have been given radiation safety training.

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.

There are research administrative staff and researchers who do no animal work in our research buildings. Animals are to be transported in cages covered with drapes.

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.

Nominations of new voting members and recommendations for re-appointments of current voting members are made by the IACUC at a convened meeting by a majority vote each spring. The Chair informs the Research and Development Committee (RDC) of the IACUC-approved nominee(s) as a courtesy and presents new nominations and re-appointment recommendations to the Medical Center Director in writing or in person. Only the Medical Center Director has the authority to appoint IACUC members, and such appointments must be in writing. (VA Handbook 1200.07, page 18, paragraph 8a) The Medical Center Director (IO) officially appoints the members and officers in writing. Members may be appointed for renewable terms of up to three years. Officers' terms are for one-year and are also renewable. The one-year term of an officer may fall within any three-year term and does not shorten the three-year voting membership. The membership year begins on July first and ends on June 30. Terms expire on June 30 at the end of the term of appointment.

Each member may recommend a voting alternate, whose name is included in the nominations slate. Voting alternate terms are concurrent with that of the primary member. Voting alternates may not be appointed for the roles of Chair and/or Vice-Chair.

Occasionally a member will need to be replaced at another point during the meeting year, in which case a replacement will be recommended by the IACUC, and the process will proceed as above with the new member's appointment beginning as soon as can be reasonably accommodated. Terms of interim appointments end on the expiration date of the retiring member s/he replaces, at which time the new member may be appointed to a full three-year term.

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

The IACUC meets monthly, with a minimum of 10 meetings being required during the July through June meeting year. The Chair may call a special meeting at any time business of an urgent nature requires it.

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

IACUC member orientation and training:

All IACUC members receive the following documents, which are also posted on on the VAGLAHS SharePoint site. All members and persons who regularly attend the IACUC meetings are given access to the site.

Guide to Care and Use of Laboratory Animals

Public Health Service Policy on Humane Care and Use of Laboratory Animals

VHA Handbook 1200.07 Use of Animals in Research

The VAGLAHS IACUC SOP

The Animal Welfare Assurance for this institution

Other SOPs and Guidelines as applicable to the IACUC's responsibilities.

All IACUC members are required to take and be current on "Essentials for IACUC Members" on the www.CITIProgram.org website. In addition, a brief presentation of a particular topic (such as the three R's; reporting requirements; a selection from the OLAW FAQs, etc.) is often provided at IACUC meetings.

Members are also strongly encouraged to attend an IACUC 101 workshop, and all costs are covered by the Greater Los Angeles Research & Education Foundation.

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.

Animal research protocols must be submitted via our IMEDRIS/IRIS system. The programmed protocol form is based on the VA protocol review form (Animal Component of Research Protocol or ACORP; see http://www.research.va.gov/programs/animal research/) and also incorporates additional information (such as the grant number) and a protocol safety plan that covers all laboratory aspects of the project.

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"),

The PI is required to address this issue in part B of the ACORP, along with the potential benefit to Veterans' health.

How protocols that have the potential to cause pain or distress to animals are reviewed, alternative methodologies reviewed.

The ACORP form requires the PI to describe any potential for pain or distress to the animals, and to do a literature review to check for replacement, reduction, and refinement alternatives. These sections are part of the standard IACUC review.

How veterinary input is provided:

All ACORPs have a veterinary pre-review before they are submitted to the IACUC, and the veterinarian provides written comments to the PI and the IACUC. In addition, the veterinarian is specifically asked

for any further comments as each protocol is reviewed during the IACUC meeting.

How the use of animals are justified.

The ACORP form specifically asks the PI to justify the choice of species. A literature search is also required that must include a search for alternative, including computer models, in-vitro models, less sentient species, and less painful or distressing procedures.

Specify how experimental group sizes are justified.

The ACORP form specifically asks the PI to justify the group sizes and the total numbers of animals requested. A power analysis is strongly encouraged.

Protocol review methods

Full committee review (FCR) at a convened IACUC meeting:

All members have access to the protocol via the IMEDRIS system, and can view them during the meeting. The primary and secondary reviewers will present their reviews for each new protocol, modification, and triennial review. If a reviewer cannot be there, the Chair (or possibly another IACUC member) will read that reviewer's written review. The Chair will then ask for comments from the VMO, the Community Representatives, the APCO, and any other member of the committee. The primary or secondary reviewer makes a motion, recommending either "approve," "approve with administrative change", "requires modifications in order to secure approval," "table", or "disapprove". If another IACUC member seconds the motion, the Chair will open the meeting to discussion, and then take a vote. The IACUC Coordinator will tally the vote, and a memo is sent to the PI with the Committee's decision.

Approve: The PI receives a memo stating that the protocol has been approved. The memo indicates the approval date along with the annual continuation and triennial review dates.

Approve with administrative change: One or more very minor changes that do not change the experiment or affect animal welfare. An example would be checking a checkbox the PI overlooked.

Requires modifications in order to secure approval: The PI is sent a memo notifying him/her of the IACUC's decision. The memo includes an itemized list of the modifications required to secure approval of the submission. The IACUC may require that the resubmission be reviewed at the next convened meeting, or vote unanimously to allow the resubmission to be

reviewed and approved by designated member review. If the latter, identical versions of the PI's response memo and corrected protocol are sent to the primary and secondary reviewers, VMO, and IACUC Chair. If the corrections are acceptable, approval is granted. If any one of the reviewers finds the corrections are not acceptable, the other reviewers must be made aware of and agree to the request for further changes. Another memo is sent to the PI and the cycle repeats. However any member of the IACUC may, at any time, request to see the revised protocol and/or request FCR of the protocol.

Table: Substantive issue require a response from the PI and extensive revision of the protocol. A memo is sent to the PI with the committee's decision and an itemized list of the required modifications. The PI's response memo and revised protocol go to full committee review.

Disapprove: In very rare cases, the IACUC decides to withhold approval because the research project is not in accordance with the VA mission, the institution does not have the facilities to support the project, or for some other programmatic reason. In these cases a revised protocol will not be accepted. The PI may appeal this decision or s/he may redesign and resubmit the project as a new study.

Designated Member Review (DMR):

The Chair will determine whether a submission is a candidate for DMR, usually a protocol that cannot wait until the next convened IACUC meeting. (These are typically "just in time" protocols that need approval before the deadline in order to release funds and continuing or triennial reviews for protocols that are at risk of expiring). Only about 5-10% of our submissions typically go directly to DMR. The IACUC coordinator contacts all of the IACUC members to evaluate the protocol in our IMEDRIS system. They are given 72 hours (three business days) to request that the protocol go to full review or to agree with it going to DMR. If no one requests full review, the VMO along with two IACUC members assigned by the Chair review the protocol and submit written reviews and recommendations to the Chair to approve, require modifications in order to secure approval, or send to full committee review. If modifications are requested by any one of the reviewers, the other reviewers must be made aware of and agree to the modifications. The PI is informed by memo of the results of the DMR, makes the changes, and submits a reply memo and corrected protocol. The corrected protocol then goes back to the two reviewers, the VMO, and the Chair, each of whom decide whether or not the changes were satisfactorily made. If so, final approval is granted. If not, the PI notification (via written memo) and DMR process continues until all reviewers agree to approval.

Conflicts of Interest/Recusals: In cases when an IACUC member is on a protocol under review or has any other potential conflict of interest in the IACUC's decision on the submission, the member is allowed to stay and answer questions during the review of the protocol and but must recuse him/herself prior to the motion, discussion and vote and must leave the meeting room. If quorum would be lost with the member's recusal, the review is not conducted and the protocol is either deferred for review at the next convened IACUC meeting or the Chair authorizes a call for DMR as described above.

Administrative reviews:

The Chair is authorized to approve certain modifications to an approved protocol through an administrative review. Those modifications are:

1. Change in animal strain, sex or age. (If the request is to add a strain with a deleterious phenotype, the modification must go to full committee review [FCR] or DMR).

2. Request for additional specimen collection after euthanasia.

3. Increase or decrease in concentration or dose of approved test substances, or adding analogous test substances (excluding chemical hazards, biohazards, and radioactive materials).

4. Change in funding source.

5. Change in space in which animal work is conducted, providing the space has already been reviewed and approved for animal research by the full IACUC.

6. Change in total number of animals necessary to perform approved procedures that does not exceed 10% of the number last approved by a full IACUC review. (This is applicable to mice and rats only. Requests to increase the numbers of any other species must go to FCR or DMR.)

7. Deletion of research personnel.

8. Addition of research personnel: A PI submits a formal modification request, and the IACUC Coordinator checks to confirm that anyone being added to an animal use protocol is current with the appropriate animal training for the protocol and have a PI-specific Scope of Practice on file with Research administration. The IACUC Coordinator informs the PI of any requirements not met. Once all requirements are met, the IACUC Coordinator informs the IACUC Chair who then approves the modification.

9. Termination of animal use on expired animal protocols when an investigator has failed to take action. This is a database action requested by the VA Office of Research Oversight. Once an animal protocol expires, any remaining animals on it are immediately placed under the care of the VMU and no research activity can be performed on them until they are subsequently transferred to an active research protocol.

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.

If a PI wishes to make significant changes to an approved animal use protocol, a "modification form" must be submitted to the IACUC along with the modified ACORP via our IMEDRIS system. This form details the desired changes, the rationale for the changes, and where the changes go in the previously approved ACORP. The review process is identical to the review process described above for a new protocol.

Minor amendments:

The Chair is authorized to approve certain modifications to an approved protocol through an expedited review. Those modifications are:

1. Change in animal strain, sex or age. (If the request is to add a strain with a deleterious phenotype, the modification must go to full committee review [FCR] or DMR).

2. Request for additional specimen collection after euthanasia.

3. Change of ACORP title.

4. Change in funding source.

5. Change in space in which animal work is conducted, providing the space has already been reviewed and approved for animal research by the full IACUC.

6. Change in total number of animals necessary to perform approved procedures that does not exceed 10% of the number last approved by a full IACUC review. (This is applicable to mice and rats only. Requests to increase the numbers of any other species must go to FCR or DMR.)

7. Deletion of research personnel.

8. Addition of research personnel: A PI submits a formal modification request, and the IACUC Coordinator checks to confirm that anyone being added to an animal use protocol is current with the appropriate animal

training for the protocol and have a PI-specific Scope of Practice on file with Research administration. The IACUC Coordinator informs the PI of any requirements not met. Once all requirements are met, the IACUC Coordinator informs the IACUC Chair who then approves the modification. Once all requirements are met, the IACUC Coordinator informs the IACUC Chair who then approves the modification.

9. Termination of animal use on expired animal protocols when an investigator has failed to take action. This is a database action requested by the VA Office of Research Oversight. Once an animal protocol expires, any remaining animals on it are immediately placed under the care of the VMU and no research activity can be performed on them until they are subsequently transferred to an active research protocol.

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.

Assessment of endpoints is conducted following the SOPs developed by the VMO and IACUC, including: "Default Endpoints for Use with Research Animals," "Rodent Tumor Size," "Water Restriction," and "Food Restriction."

The PI is required to list humane endpoints for the study in the animal use protocol. These are checked by the VMO during the veterinary pre-review, and by the IACUC during the formal review. The PI may be required to alter the endpoints criteria, to add additional ones, or to provide scientific justification acceptable to the VMO and IACUC why such endpoints cannot be employed, before the protocol can be approved.

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).

We rarely have such studies, but we had one involving a new kind of chemotherapy agent. The IACUC requested that pilot studies be designed to test maximum tolerated dosing with a small number of mice.

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.

VMU personnel check all the animals inside the VMU each day and report any health problems they see to the veterinarian and the relevant PI. For animals housed in the labs, the laboratory staff check them each day and a veterinary staff member checks them each week.

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.

If a PI notices unexpected morbidity or mortality they are supposed to contact the veterinarian for guidance. The VMO reports these issues to the IACUC, although the PI is also free to do so. The IACUC may decide to investigate the issue.
To date, we have not encountered unanticipated phenotypes in genetically-modified animals.
The PI is required to keep a surgical outcome log which is inspected by the IACUC during the semi-annual inspections. If the mortality seems high, an investigation is conducted into the issue.
This is what the surgical outcome log looks like:

PI's Name: (Name on ACORP)	**Approved Project Number(s):**
	Date of last approval:
Species:	**Number of animals approved in the ACORP(s):**
Type of surgical procedure: (Use a separate form for different procedures.)	**Is this surgery survival or non-survival?**
	Is this surgery part of multiple surgeries on the same animal?
Date of first surgery on page:	**Date of last surgery on page:**

1) Date Of Surgeries	2) Surgeon's Name (Must be same as	3) Total Surgeries On That Date By	4) # Of Survivors Note: if non-survival	5) # Died From Surgical Complications	6) # Of Animals From Which Useful Data

	listed in ACORP.)	Listed Surgeon	surgery enter zero.		Could Be Collected

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."

Our IACUC defines "prolonged restraint" as 15 minutes or longer. We have an SOP "Physical Restraint of Unanesthetized Animals". Among other things, the SOP states that "The period of restraint must be limited to the minimum required to accomplish the research objectives"; "restraint devices … should be specifically designed to accomplish research goals that are impossible or impractical to accomplish by other means"; and that "Attention must be given to the possible development of lesions or illnesses associated with restraint, including contusions, decubital ulcers, dependent edema, and/or weight loss."

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.

Animal Restraint Devices Table

Species	Restraint devices	Acclimation procedures	Duration of Confinement	Monitoring procedures	Criteria for removing animals that do not adapt or acclimate	Provision of veterinary care for animals with adverse

						clinical consequences
Cat	Head restrained to Kopf Stereotaxic head-holder, body in body restraining bag. Goal is to do EEG recordings during natural sleep.	We adopt an incremental, daily adaptation that lasts minimally (1-2 hrs) at the beginning several days until up to 4-5 hrs per day when full adaptation is achieved. A reward strategy of play-time and canned food treat at end of each adaptation day will enable the animal to become relaxed while being restrained and accompanied by the researcher within the laboratory environment.	1 - 5 hrs	Animals are monitored continually (including EEG) during adaptation and during actual recording.	Presence of signs of distress (persistent vocalization, excessive body movements) and behavioral agitation (EEG desynchrony and maximal EMG levels, failure to fall asleep within the first 1-2 hrs of being restrained).	Our VA has a full-time veterinarian plus back-up care from . If there is a problem we call or page the veterinarian, who then determines appropriate treatment.
Rat	Head restrained to Kopf Stereotaxic head-holder. Goal is to do EEG recordings during natural sleep.	Rats will be placed in a chamber with no restraint for 2 hours daily until they can sleep continuously for at least 1 hour. After this, animals will be head-restrained in the recording apparatus for not more than 30 minutes. During following days, restraint time is increased if animals show no or little struggle. The adaptation period normally lasts for 1-2 weeks with the following daily progression of the head-restrained period: 30 min, 1 hour, 2 hours and 3-4 hours. Animals are considered habituated when they freely enter the apparatus, go to sleep within	4 hrs	Animals are monitored continually (including EEG) during adaptation and during actual recording.	Behavioral signs of distress or discomfort, lack of sleep or abnormal sleep-wake cycle.	same as above

		minutes, and eat right after they are released from the head-restraint apparatus.				
Rat	tethered collar in a Raturn	Rats will be put on the collar and placed in **Raturn** for 2 hr/day over a week. Rats will then be trained to adapt to the tether in the **Raturn** following a progression of periods: 30 min, 1 hr, 2 hrs and 4 hrs over a week.	4-6 hr	Animals are checked every 15 minutes during adaptation. Once they are adapted and being recorded they mostly monitored continually (including EEG), or at least every 15 minutes.	We have not had any incidents when we had to remove the animal from the restrain. Animal walks, drinks, eats and sleeps comfortably inside the **Raturn**. However, the animal will be removed from the restrain if it shows discomfort and distress when tethered or if skin lesion occurs around the collar.	same as above
Rat	Plastic restraining cone	None. Animals are partially sedated with midazolam for this procedure.	15 minutes	Monitoring is continuous, and includes EEG, body temperature, and skin color.	Animals are monitored for color of nose, mouth and ears for signs of lack of oxygenation, and for excessive drop in body temperature. Since they are partially sedated with midazolam they do not struggle.	same as above
Rat	Bollman cage for colon motility and	1. For non-stress related motility and visceral pain studies: Acclimation for 3 days	1-2 hrs	Animals are normally monitored continually	Persistent movement or persistent vocalization (5	same as above

	visceral pain studies	before expt. Start with gentle handling and holding against body for 5-10 min (1st day). Place in Bollmans cage for 30 min (1st day), 1 hr (2nd and 3rd day each). On the day of experiment, 30 min stabilization in the Bollman cage before any expt. 2. For stress related motility study: No acclimation is needed as the goal is to study the effect of stress.		(including colonic motility), but occasionally the monitor may take a few minute's break.	min cut off time). Very rare and unlikely but in the event of excessive movement or vocalization, animal will be immediately exempted.	
Rat	Plexiglas cylinder for visceral pain/colonic distension test	same as #1 above	1-2 hrs	Animals are monitored (including EMG readout) continually.	same as above	same as above
Mouse	Plexiglas cylinder for colon motility and visceral pain studies	1. For non-stress related motility and visceral pain studies: Acclimation for 3 days before expt. Start with gentle handling and holding against body for 5-10 min (1st day). Place in Bollmans cage for 30 min (1st day), 1 hr (2nd and 3rd day each). On the day of experiment, 30 min stabilization in the Bollman cage before any expt. 2. For stress related motility study: No acclimation is needed as the goal is to study the effect of stress.	1-2 hrs	Animals are normally monitored continually, (including colonic motility readout) but occasionally the person monitoring may take a few minute's break.	same as above	same as above

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.

The surgery appendix of the animal protocol form has questions the PI will need to answer:

a. Provide a complete scientific justification for performing the multiple survival surgeries on an individual animal:
   ▶

b. Give the interval(s) between successive surgeries, and the rationale for choosing the interval(s):
   ▶

The IACUC will then review this as part of the protocol review. Multiple survival surgeries are only allowed if they required as part of a research project. The only exception is to remove osmotic minipumps once their contents have been released, (as recommended by the manufacturer).

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.

Summary of protocols with multiple survival surgeries

IACUC/OB Number	Details
2020-000083	Osmotic minipump implant with removal after 2-4 weeks.
2018-040420	Electrodes are implanted for EEG and EMG sleep recording - these have a long working life. After 2-3 months, hypoglossal cuff electrodes are implanted - they have a much shorter working life due to scar formation so they are only implanted towards the end of the study.
2018-070716	The first surgery is implantation of a GRIN lens. Several days are allowed for inflammation to resolve so a baseplate can then be properly implanted.
2020-000046	The first surgery is implantation of a GRIN lens. Several days are allowed for inflammation to resolve so a baseplate can then be properly implanted.

2018-121120	Osmotic minipump implant with removal after 4 weeks	
2018-100956	An intial surgery to induce scar formation (mimiicking damaged vocal cords). The second surgery 4 months later is to test the results of the therapy.	
2012-050804	Implant EEG electrodes. Three weeks later run a baseline recording, then implant a morphine tablet or Alzet minipump.	
2018-121168	This is a study on skin wound healing. They do one set of test wounds, then wait 4 weeks and do a second set, wait two more weeks and do a third set. This allows different treatments to be compared in the same animal (greatly reducing variability), and reduces the total number of animals needed for the study.	

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.

Food and Fluid Regulation Table				
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**
Any remaining food in the stomach and duodenum will stimulate the upper GI tract physiological parameters, such as bicarbonate and mucus secretion, that we are measuring. The food effects then masks the effects of the test substances on these parameters.	rat	The animals will be overnight fasted in the wire mesh cages, 18 hrs before the experiments for in vivo perfusion and microscopy models. We will use wire mesh cages for fasting (just for overnight), because rats will eat their feces during fasting (known as coprophagia).	Check health status	10% loss of body weight, failure to groom, lethargy, medical problems unresponsive to veterinary intervention
This food deprivation period is essential to train the rats to activate the lever to obtain a reward (i.e., food).	rat	Approximately seven days after surgery, the rats will undergo a food-deprivation period of 23 hours. They will then be trained to press a lever in order to obtain food pellets until they become proficient (less than a week). The rats will be fed 15 grams of chow each day in addition to the food obtained through lever activations. After this training period, the rats will be fed ad libitum.	Rats will be weighed every other day to ensure they do not lose more than 10% of their initial weight.	If they lose more than 10% of their bodyweight they will be removed from the study.

Food restriction is necessary to motivate the animal to bar press for food. This is a standard procedure for this kind of motivated behavior testing. Food restriction will be lifted once testing is done.	mouse	The animals will be kept at 85-90% of their normal weight by restricting their daily amount of food during the training and testing of operant conditioning. The amount of food on each day is regulated individually based on each animal's weight on that day.	Daily heath check and weight monitoring	If they lose more than 10% of their body weight food will go back to ad libitum
Positive reinforcement conditioning of water is necessary to motivate the animal to get the positive reward.	mouse	Mice are first water restricted for 14 days, having free access to water for 90 min per day. The animals are then acclimated to the operant conditioning cages for 60 min per day for a week. They are trained to bar-press for water.	Daily heath check and weight monitoring	Poor health and continuous weight loss that exceeds 10%
Positive reinforcement conditioning of food is necessary to motivate the animal to get the positive reward.	rat	Rats are food deprived 24 hr for the initial training trial. The food ration is then restricted to maintain 85%-90% of initial weight. They are then trained to lever-press for food pellets.	Daily heath check and weight monitoring	Poor health and continuous weight loss that exceeds 10%
Positive reinforcement conditioning of water is necessary to motivate the animal to get the positive reward.	rat	Rats are trained for water reward on a regime similar to that used for food reward. Rats are first water restricted for 14 days, having free access to water for 90 min per day. The animals were then acclimated to the operant conditioning cages for 60 min per day for a week and trained to bar-press for water.	Daily heath check and weight monitoring	Poor health and continuous weight loss that exceeds 10%
Positive reinforcement conditioning of food is necessary to motivate the animal to get the positive reward.	mouse	<u>*Food:*</u> *Mice are given a 1-week acclimation period followed* by a 3-day exposure to the 20 mg precision food pellets [redacted]). Mice are food deprived 24 hr for the initial magazine training trial. The food ration is then restricted to about 2-3.5 g (regular portion is around 3-4.5 g/day) to maintain 85%-90% of initial weight. They are trained to bar-press for food.	Daily heath check and weight monitoring	Poor health and continuous weight loss that exceeds 10%

Fasting to compare metabolic adaptive changes following energy restriction in normal rats, obese rats, and Type 2 Diabetes rats.	rat	Rats will be fasted for 48 hours. Water will be provided *ad libitum.*	Daily heath check and weight monitoring	Rats lose more than 10% of their expected body weight or show lethargy, hunched posture, rough coat, ocular discharge and labored breathing.
Positive reinforcement conditioning of water is necessary to motivate the animal to run the track.	mouse	Animal will be weighed and given 1ml of water each day after, with water adjusted according to their weights. 1ml of water per day is approximately 1/4th of what mice drink without deprivation.	Daily heath check and weight monitoring	If the animal's weight drops significantly then saline injections may be given. If the animal's weight drops more than 10% or the animal shows deteriorating health, the animal will be sacrificed.

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.

PIs are expected to use pharmaceutical grade materials if available in suitable forms. The Research Department provides pharmaceutical grade saline and water for injection for free. If a PI needs to use a non-pharmaceutical grade drug or other substance, they have to fill out this table which is part of our "test substances" appendix in our protocol forms and is included in Appendix 9 below. The IACUC then reviews it as part of the protocol review.

List all items from table 2 that are not USP grade, FDA approved, a fixative, or a special diet	Why the use of a non-pharmaceutical grade formulation necessary? *Please put an X in the appropriate column, and add rows as needed.*			
	No FDA approved version exists	The FDA approved injectable forms are too dilute or have the wrong diluents for this study*	The FDA approved versions are only in pills or other forms that aren't suitable for this study	Other (please explain)

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.

N/A

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

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

N/A

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.

N/A

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).

All protocols get a *de novo* review every three years, plus annual reviews every year.

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

Twice a year the IACUC inspects all areas where animals are housed or used, following checklists based on a Facilities Inspection checklist provided by the VA Chief Veterinary Medical Officer. This process takes several months. Towards the end or immediately afterwards, a separate Program Review takes place following a

different checklist provided by the VA Chief Veterinary Medical Officer. The IACUC then reviews both reports and votes to approve them. A meeting is then held with the Institutional Official (who is the Medical Center Director), the Chief of Staff, the Veterinary Medical Officer, the IACUC Chair, the APCO, a member of Research Administration, and any IACUC members who want to attend. The Program Review and Facilities Inspection reports are reviewed with the IO, and any issues where we need help from the IO are discussed.

The APCO and VMO also do post-approval monitoring of individual protocols, which includes reviewing veterinary and research records and comparing what the research group is doing with the approved ACORP, meeting with the research team to discuss the findings, and presenting the findings to the IACUC.

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**.

Twice a year the IACUC inspects all areas where animals are housed or used (including all satellite housing rooms and labs with any animal use), following checklists based on a Facilities Inspection checklist provided by the VA Chief Veterinary Medical Officer. This process takes several months. Inspection teams are two voting IACUC members for all VMU areas and for any labs with covered species, and one or two voting IACUC member for labs with only laboratory rats or mice. If an area is closed for renovation, our policy is we will not inspect it until after the renovations are complete, but it has to be inspected before animal work or animal housing can resume.

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.

OLAW site visit April 2018: Deficiencies noted with regards to cage cards, IACUC DMR processes, Occupational Health and Safety Program, posting information on emergency back-up veterinarian, and clearer CO2 euthanasia directions. OLAW closed the case in March 2019.

ORO (VA Office of Research Oversight) remote site review results received June 26, 2020 (this was going to be a site visit but was changed to a remote review because of

the COVID-19 pandemic): Deficiencies noted with regards to MOUs, record-keeping, IACUC reviews of protocols, timely reporting of noncompliance events, PIs not requesting veterinary assistance when needed, and not getting copies of VA-funded protocols carried out at affiliates. We are in the process of correcting these deficiencies.

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

The IACUC semi-annual inspections of the labs include a review of post-operative records and surgical outcomes. Our Research Compliance Analyst does a separate evaluation of 33% of the animal protocols every year to ensure everything is up to date, all staff are current on their training, etc.

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

There is signage throughout the VMU and in all of the labs informing people how to report animal welfare concerns, including how to report them anonymously. Our standard procedure is for the Chair to appoint one or more IACUC members to investigate the concern (usually with assistance from the APCO) and report their findings to the IACUC. If the IACUC finds it to be a "reportable event", a letter describing the findings and remediation plan is sent to the ACOS for R&D, the Chief of Staff, and the IO. Once signed by the IO, a PDF of the signed letter is e-mailed to the VA Office of Research Oversight, the NIH Office of Laboratory Animal Welfare, other NIH Institutes (if appropriate), AAALAC, and the VA's Chief Veterinary Medical Officer.

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 disaster response would include: the VMU staff, certain members of Research Administration (the ACOS, deputy ACOS, AO, RBSO, and APCO); and various VA departments depending on the nature of the disaster (Emergency Management, Facilities Management, Industrial Hygiene, Radiation Safety, the VA Police Department, etc.). The PIs who own the animals involved would also be included in the response.

Provisions for meeting animals' needs: all animal housing areas are on emergency backup generator circuits that are tested monthly and have a four day supply of fuel. Both [redacted] have emergency canned water stored that is good for 30 years, and provisions for emergency euthanasia if needed. The two [redacted] are [redacted] apart and separated by the [redacted], so it is unlikely a disaster would hit both [redacted] at once. Valuable animals (covered species, unique strains, etc.) would be transferred to the other campus if need be.

II. Animal Environment, Housing and Management

Note: Complete each section including, where applicable, procedures performed in farm settings, field studies, aquatic environments, cephalopods (whose use may be described in Appendix 18 in lieu of each section of the Program Description), 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.

Temperature is controlled and monitored by building and room. Each building has a separate HVAC system. The VA Engineering Service provides specialized staff for repairs. The VA also contracts with outside vendors for service contracts on specific buildings. Digital thermometer/humidity meters record the maximum and minimum temperature and humidity in animal rooms. These devices are checked by the animal care technicians and recorded on a daily log.

A temperature alarm system has been installed in the animal rooms at both the [redacted] and [redacted] VMU. At [redacted], the temperature of each room is monitored 24 hours a day by Facilities Maintenance staff, who are notified electronically (via computer notification) if the temperature goes out of range. The VMU Facilities Manager or technician on call receives an emergency alert via cell phone if the temperatures in any VMU animal room go out of range, and VMU Facilities Manager responds immediately, as required.

The [redacted] VMU animal rooms are monitored using the [redacted] Monitoring System. In the event of out of range temperatures, the system sends an emergency alert

to the VMU Facilities Manager or technician on call. The alert continues until a response is received by the system. The VMU Facilities Manager or technician then contacts the on-call contracted HVAC engineer to correct the problem. If the repair of the HVAC is not immediate, portable ac/heating units will be turned on until the repair has been completed.

In addition, temperature and humidity in animal rooms are recorded daily on individual room sheets. Any out of range temperatures are reported to the Facilities Manager.

c. 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]

Species	set point	acceptable daily fluctuation	acceptable daily fluctuation
Mouse, rat, hamster, gerbil, guinea pig	73 F	68-79 F	30-70%
Rabbit	67 F	61-72 F	30-70%
Cat	73 F	64-84 F	30-70%

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]

Rodents are provided with nestlets and Enviro-dry to build nests and modulate thermoregulation. Rodents are provided with plastic red huts as shelters or PVC tubing. Hamsters are provided with Enviro-dry and PVC tubes or red huts. Gerbils are given Enviro-dry to build nests and are given huts. Cats have plush beds and private hiding boxes.

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.

The animal room ventilation is assessed by the VAGLAHS Engineering Department. They typically preform this assessment every three years as part of AAALAC accreditation visit preparation. Ventilation rates are also assessed on a case-by-case or sectional basis if any unusual environmental conditions (odor, unusual stillness of air, silence, reduced air flow using "kimwipe" test, etc.) are subjectively noted.

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

Ventilated Techniplast caging is used in one of the WLA Biocontainment areas. Passively ventilated racks (OptiMICE®, Animal Care Systems) that are connected to [redacted] HVAC systems are also used. These racks require 60 CFM, and the HVAC system provide somewhat more than this.

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

No recycled air is used at our facility.

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).

We have no aquatic species.

b. Provide a general description of overall system(s) design, housing densities, and water treatment, maintenance, and quality assurance that are used to ensure species appropriateness.
Note: Facility-specific tank design and parameter monitoring frequencies should be summarized in **Appendix 12** (Aquatic Systems Summary).

N/A

4. Noise and Vibration [*Guide*, pp. 49-50]
Describe facility design features and other methods used to control, reduce, or prevent excessive noise and vibration in the animal facility.

Separating various species by room and wing controls noise.
Staff and researchers are trained to minimize noise and vibration in animal areas.
There is at least one room between the cage washers and any animal rooms, so equipment noise is minimized.

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, cephalopods, and wildlife when reviewing biomedical, field and agricultural research studies.

The VAGLAHS animal program follows the recommendations of the Guide for the Care and Use of Laboratory Animals, 8th ed., to verify adequacy of space for all research animals.

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]

None.

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).

Structural environment of primary enclosures							
Species	**Resting Boards**	**Shelves/ Perches**	**Toys/ Manipulanda**	**Foraging Opportunities**	**Nesting Material**	**Swings**	**Other (Specify)**
Mice			Red plastic "mouse houses" PVC tubes [redacted] nylon rodent chews		Cotton Nestlets (except nude mice) Enviro-Dri		
Rats			PVC tubes Red plastic tubes Red plastic huts [redacted] nylon rodent chews		Cotton nestlets Enviro-Dri		
Cats	Milk Crate Perches Cat Tree with hiding Box and resting boards	Stainless steel, plastic, or mesh shelves built into cages.	Plastic balls with bells inside Plastic hanging chain Various cat toys				Mesh ramps for climbing Canned food Frozen dried treats. Laser pointer
Rabbits	Large Red "Rabbit Huts" for shelter.		Plastic chains "Jingle balls" Certified Bio-Serve wood chews, "Plastic Dumbbells"				[redacted] hay Fresh produce Wood chew blocks

Guinea Pigs			Red plastic hut PVC tubes Plastic dumbbells Plastic chains				Loose [redacted] hay, Fresh produce, Wood chewing blocks
Gerbils			PVC tubes Red plastic tubes. Manzanita sticks				Sand bath
Hamsters			Red tubes				

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).

Rodents and rabbits are provided PVC or plastic tubes or shack houses to hide in. Rodents are provided with material for nest building (Enviro-dri and cotton nestlets). Gerbils are provided with dust for "dust baths" and manzanita wood for chewing. Cats are provided toys as noted above and are housed in group cages when possible and are allowed out of their single cages during the day on a daily basis for group interaction. Lazer pointers are used to entertain and exercise cats. Soft cat beds are provided. Resting and hiding places are provided with resting boxes, perches and a climbing tree.

Rabbits receive loose hay and natural wood chews and are permitted to be out of the cage in "playpen" area when compatible. The rabbit cages have a sliding door between cages to allow for socialization. Rabbits are also provided with plastic dumbells as toys.

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

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

Rodents: All rats, mice, hamsters, gerbils and guinea pigs are group housed unless specifically noted in the animal protocol and approved by the IACUC or unless the

animals are combative and fighting with each other of if they have been separated temporarily for clinical care.

Rabbits: All are socially housed in compatible pairs except as noted above for rodents.

Cat: Compatible cats are housed together in gang cages. When housed separately, cats are permitted to "free-roam" outside of their cages for socialization, play and exercise during the day.

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

The IACUC will approve individual housing for socially housed animals if it is required post-surgically to prevent the animals from damaging each other's surgeries (stitches sutures, head-caps, etc.). In some cases male mice may be separated if they fight excessively (generally C57 background) to prevent injury or death. Animals are also separated by the veterinary if necessary to successfully treat clinical problems. Animals are reunited when recovered.

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

Animals are given environmental enrichment as described above (toys, PVC tubing, etc.). Individually housed cats are petted, brushed, played with and provided with personal attention daily Monday-Friday.

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.

The IACUC reviews the enrichment and behavioral management program annually. The veterinarian reviews all aspects of the enrichment program on an annual basis as part of SOP review. In situations in which rodents have been separated, the cages are identified as housing single animals and the reason for the separate housing (breeding, fighting, clinical care). These cases are reviewed weekly. Every effort is make to pair house animals following separation.

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.

The IACUC requires that animals be habituated to procedures involving gavage, restraint or other repetitive procedures that are novel and potentially stressful to them. In general, recommendations to staff and researcher teams are to handle all research animals to habituate them to manipulation by humans, to reduce their levels of stress and to facilitate their use as research subjects. Cats are handled and petted daily by VMU staff members to habituate them to people, handling etc. Rabbits are habituated to having arms reaching into their cages by being regularly petted in and out of their cages. This also reduces stress in VMU staff members

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.).

Type of Protection	Check all that apply
Windbreaks	N/A
Shelters	N/A
Shaded areas	N/A
Areas with forced ventilation	N/A
Heat-radiating structures	N/A
Access to conditioned spaces	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.

LabDiet Prolab RMH 2500 Diet
LabDiet Picolab mouse 5R58
Picolab Mouse Irradiated Diet (#5058)
Fenbendazole Irradiated Diet
LabDiet 5001 Hamster/Gerbil Diet
LabDiet 5015 Mouse Breeding Diet
LabDiet RMH 2500 Rodent Diet
LabDiet 5326 Rabbit High Fiber Diet
LabDiet 5008 Rodent Breeding Diet

Fromm Canned Cat Food
Fromm Adult Gold Dry Cat Food
VE Cat Chicken Breast Treats

Formulab Diet (#5008)

Zupreem Rabbit Pellets
Zupreem Guinea Pig Pellets
Zupreem Western Timothy Hay

Clear H20 Dietgel 76A Maintenance
Clear H20 Hydrogel

Enrichment/treat items
Zupreem Western Timothy Hay

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

Vendor: Newco foods are stored in a [redacted], which is a 44,000 square foot concrete tilt-up structure. Roof height in this heavily powered ventilated building is 26 feet. This ventilation is used to take advantage of the cool evenings and maintains a 10-15 degree differential during the hotter months.

Animal Facility Storage Rooms: [redacted] and [redacted] in [redacted] have associated, temperature controlled storage rooms. Temperatures are maintained at or below 70 degrees F (21 degrees C). Food is stored on plastic pallets at least six inches away from the wall. Humidity is maintained below 70% in the fall/winter months but will occasionally rise above 70% in the summer months. Bags found to be opened in any way are discarded. A “first in-first-out” policy is maintained to rotate food and insure use within 3 months. Dates of milling and expiration are written on bagged food. Vermin are monitored with the use of live traps which are checked daily.

Animal Holding Rooms: Food is stored in plastic containers with plastic liners. For all lab diets, food is placed in the container in the same bag. Expiration dates are calculated and placed on a label on the lid of the storage containers. Mill dates are also labeled and placed on the lid of the storage barrel.

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).

[redacted] VMU special food preparation areas: Food for cats is prepared in [redacted]. Food for post-op cats is prepared and served to them in the post-op room [redacted]

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

All the various species are fed from stainless steel feeders, bowls or hoppers.

Rodents: All rodents are fed ad libitum. Additional food is added to the hopper if necessary. Fresh food is provided at cage exchange and leftover food is discarded. If animals are being fasted for study purposes, they are often put in special "fasting cages" with a grid floor. A fasting card specifying time and date the fast starts and ends dates is put on the cage.

Rabbits: Rabbits are fed **ad libitum** daily delivered in hoppers.

Gerbils, hamsters and guinea pigs are fed ad libitum in hoppers or bowls in the case of guinea pigs

Cats: Cats are fed fresh food daily. They are fed a specified amount of dry and wet food in stainless steel bowls to maintain ideal body weight.

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

Food deliveries are received at least every other week from [redacted]. Milling dates are verified upon receipt and food older than one month is rejected. Food is ordered to ensure there is enough food available for a two-week period in case of a disaster. To maintain nutritional value of the food, the oldest food is used first and the newly received food is rotated to the bottom of the feed storage pallets.

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).

The Los Angeles City Department of Water and Power (DWP) supplies all water for the VA facility. The water is treated by DWP to the State of California Water Quality Standards. The VMU filters the water at the bottle filling station using GE Hytrex cartridge filters. Water is provided to the animals as follows:

Mice, gerbils, hamsters, rats, guinea pigs, rabbits: Water bottles with sipper tubes.

Cats: Water bowls.

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

The water is provided by and monitored by the Los Angeles Department of Water and Power to assure it conforms to the State of California Water Quality Standards. Additional testing of the water on campus is performed by Industrial Hygiene.The VMU test the water quality quarterly using an ATP system.

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.

Types:
Hardwood Sani-Chips
Paper Liners

How used:
Mice and Rats: direct, Aspenchips and Hardwood Sani-Chips
Cats: direct, paper liner on bottom of cage, sand in litter pans
Rabbits: indirect, Paper Liners in a pan under the cage floor
Gerbils and Hamsters: direct, Hardwood Sani-Chips
Guinea pigs: direct, Sani-chips

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

At the [redacted] VMU, bedding is stored on plastic pallets in the clean cage storage area of [redacted]. All bedding is autoclaved prior to use. Loose bedding is stored in closed containers in each clean cage storage area. Vermin control is accomplished using live animal traps that are checked daily. If evidence of vermin is seen (i.e., rodent droppings, visual sighting of roaches and other insects), the pest control contractor is contacted.

At the [redacted] VMU, bedding is stored on metal or plastic pallets in [redacted] on plastic pallets. Vermin control is the same as at the [redacted] VMU.

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

On arrival and before bedding is used the bags are inspected for damage. Visual inspection occurs when the bags are opened for container storage in the animal rooms. Any contamination is brought to the attention of the supervisor. Damaged bags are not used. All bags of rodent bedding, Nestlets® and Enviro-dri® are autoclaved before use.

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.

The VMU maintains two temperature controlled vans for the transport of animals on the [redacted] and [redacted] campuses. This van is used to transport dogs, and other animals as needed. The transport vehicles are maintained in a clean condition by the VMU staff.

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.).

There is a high-pressure washer for use in conjunction with a detergent and/or a disinfectant. It is used for sanitizing animal spaces. There is a BioQuell-Z hydrogen peroxide vapor generator for decontaminating entire rooms. Wet-Vacs and sprayers are used for sanitation of whole rooms, such as between studies, when new animals are housed, or for any other purpose. A small electric cart with an enclosed rear compartment is also used to transport personnel and equipment between buildings on the [redacted] Campus. [redacted] has a 2.5 ton cargo truck that is shared between locations for equipment and supply movement.

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.

Rodent cages are changed and sanitized once or twice a week. Rabbit cage pan liners are changed **daily. Rodent c**age tops are changed every 2 weeks. Cat litter is scooped daily and changed every other week.

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

to justify those exceptions.

Generally cage changing is delayed for a few (3) days when a rodent has just given birth to avoid disturbing the dam.

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

[redacted] **VMU**: For both [redacted] soiled bedding is placed into dump stations located on the dirty side of the cagewash [redacted] Clean bedding is added to cages in [redacted]. [redacted] **VMU**: All rodent cages and cat litter pans are emptied into dump stations on the dirty side of the cage wash area. Clean bedding for rodent cages and clean litter for cat pans is placed into the cages on the clean side of the cagewash area.

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).

Cages are visually inspected by VMU staff for proper sanitation and any abnormalities are reported to the supervisor. Temperature indicator labels are **checked on the first load** daily in each cage washer. The labels are placed on a log sheet and initialed by the person performing the test. Any deviations are reported to the VMU supervisor immediately. In addition, ATP testing is performed quarterly on clean rodent caging to assess sanitation effectiveness.

b) Describe preventive maintenance programs for mechanical washers.

Preventative maintenance programs for mechanical cage washers are contracted. Premium maintenance contracts are awarded for all cage washers and reviewed every four years.

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.

All soiled bedding is dumped into plastic bags in dump stations and then placed into outside trash receptacles. A contracted disposal service empties the dumpsters at least weekly.

ii. Animal carcasses.

Carcasses that are not needed by the principal investigators are placed in plastic bags and stored in a dedicated refrigerator or freezer. They are picked up by a contract disposal service [redacted]).

Carcasses with potential hazardous chemicals (such as formalin-perfused carcasses) are bagged in the lab by laboratory staff and put directly into a dedicated freezer or refrigerator to be picked up by a contract disposal service [redacted]).

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).

The program for controlling pests consists of monitoring for pests through the use of insect glue boards. The glue boards are dated, visually inspected, and replaced once a month by the contractor. The pest control contractor provides routine preventative services monthly and on an "as needed" basis. For vermin control baited traps are outside of the buildings and live traps are in the feed rooms. Live traps are checked daily and checks are documented.

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

N/A

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

Pesticides are not used in the presence of experimental animals. Pesticides are used on the exterior of the buildings and in subspaces.

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.

One member of the animal care staff works every Saturday, Sunday and holiday in [redacted] and [redacted]. Their responsibilities are, but are not limited to, health checks, spot changing cages, refilling water bottles and hoppers as needed, and documenting all tasks completed on the Room Check sheet. The animal care technicians report directly to the attending veterinarian on weekends and holidays.

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.

A formal, rotating "on-call" system assures that at least one veterinarian is available to handle emergency care and answer requests for guidance from the animal care technicians or investigators at all times. The Facilities manager or designee is on call for facility related issues. All supervisory personnel are provided with cell phones.

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

a. Identification

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

Mice: Cage card, tail or toe tattoo, ear notch, ear tag **and ear snip**
Rats: Cage card, tail tattoo, ear notch
Rabbits: Cage card, ear tattoo
Cats: Cage card, ear tattoo
Hamsters: Cage card, ear notch

Gerbils: Cage card, ear tag
Cage cards identify the name of PI, contact person, protocol number, vendor, species/strain, sex, date received, DOB and animal ID

b. Breeding, Genetics, and Nomenclature

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

Investigators have an opportunity to consult with the VMO as part of the protocol approval process regarding the genetic characteristics of various strains of rodents, or are provided with reference materials. The information contained in 2011 edition of the Guide on pages 76-77, including references, has been provided to all researchers. Investigators are encouraged to educate themselves on the matter.

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 information contained in the 2011 edition of the Guide on pages 76-77, including references, has been provided to all researchers. Investigators are encouraged to educate themselves on the matter.

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

The information contained in the 2011 edition of the Guide on pages 75-76, including references, has been provided to all researchers. The VMU advises investigators regarding maintaining the health and genetic consistency of inbred strains and provides additional information and resources Investigators are encouraged to educate themselves on the matter.

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.”

Investigators are required to inform the IACUC if any newly generated genotypes are expected to impact animal well-being and describe these effects on the animals in their ACORPs. Animals are monitored by investigators and VMU staff for expression of any negative or problematic phenotypes.

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.).

Rodent and Rabbit Commercial Vendors: Only major commercial vendors are approved for routine animal purchases. These include [redacted], [redacted]. These vendors send health-screening information or VMU staff research it on the Internet. The goal is to receive only animals that are free of the common rodent and rabbit viral and bacterial agents.

Cat Vendors: Cats are purchased only from class A dealers. Health and vaccination reports are obtained prior to each shipment. Only animals that are judged by the VMO to be of the same or higher quality health status to the animals already present in the vivarium are permitted to be transferred into the VMU.

Rodents from other research institutions or from unapproved vendors: Other institutions or unapproved vendors are required to submit two years of health reports so that the VMO can determine the current and historic viral, bacterial and parasitic status of the animals. Animals infected with any of our excluded pathogens are rejected for entry. Animals accepted for transfer are required to undergo VMU quarantine procedures. All such rodents are quarantined for three weeks pending the results of PRIA (buccal cells), PCR (feces), and "sticky swabs" (pelt and anus to detect ecto- and endoparasites. Once the results come back negative, these animals are released from quarantine. Occasionally, animals are used acutely by the lab following an acclimation period, and under this scenario are exempted from quarantine.

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).

The vendors deliver most animals in specialized vehicles. If they are not delivered to the VMU by the vendor they are generally flown into LAX where they are picked up and then delivered to VAGLAHS by a commercial animal transport service. USDA covered species

are picked up at the airport by VMU staff. The subject of transportation is covered by an SOP (Animal Transportation) that is posted on the Research and Development Service website. Generally speaking, within VAGLAHS, animals are transported in either a VMU air-conditioned van or on foot. Where appropriate, animals are contained in a transport cage during transport. If transported between local institutions, animals are generally transported in the air-conditioned VMU van. Cats are transported between campuses and within a campus in the VMU van.

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.

All animals are observed at least daily for signs of injury or disease by trained personnel. During quarantine animals are PRIA tested for adventitious pathogens using cheek cell samples. PCR is performed on feces to detect internal parasites. Sticky swab testing is performed on pelt and anal region to detect ectoparasites and endoparasitic eggs.
Rodents are enrolled in the VMU Sentinel Testing Program following release from quarantine (Sentinel Testing SOP). Serology for all relevant laboratory rodent diseases is performed at quarterly intervals to detect subclinical disease or exposure. Diagnostic laboratory services are utilized that include gross and microscopic pathology, hematology, microbiology, parasitology, clinical chemistry and molecular diagnostic services.
Transplantable tumors, hybridomas, cell lines, blood products, and other biologic materials are required to be tested for adventitious pathogens before being introduced into animals.

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

Animals found to be harboring infectious diseases are isolated, diagnosed and either treated or euthanized. For select pathogens, entire roomfuls of rodents are quarantined and treated when necessary.

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

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

The SOP, "VMU Procedures for Animal Ordering and Receiving Procedures", provides a guide for ordering and receiving animals. Before animals are ordered, the researcher submits an Animal Ordering form. This document is reviewed by the VMU

supervisor to assure that the animals are being purchased under a valid protocol, and that the requested housing can be accommodated. The request indicates the type of housing required for the particular animals.

Rabbits and Rodents: Unapproved rodent suppliers are required to submit two years of health reports prior to approval of animal transfer. Rodents that are not free of standard, excluded pathogens are required to be rederived (cesarean or embryo transfer) before arrival. Animals from each shipment are quarantined separately to insure that any potential pathogens are not transmitted among separate groups of incoming animals.

The animal care technician receives rabbits and rodents. The shipping documents are checked to be sure they are in harmony with the Animal Ordering form. Before the shipping container is opened the box is **wiped** with disinfectant. Each animal is examined before it is placed in the VMU cage. If problems are noted, a report is made to the VMU supervisor for further action.

Cats: The VMU supervisor receives dogs and cats and is assisted by a technician as needed. Records are reviewed to determine if the animals have received appropriate vaccinations in accordance with established policy. All cats receive a full medical exam upon arrival, along with any needed vaccinations. If major health problems exist the animals are either returned to the vendor or they are held in isolation pending instructions from the vendor. Care is provided and/or euthanasia is performed as instructed by the VMO.

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.

When necessary, quarantine facilities are available in a separate room, building or campus. All animals are purpose bred.

Rodents: In most cases commercial rodents are not quarantined. Animals from unapproved vendors are quarantined and tested as described above

Rabbits: All rabbits are from similar SPF colonies. Rabbits are not quarantined.

Cats: All cats are purpose bred and are housed in isolation for 10 days away from the resident population. This is accomplished in a separate area, room, building, or campus, as the case may require.

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

Rodents and Rabbits: The stabilization period for rodents and rabbits is 5 days. A card is attached to each cage of newly arrived animals from approved commercial vendors indicating: **"NEW ARRIVALS" Do not use before** _____ However, animals can be released by the VMO before 5 days for terminal studies. Rodents from non-approved vendors are also required to go through a minimum three-week quarantine before use.

Cats: Cats are observed for signs of disease and are acclimated to their new environment for a ten day period prior to the release for experimentation. Animals may be released from quarantine earlier at the discretion of the VMO.

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.

All animals are separated by species and similar health status. Rodents are separated by source and shipment during quarantine. Cats of similar health status are purchased from class-A vendors and are housed in same species groups once quarantine is over.

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

Multiple species are not housed in the same room, area or enclosure.

c. Describe isolation procedures and related facilities for animals.

Rodents that are suspected of having a contagious disease are generally euthanized. Larger animals may be isolated in separate rooms.

Facilities are available a [redacted] to house cats that might be ill and require isolation or special housing. In some cases the unused surgical recovery room serves as an isolation room.

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.

Veterinary care is an essential part of the animal care program. Adequate veterinary care includes observing all animals daily to assess their health and welfare, and caring for those with evidence of disease or injury. Daily observation of animals may be accomplished by someone other than a veterinarian; however, a mechanism of direct and frequent communications has been adopted so that timely and accurate information on problems in animal health, behavior, and well-being is conveyed to the attending veterinarian to ensure that animals are cared for in a timely manner. Veterinary care is available for all animals housed on both VAGLAHS campuses with a veterinarian on call 365 days a year. The on-call schedule with VA cell phone numbers is posted in all buildings that contain laboratories and house animals. The Veterinary Medical Officer has 27 years of experience in laboratory animal medicine and is ACLAM board certified. The Clinical Veterinarian has 11 years of clinical practice experience and has completed a residency program in laboratory animal medicine. The VMU Facilities Manager/Supervisor is a CMAR, **Registered Veterinary Technician and** certified by AALAS at the **R**LATg level and has been working in research for **20** years. The animal care staff members have been trained by the VMU supervisors and by taking on-line training. Besides regular veterinary observation, all animals are observed daily by the caretakers, including weekends and holidays, for evidence of disease or injury. In general a visual or cage side observation suffices to assess the animal's condition, though a hands on assessment is made if necessary. Particular attention is paid to the behavior or action of the animal in relation to the other animals in the cage or room. Trained animal technicians and caretakers are primarily responsible for the identification of sick or injured animals as part of their daily observations. Once a problem has been identified the technician or caretaker fills out a**n Animal** Health Report and gives the **report to the RVT.** Verbal communication is also utilized daily for all species. All health cases are referred to the veterinarian. Investigators are notified of medical issues in their animals verbally and/or by e-mail and via the pink copy of the Health Report.

Training: Animal care technicians are trained by the veterinary staff to recognize common diseases in the species with which they work. Training includes formal class instruction by the veterinary staff, on-line classes provided by the VA at www.citiprogram.org , AALAS training materials and annual VMU SOP review. A significant part of the training is on-the-job, including provision of feedback from the veterinarians to the technicians when they report health problems. Employees are strongly encouraged to seek AALAS certification. Training materials are provided to VMU employees, including textbooks and computer-based learning materials.

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

Animal Care Staff and veterinarians are in continual contact and communication with researchers. Researchers are required to contact the veterinarian for any animal illness or injury. Animal care staff members are required to communicate any animal issues to the veterinarian using a written Health Report. The Health Report is used by caretakers to collect information on signs of disease or injury and to facilitate the timely transmission of this information to the veterinary staff. The veterinarian or veterinary technician under direction of the veterinarian contacts the researcher using either e-mail or verbal communication to describe the problem and recommend the appropriate course of action or treatment. Often, especially in acute cases, information is communicated directly and verbally to the veterinarian, who notifies the Investigator (if possible) and takes appropriate action.

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

The VMO examines the sentinel results from all non-approved rodent vendors and must grant approval before rodents from those vendors enter VMU facilities. Rats and mice in the VMU have sentinels placed for each group of 30-70 animals on a rack, and are sampled at least quarterly. See complete details of sentinel program below.

Cats receive physical exams upon entry and at least once yearly. They are vaccinated for rabies, rhinotracheitis, calcivirus, panleukopenia and chlamydia as kittens. A complete fecal exam is performed once yearly. Cats are treated for endoparasites and ectoparasites when indicated. Cats have their nails trimmed monthly or more frequently as needed.

Rabbits receive a physical exam at least once a year. Rabbits are weighed and have their toenails clipped monthly or more frequently as needed.

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

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

A formal "on-call" system assures that at least one veterinarian is is available to handle emergency care and answer requests for guidance from the animal care or investigator staff members at all times. The "on-call" schedule is posted throughout the animal facilities. All supervisory personnel are provided with cell phones. Access to drugs is via cabinet keys kept in the clinics. Controlled drugs are kept in double locked cabinets in the clinics with keys in secondary lockboxes.

b. 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 authority to treat the animal, remove it from the experiment, institute appropriate measures to relieve pain or distress or perform euthanasia as necessary.

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.

Typical hardcopy medical records are maintained on all cats, gerbils, hamsters, guinea pigs and rabbits. The VMU veterinarians and occasionally senior staff make notations in records. The individual investigator may also provide notation in the medical records for the **smaller** covered species. All clinical lab findings, diagnosis, treatments, and medical progress are documented in each animal's clinical record. Records are maintained in the room or near the room in which the animals are housed and may accompany the animals to surgery, post-op, and to laboratories during experimental procedures.

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

The clinical veterinarian is responsible for maintaining the medical records. In the case of cats and small covered species the medical records are maintained with the animals or in file cabinets in the clinics. The facilities supervisor maintains logs and other records for rodents, including any health reports. The health reports and treatment records and any other associated correspondence are kept on file in the VMU.

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

The clinical veterinarian is responsible for maintaining the medical records on covered species, including all medical data, diagnostic testing results, problems, treatments and complete medical history.

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

a. In-house diagnostic laboratory capabilities.

Current VMU capabilities include microscopic examination of samples from fecal flotation, skin scraping, impression smears, and examination with diff-quick stain. Hematocrit, blood glucose and urine test strips are determined in house. Radiological diagnostics can be performed at the [redacted] and [redacted] campus.

b. Commercially provided diagnostic laboratory services.

[redacted]® Diagnostics provides a full line of body fluid and tissue diagnostic services including CBC, blood chemistry, urinalysis, and cultures. [redacted] provides serology and PCR testing.

c. Necropsy facilities and histopathology capabilities.

Gross necropsies can be performed in-house. Both facilities have dedicated necropsy rooms. Specialized necropsy/histopathology services are provided by [redacted]® Diagnostics Laboratory.

d. Radiology and other imaging capabilities.

The VMU has two radiographic units (Min-Xray), one at each campus.

5. Drug Storage and Control

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

VMU: Non-controlled drugs are purchased from commercial vendors. Controlled drugs are purchased through the VA pharmacy. Controlled drugs that belong to the VMU are kept in double-locked cabinets with appropriate logs according to rules set up by VAGLAHS. Other drugs are kept in separate locked cabinets. The veterinarians and the VMU supervisor have keys to both cabinets. Drugs that require cold storage are kept in a separate refrigerator. All controlled drugs in the VMU are inspected monthly by the VAGLAHS Controlled Substances Inspection Team members.

Investigator: Non-controlled drugs are purchased from commercial vendors. Controlled drugs are purchased through the VA pharmacy. Controlled drugs are kept in double-locked cabinets with appropriate logs according to rules set up by VAGLAHS and are inspected monthly by the VAGLAHS Controlled Substances Inspection Team members. Other drugs are kept in dedicated areas of the research laboratories

b. Describe record keeping procedures for controlled substances.

VMU: Every controlled drug has a special log sheet (Controlled Substance Administration Record VA Form 10-2638) on which notes are made every time the

drug is used. The name of PI, the amount of the drug and name of the person dispensing it are listed on the sheet.

Investigator: The same rules as for the VMU apply to the investigators using controlled drugs.

Inspections: There is a monthly inspection of controlled drugs and logs by Controlled Substance Inspection Team members. In addition, the IACUC checks all drugs, both controlled and non-controlled, for expiration dates during their semi-annual inspections.

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

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

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

Presurgical planning starts with the protocol review process. The VMO or clinical veterinarian reviews the research protocol and provides e-mail comments to the researcher before the protocol is submitted to the full IACUC for review and approval. During this pre-review of the protocol, the VMO assesses training requirements, reviews surgical location, anesthetics, pre- and post-operative care, asepsis, surgical approach and appropriate use of surgical materials and other details of the surgery. A specific section of the protocol, Appendix 5, is used to document the plan for surgery in detail.

The educational guide "Clinical Guide for Performing Rodent Survival Surgery" guides all rodent surgery. This educational guide is posted on the Research and Development Service website. Investigators are required to demonstrate to the IACUC that they are competent to perform the surgeries in question. In some cases the VMO or clinical veterinarian will be present the first time a new surgery is performed.

The VMO oversees the surgical program. The VMO or clinical veterinarian is available for consultation on all aspects of surgical procedures and meets with the surgical team if there are any questions. Pre-surgical planning involves all members of the surgical team and all aspects of pre-surgical preparation. All members of surgical team are identified in the animal use protocol and their experience in doing surgery is reviewed. If documented training is absent the VMO or clinical veterinarian will provide evaluation and training as needed.

The VMU veterinarian or **RVT** is present during any survival surgery on a non-rodent mammalian species. They oversee the entire procedure and often provide anesthesia support. Non-survival surgeries such as perfusions or acute neurophysiology studies do

not require the presence of a veterinarian and are typically done by the laboratory staff themselves.

[redacted]: The facility for surgery preparation on non-rodent mammal species is located in [redacted] The [redacted], and the post-surgical recovery areas are in [redacted]. [redacted] Survival surgeries on rodent and non-rodent mammals are performed in the central OR suite, which includes two operating rooms, animal and surgical pre-op rooms [redacted] The post-surgical recovery room is located next door [redacted]

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.

[redacted]
Sepulveda, [redacted]
Both survival and non-survival surgeries and major/minor/emergency are performed at these dedicated surgical locations. Surgeries are performed on rodents, rabbits and cats. Surgical facilities at both locations include areas for pre-operative prep, surgical support, surgeon scrub, operating room(s), and post-operative recovery. Air pressure in surgical rooms is positive. Interior surfaces are impermeable. Lighting is provided by fixed surgical lights and room lights The use of all surgical areas is light. The rooms are not used on 80% of normal workdays.

[redacted]	[redacted]
Summit Anesthesia® P.A.M- Standard small animal and rodent anesthesia machine combo	Summit Anesthesia® P.A.M- Standard small animal and rodent anesthesia machine combo
Surgical table	Surgical table

Surgical Lights	Surgical lights
X-Ray Min-X-Ray HF100+®	X-Ray Min-Xray HF100+®
VetOx® Pulse Oximeter	NONIN® 8600V Pulse Oximeter
LifeLine® infusion pump	Horizon NXT® infusion pump
Surgvet ®electrocautery unit	Surgivet® electrocautery unit
Ritter M11 Ultraclave® autoclave	AMSCO Century® autoclave
Ultrasonic instrument cleaner	
Electrical circulating water heating pad systems (2)	Electrical circulating water heating pad systems (2)

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).

Criteria: Major surgical procedures are defined as those that enter a body cavity including the cranial vault, thorax, or abdomen, or produce a substantial impairment of physical or physiologic function (e.g., laparotomy, thoracotomy, joint surgery, abdominal surgery to expose the cecum, or controlled cortical impact). A minor surgical procedure is defined as anything not meeting the major surgery criteria (wound suturing, peripheral vessel cannulation, or percutaneous biopsy).

b. How is non-survival surgery defined?

A non-survival surgery is one in which the animal is not allowed to recover from anesthesia and is euthanized at the end of the procedure.

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

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

Rodents: A typical rodent preparation includes shaving the hair and wiping the skin with three alternating scrubs of 70% alcohol and Betadine or chlorhexadine scrub in a circular pattern out from the center of the site. Ophthalmic lubricant ointment (Paralube® or equivalent) is placed in eyes. All surgical instruments must be sterile and sterility maintained throughout surgery. All materials to be placed on the surgical site (e.g., dental cement, tissue glue) must be of sterile formulation. Cap, gown and

mask are not required but are recommended under some circumstances such as surgery on immunodeficient rodents. Sterile gloves are required for aseptic surgery.

Non-rodents: On the day of the procedure the surgical site is prepared by hair removal (mechanical shaving or use of depilating lotion), followed by three alternating scrubs of 70% alcohol and Betadine or chlorhexidine solution. Ophthalmic lubricant ointment (Paralube® or equivalent) is placed in eyes. Animals are draped for aseptic surgery. Surgeon preparations take place in the Surgeon Prep-room and include proper hand scrubbing for aseptic surgery, use of sterile disposable gowns, masks, head covers, shoe covers and sterile surgical gloves. Aseptic technique and sterile fields are maintained throughout surgery.

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.

For the VMU, surgical instruments are sterilized using one of several steam autoclaves. The effectiveness is monitored by use of Steris "Verify" biological indicators. In addition, sterilization tape or other indicator is attached to each item. Sterile gowns and other protective clothing are purchased as sterile until opened.

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

All surgical packs are re-sterilized before use or every **6** months. In addition, investigators use various means to sterilize surgical supplies and instruments including hot glass bead sterilizers (between serial surgeries), cold sterilization, and steam sterilization within the laboratory. The approved sterilant/disinfectant is Cetylcide. The most common method of sterilization is by steam autoclave.

d. Indicate how effectiveness of sterilization is monitored.

Monitoring is generally accomplished by using autoclave tape or indicators and/or adherence to standard times and temperatures.

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

The VMU provides the following types of equipment:

Gas anesthesia equipment and supplies for large or small animals.
Monitoring equipment (i.e. ECG machine, Pulse Oxymeter, etc.)
Support equipment (i.e. surgical light, electrocautery unit, suction pump, heating pads, IV pump and incubation unit for post-surgical recovery), and Antibiotics, IV fluids, analgesics, and all other drugs needed for surgical procedure and post-surgical recovery.
Steam autoclaves.

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 records including the surgery report and anesthesia record, in which vital functions are noted every 15 minutes with data regarding anesthetic gas concentration, quality of pulse, membrane color, capillary refill time, pulse rate, respiration rate, and blood oxygenation and are maintained for survival and non-survival surgery. Depth of anesthesia is monitored at regular intervals. Body temperature **is** routinely monitored in dogs and cats. The surgery report includes all medications given to the animal intraoperatively with the administration times. The time of intubation and extubation is also noted. The surgery report is kept with the post-operative record and later transferred to the animal's medical record. Post-op records are maintained for 3 days for surgeries that do not involve sutures and 10 days for those that do.

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.

Cats and Rabbits:
Post-surgical care at [redacted] takes place in the Post-Op room [redacted] and at [redacted] in the post-op room [redacted]).

Vital functions of the post-surgical animals (i.e., heart rate, respiratory rate, capillary refill time, temperature, and hydration) are checked continually until the animal is able to maintain a sternal position. Once animals are conscious, temperature and hydration status are monitored at regular intervals. Intake and elimination are recorded. Behavioral signs of postoperative pain are assessed, medication and analgesics are delivered and additional analgesia is added to the analgesic regimen as required. The surgical incision site is monitored for signs of dehiscence or infection. Animals with sutures are assessed and treated as required for 10 days. Bandaging is performed and bandages changed as necessary. Skin sutures, clips, or staples are removed at 7-10 days.

All physiological and post-operative data is kept in the post-operative record. The post-operative record is kept in the recovery room as long as the animal is in the recovery room. Later the documents are placed with the animals' other medical records. The PI and their staff are responsible for post-surgical care with the VMU supervisor and veterinarian overseeing their tasks and being in communication with them via e-mail, and/or phone. Researchers and their staff are trained by the VMU supervisor or the clinical veterinarian to administer IV fluids, antibiotics, or other medications as necessary. The VMU stays in continual contact with the PI or person observing post-surgical cases via cell phone.

Rodent:
Post-surgical care includes the investigator observing the animal to ensure uneventful recovery from anesthesia and surgery; administering supportive fluids if needed, and giving prescribed analgesics, and other drugs as required in the protocol.

Rodents are not returned to their normal cage until they have recovered from anesthesia and are able to right themselves. Animals are generally housed singly on paper towels or soft bedding. After the initial recovery they are observed at least daily with special attention to the appearance of the surgical site, attitude, signs of pain, alimentation and elimination, hydration, and weight loss. If they are in the VMU the caretakers and VMU supervisor observe the animals during routine duties. In most cases, the responsibility for post-operative care of rodents rests with the investigator. This responsibility is identified at the time of protocol review.

The investigator is responsible for maintaining surgical records. Records are maintained in the laboratory or near to where the surgery is conducted. The records are kept on the "Rodent Surgery Post-Operative Record", which includes space to note down post-operative analgesics. Use of a "Surgical Outcome Log" is required. This log is maintained for each procedure approved for each animal use protocol. The log is kept in the laboratory in a location where it will be readily available for review. Members of the VMU or IACUC may request to see the log at any time, and the IACUC routinely reviews the logs during the semi-annual facilities inspections.

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

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

Both a prospective and retrospective reporting processes are used. The VA uses the four pain categories (B, C, D, and E) described in the Animal Welfare Regulations for all vertebrate animals regardless of USDA coverage status. The investigator and the VMO make the initial assessment as to the appropriate pain category. The IACUC makes the final determination during a regularly convened meeting. VMU staff and investigators are trained to recognize species specific signs of pain which must be reported to the veterinarian. Procedures which would be expected to cause pain in humans are assumed to cause pain in other species. Inappetence, lethargy, labored respiration, vocalization, hunched posture, porphyrin staining (rodents), lack of grooming and abnormal appearance and posture are examples of pain indicators that are often used in assessing animal pain and distress and which would necessitate veterinary intervention.

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

During the protocol review process each investigator, in consultation with the VMO, is asked to describe the end-points for the animals in the study. The IACUC will assess the

information and make a final determination as to the appropriateness of the final end-points. The IACUC has established default end-points as a guide for investigators. These default end-points are described in the SOP "Default Endpoints for use with Research Animals" which is posted on the Research and Development Service website. These end-points are: lethargy and failure to groom; hunched posture; progressive weight loss exceeding 10% of normal body weight; ulcerative dermatitis unresponsive to treatment; any tumor that has ulcerated or interferes with normal locomotion (tumor size is limited to 1.5 cm in mice and 2.5 cm in rats in any dimension); conjunctivitis unresponsive to treatment; loss of mobility; signs of unrelieved pain (vocalizing, self-trauma); any animal found moribund.

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.

Species	Drug(s)	Dosage (mg/kg)	Route	Frequency
Rat	Buprenorphine	0.03 to 0.05 mg/kg	SC	BID to TID
	Carprofen	5 mg/kg	SC	SID
	Isoflurane	1%-5%	Chamber or mask	Pre-euthanasia or intraoperative
	Bupivacaine	2 mg/kg max	Intradermal	Once, pre-op
	Ketamine	75-100 mg/kg	IP	Once, pre-op
	Xylazine	5-10 mg/kg	IP	Once, pre-op
	Sodium pentobarbital	40-50 mg/kg	IP	Once, pre-op
Mouse	Buprenorphine	0.03 to 0.05 mg/kg	SC	BID to TID
	Carprofen	5 mg/kg	SC	SID
	Isoflurane	1%-5%	Chamber or mask	Pre-euthanasia or intraoperative
	Bupivacaine	2 mg/kg max	Intradermal	Once, pre-op
	Ketamine	75-100 mg/kg	IP	Once, pre-op
	Xylazine	5-10 mg/kg	IP	Once, pre-op
Rabbit	Buprenorphine	0.02 to 0.05 mg/kg	SC, IM, IV	BID to TID
	Meloxicam	0.2 mg/kg	PO or SC	SID
	Bupivacaine	2 mg/kg max	Intradermal	Once, pre-op
	Acepromazine	1-2 mg/kg	IM	Once (sedation)
	Isoflurane	1%-5%	Chamber or mask	Pre-euthanasia or intraoperative

	Ketamine	10 mg/kg	IM, IV	Once, pre-op
	Xylazine	3 mg/kg	IM, IV	Once, pre-op
Guinea pig	Buprenorphine	0.05 mg/kg	SC	BID
	Meloxicam	0.2 mg/kg	PO or SC	SID
	Carprofen	1-2 mg/kg	SC, PO	SID-BID
	Ketamine	85 mg/kg	IM	Once, pre-op
	Xylazine	12-13 mg/kg	IM	Once, pre-op
	Isoflurane	1%-5%	Chamber or mask	Intraoperative
	Bupivacaine	2 mg/kg max	Intradermal	Once, pre-op

Species	Drug(s)	Dosage (mg/kg)	Route	Frequency
Gerbil	Bupivacaine	2 mg/kg max	Intradermal	Once, pre-op
	Buprenorphine	0.1-0.2 mg/kg	SC	BID
	Meloxicam	0.2 mg/kg	PO or SC	SID
	Isoflurane	1%-5%	Chamber or mask	Pre-euthanasia or intraoperative

Species	Drug(s)	Dosage (mg/kg)	Route	Frequency
Cat	Buprenorphine	0.01 to 0.03 mg/kg	SC, IM, IV	BID to TID
	Meloxicam	0.1 – 0.3 mg/kg	PO	SID
	Bupivacaine	2 mg/kg max	Intradermal	Once, prior to incision
	Acepromazine	0.1 to 0.2 mg/kg	SC, IM	Once, pre-op
	Atropine	0.05 mg/kg	SC, IM, IV	Once, pre-op
	Glycopyrrolate	0.005 – 0.01 mg/kg	IV, IM	Once, pre-op
	Tiletamine/Zolazepam	9-15 mg/kg	IM	Once, pre-op
	Diazepam	0.1 – 0.5 mg/kg	IM, IV	Once, pre-op
	Ketamine	2-10 mg/kg	IM, IV	Once, pre-op
	Xylazine	1.1-2.2 mg/kg	IM, SC	Once, pre-op
	Isoflurane	1% - 5%	Endotracheal intubation	Intra-operative
	Lidocaine	topically	larynx	Once, pre-op

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

The VMO or clinical veterinarian reviews each investigator's choice of drugs as part of the protocol approval process. Any painful procedure must include the use of analgesics or anesthetics unless doing so would disrupt the scientific process and confound the study, and the exception has been reviewed and approved by IACUC. Use of multi-modal anesthesia and pre-emptive analgesia is generally recommended. Any updates or modifications to existing analgesic or anesthetic protocols that the veterinarian feels might improve outcome are recommended to the PI. A number of clinical guides have been written that give the investigator information on the use of anesthetics, analgesics, and tranquilizers. These clinical guides are posted on the Research and Development Service website.

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 use of anesthetics in covered species is monitored by the VMU veterinarians and **RVT.** If required, the frequency or duration of analgesics are modified by the veterinarian in consultation with the investigator. The APCO monitors analgesic/anesthetic use in rodents on a spot-check basis. During the semi-annual facility inspections the IACUC reviews post-operative records to determine if the use is in keeping with the approved protocol. The VMO, clinical veterinarian or **RVT** assess the condition of post-surgery animals daily. Animals that appear to need analgesia beyond the 72-hour minimum required by IACUC receive additional medication.

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.

Protocols involving the use of neuromuscular blocking agents are reviewed during the pre-review process to insure that analgesia is appropriate and that the physiological functions that indicate distress (e.g., increased heart rate and blood pressure) are carefully monitored throughout surgery. Investigators using these agents are required to contact the IACUC and VMU prior to the first surgery to arrange for members of the IACUC (including the VMO or clinical veterinarian) to observe the surgery and ensure animal well-being and effectiveness of analgesic and anesthetic regimens.

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

All precision vaporizers used for delivery of gas anesthesia are checked by [redacted] Scientific® technicians annually to ensure that the equipment is sound and delivering the correct amounts of anesthetic gas. In addition, [redacted] Scientific® trouble-shooters are

contacted to rectify any problems that develop with the vaporizers such as users noting isoflurane odor, or damage to anesthesia machine components or leaks in any associated tubing.

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.

Species	Drug(s)	Dosage[1]	Route
All species	Pentobarbital (Nembutal or Fatal Plus) Pentobarbital followed by perfusion.	90 – 200 mg/kg	IV or IP
Rat Mouse	CO2, decapitation, <200g cervical dislocation, Isoflurane followed by thoracotomy or cervical dislocation. *Euthanasia with microwave irradiation:* Microwave irradiation of the head may be required to rapidly inactivate enzymes that degrade neurotransmitters (e.g. acetylcholinesterase in the case of acetylcholine) in order to allow their accurate assay. The procedure is performed with equipment designed for this purpose, the Gerling-Moore Biostat microwave fixation system, with a nominal power of 5 kW. Animals are anesthetized with a bolus of intravenous pentobarbital (30 mg/kg), introduced into the chamber of the equipment and the microwave power activated for one second. The brain is then rapidly removed and frozen for later analysis.	5 Kw for one second	Inhalation
Rabbit	Pentobarbital	120 mg/kg	IV
Hamster	CO2 in a chamber.	Overdose	Inhalation
Guinea pig	CO2 in a chamber	Overdose	Inhalation

Special consideration is given to the euthanasia of rodents that are neonates or near term because of the resistance of these animals to CO2 hypoxia and need for prolonged exposure times. In general we follow the NIH *Guidelines for the Euthanasia of Rodent Fetuses and Neonates* in these cases.

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

CO2 euthanasia chambers are used that are designed for that purpose. Gauges and tanks are routinely checked by the VMU Facilities Manager to insure appropriate function. Investigators who use decapitation as a physical method of euthanasia must assure the IACUC of their proficiency in use of the equipment and that the equipment will be maintained appropriately and operate smoothly.

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

All methods of euthanasia are reviewed and approved by the veterinarian and the IACUC. Death must be confirmed by personnel trained to recognize cessation of vital signs in the species being euthanized. In larger species death is confirmed by the cessation of heartbeat and respiration. In rodents the IACUC also requires that a secondary, physical method of euthanasia be used to confirm death.

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.

Animal housing and use facilities are located on both the [redacted] and [redacted] campuses. The [redacted] facility consists of two central animal housing buildings within the core. Both buildings contain a cage wash area, and Building [redacted] contains a dedicated surgical suite. Animals housed in research labs are located in Building [redacted] a secondary location a short distance away.
Animal housing at the [redacted] facility consists of centralized VMU housing on the [redacted] of [redacted]. [redacted] contains two dedicated surgical suites, a necropsy room, radiology and a surgical recovery room. [redacted] contains a walk in **refrigerator** and a procedure room. Research labs containing animal are located in [redacted] as well as on [redacted].

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).

A. [redacted]

1) General Arrangement: [redacted] and associated VMU space is a conventional housing space approximately 7,925 square feet. The facility is conventional, single corridor with a dedicated cagewash and both indoor and outdoor space. Associated with the complex are two storage trailers.

2) Distance to Research labs: It is approximately 0.5 mile or less from most of the research laboratories.

3) Available Housing: Animal housing rooms are used for conventional housing and quarantine. This building is also the site of the non-rodent survival surgery suite. The

building generally houses mice, and rats and rabbits, but could be used for other species including cats.

4) Finishes:

Floors: broadcasted, epoxy sealed with a polyurethane coat

Walls: cement block with enamel paint.

Ceilings: hard ceiling

Doors: wooden and metal doors sealed with epoxy paint. All except one have view panels.

5) Engineering Features used in hazardous agent containment.: N/A

6) Security Features: The [redacted] VMU [redacted] main entrance is locked at all times. Entry is via a computerized keycard system, and keycards are only given to authorized personnel. Each person has his/her own identifying keycard. All entries are recorded by a computer system, and entry logs are available for review. The two rear entrances and gates at the end of the cage wash area are locked at night. There is an 8-foot cyclone fence with privacy screening surrounding the sides and rear of the building.

7) N/A

8) N/A

B. [redacted]

1) General Arrangement: [redacted] and associated VMU space is a conventional housing space approximately 3,528 square feet. The facility is single corridor with a dedicated cagewash.

2) Distance to Research labs: It is approximately 0.2 miles from most of the research laboratories.

3) Available Housing: The facility is a conventional, single corridor building housing rats and mice. The building houses mice and rats, but could be used for housing other rodents, rabbits or cats.

4) Finishes:

Floors: cement sealed with epoxy paint

Walls: cement and cement block sealed with epoxy paint

Ceilings: hard ceilings

Doors: metal doors sealed with epoxy paint. All have view panels.

5) Engineering Features used in hazardous agent containment.: N/A

6) Security Features: The [redacted] VMU [redacted] is locked at all times. Entry is via a computerized keycard system, and keycards are only given to authorized personnel. Each person has their own identifying keycard. All entries are recorded by a computer system, and entry logs are available for review. There is a rear entrance that remains locked at all times. The VA police patrol the campus 24 hours a day, 7 days a week.

8) Flammable and Hazardous agent storage: Cleaning chemicals and supplies are stored in a flammables cabinet in the dirty side of the cage wash area..

D. [redacted]

1) General Arrangement: [redacted] is a 3-story concrete building in which the entire [redacted] is VMU space. The entire [redacted] consist of research laboratories. [redacted] is the main VMU building for the [redacted] campus.

The [redacted] is dedicated to the VMU and is a conventional facility which houses rats, mice, gerbils, hamsters, **cats** and rabbits in the [redacted]; clinic and treatment facilities in the [redacted], and rodents and operating room in the [redacted]. Cage washing facilities are centrally located close to the [redacted].

The cage washing facilities also serve an attached [redacted] to be described separately. Gross square footage: 24,625: including administrative offices, general animal rooms, non-rodent-survival surgery, necropsy, treatment, bathing, procedure rooms, and storage.

2) Distance to Research labs: [redacted] contains research laboratories on the [redacted]. Some research buildings are connected by passages and others are removed up to ½ mile. Most animal research is conducted in the research complex (connected buildings) composed of [redacted]

3) Available Housing: The [redacted] VMU animal facilities are conventional housing facilities. There are separate areas for rats, mice, hamsters, gerbils, guinea pigs, cats, and dogs. Each room has its own associated animal technician and equipment. [redacted] contains conventional rooms, two ABSL2 hazard containment suites equipped with Class II biosafety cabinets, and rooms devoted to quarantine.

[redacted] is divided into 4 distinct and separate areas with respective equipment, caging and auxiliary spaces: clean rodents, gerbils, hamsters and rabbits in the south wing; rodents and OR in the [redacted]; and ambulatory TX in the [redacted]. A mobile cubicles (HEPA filtered Biobubble® unit) is available for quarantine housing, to adjust for the housing of unusual species (chickens, opossums, ferrets, etc.) or to create isolation of ABSL-2 animals.

4) Finishes:

Floors: All animal room floors are composed of hard resin top coating.

Walls: All walls are of plaster, with either epoxy or enamel paint coating. In addition, there are several 3 ft. -thick earthquake reinforcement walls in central locations.

Ceilings: Ceilings are solid, painted plaster within animal rooms and animal areas throughout [redacted]

Corridors: The composition of all areas consists of hard resin coating over concrete slabs. The floors are covered at the wall junction. Some corridors have low-level bump guards.

Animal Room Doors: Floor to ceiling double metal doors are at the loading dock entrance, the cage washing room entrance and the emergency building perimeter exit doors. All inside animal room doors are 7' x 4'. Four of twelve animal rooms have view panels.

5) Engineering Features used in hazardous agent containment.: N/A

6) Security Features: The [redacted] VMU complex [redacted] is locked at all times. Entry is via an electronic key card system, and key cards are only given to authorized personnel. Each person has his/her own identifying key card. All entries are recorded by a dedicated computer in the Research and Development Service and can be reviewed, if need be. In addition, entry from the main hallway of the VMU into any animal areas requires passing through a second keycard entrance. Keys for surgical area rooms are restricted to the veterinary staff. The animal housing areas carry a sub-master key, which is assigned to animal caretakers after six months of basic training in animal care.

Heavy security screens have been installed on all the windows in [redacted] and the VA Police patrol the campus seven days a week, 24 hours a day.

7) Exterior Windows: there are no exterior windows except for offices, breakrooms, and some storage rooms.

8) Flammable and Hazardous agent storage: Cage washing chemicals are stored on plastic spill pallets in the hallway between [redacted] Flammable and hazardous agents are not stored in the VMU.

E. [redacted]

1) General Arrangement: [redacted] is a one-story concrete building with the VMU occupying almost the entire space. [redacted] is connected to [redacted] by a hallway and for practical purposes is part of [redacted] There are five animal rooms (rats and mice, a Vet Tech office, dead animal refrigerator, a locker room for VMU staff, and associated storage areas.

Gross square footage: 5,610

2) Distance to Research labs: There are no research laboratories in this building. Rats and mice are housed under conventional conditions in dedicated rooms. A single hallway serves all areas.

However, there are passages from [redacted] leading into three buildings [redacted] which form the core of the research space at [redacted]

3) Available Housing: Rats and mice are housed under conventional conditions in dedicated rooms. A single hallway serves all areas

4) Finishes:

Floors: The flooring in [redacted] is terrazzo, all being in excellent condition.

Walls: The walls are tiled, and in good condition.

Ceilings: [redacted] have secondary washable ceiling panels. [redacted] have solid ceilings.

Corridors: [redacted] has terrazzo floors throughout all areas. The corridors have bump guards.

Animal Room Doors: The doors are old style wooden doors, 3ft. x 7ft. epoxy-painted, without view panels.

5) Engineering Features used in hazardous agent containment.: N/A

6) Security Features: The [redacted] VMU complex [redacted] is locked at all times. Entry is via an electronic key card system and key cards are only given to authorized personnel. Each person has his/her own identifying key card. All entries are recorded by a dedicated computer in the Research administration office and can be reviewed, if need be. In addition, entry from the main hallway of the VMU into any animal areas requires either passing through a second keycard entrance. Keys for surgical area rooms are restricted to the veterinary staff. The animal housing areas carry a sub-master key. The VA Police patrol the campus seven days a week, 24 hours a day

7) Exterior Windows. N/A

8) Flammable and Hazardous agent storage: Cage washing chemicals are stored in the hallway between [redacted] on plastic spill pallets. Flammable and hazardous agents are not stored in the VMU.

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.

The IACUC defines satellite housing as any area in which animals are maintained for longer than 12 hours or overnight.

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.

The research buildings require a keycard for access, and the labs are to be kept locked if no one is present. The VMO has access to all rooms where animals are housed.

If a PI wants to house animals outside of the VMU, they have to have a scientific justification and the room has to be prepared so it can meet requirements below. The airflow has to be checked and a report provided to the IACUC.

- Lights on timer
- No natural light
- No excessive noise
- Sanitizeable ceiling
- Adequate air flow (at least 10 changes per hour)
- No hazardous agents stored near animals

At [redacted] the room is normally set up with the [redacted]® temperature monitoring system for monitoring temperature and humidity, and two members of the lab are put into the [redacted] system so they will receive text message and e-mails if the room gets too hot or too cold. They are then contact the RBSO or Facilities Management to correct the situation.

Two IACUC members and the APCO inspect the room to give it final approval.

During semi-annual inspections, the IACUC members use the following checklist in satellite housing rooms. The numbers refer to sections in the VA Semiannual Facility Inspect Form 1B.

Satellite housing checklist June 2018

ID#	General
1351	Floors in good condition?
1353	Walls and ceilings are smooth, moisture resistant, and sanitizeable?
1753	No natural light?
1359	No bugs in lights?
1354	Doors fit tightly within their frames, are in good condition, and close on their own?
1364	Thermometer/hygrometer that records max and min?
1753	Lights are 12 on/12 off unless specified otherwise in the ACORP. Ask to see the timer.
1450	No toxic chemicals are stored in the same areas as the animals, their food, or their bedding.
2101	Contact information for the veterinarians is posted prominently.

301	Contact information for anonymously reporting animal welfare concerns is posted prominently.

Supplies

1806	Clean and dirty cages, water bottles, and enrichment are kept covered to keep dust out and odors/allergens in
1452	Food is in a sealed container in a vermin-free area, and clearly labeled with the milling date (less than 6 months ago) AND expiration date.
1451	Clean bedding is stored in a container with a lid in a vermin-free area.
1450	Dirty cages (with cage litter) are covered in plastic and sent to the VMU for cleaning if possible. If not, dirty cage litter is stored in a in container with a lid

Ventilation

1751	Room is negative pressure
1751	Air supply vents working
1751	Air exhaust vents working

Cages

1808	Each incubator has a log sheet, a thermometer/hygrometer, and a census sheet.
1809	Each cage has a cage card or a photocopy of a cage card.
1809	Cage cards are not just recycled ones from some other protocol
1806	Are the cages, water bottles, and environmental enrichment clean?
1815, 1816, 1820	Each cage has food (at least 6 lab blocks) and water (at least half-full bottle), and reasonably clean bedding.
1811	Each cage has environmental enrichment (unless specifically excluded in the ACORP)
2257	The animals look healthy, with no overdue sutures or problems?

Room log sheet

1802	Daily observation/feeding/watering of each animal takes place.
2200	Animals are observed at least daily for signs of illness, injury or abnormal behavior by trained personnel.
2100	Animals are cared for on weekends, holidays, and regular weekdays.
1822	Cages are changed at least once a week.
1355	Temperatures in the rooms are properly monitored and recorded on the log sheet.
1750	Temperature and humidity in the rooms are within acceptable ranges.
2150	There should be a census sheet present.

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.

The entire [redacted] campus has a one megawatt emergency generator to which all animal facilities are connected. It is tested monthly. If a power failure occurs, the emergency power system automatically takes over, and will maintain all environmental systems for the VMU. There are emergency lights in the hallway.
Emergency power for all [redacted] operations is provided by a hard-wired two megawatt generator that is tested monthly. If a power failure occurs, the emergency power system automatically takes over which will maintain all environmental systems for the VMU. There are emergency lights in the hallway.

Emergency power in [redacted] for all VMU operations is provided by a hard-wired two megawatt generator that is tested monthly. If a power failure occurs, the emergency power system automatically takes over and will maintain all environmental systems for the VMU. There are emergency lights in the hallway.

Power Failure History
In [redacted] the most recent power failure occurred during the Northridge earthquake of January 1994. Power was restored three days following the earthquake. Fans were used and doors were left ajar in an attempt to maintain reasonable temperatures.

[redacted] typically encounters an average of one extended (less than eight hours) power outage yearly and monthly scheduled shut downs that last less than 30 minutes. These cases are pre-arranged for the purpose of construction or repair.

All heating valves for air supplied to animal rooms are set to fail in the closed (fail-off) position.

Currently portable cooling/heating units are maintained in every all animal housing rooms to maintain temperatures within range in the case of a power outage.

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).

There have been no animal losses or health problems resulting from such failures. If there were, our standard procedure is for the Chair to appoint one or more IACUC members to investigate the concern (usually with assistance from the APCO) and report their findings to the IACUC. If the IACUC finds it to be a "reportable event", a letter describing the findings and remediation plan is sent to the ACOS for R&D, the Chief of Staff, and the IO. Once signed by the IO, a PDF of the signed letter would be e-mailed to the VA Office of Research Oversight, the NIH Office of Laboratory Animal Welfare, other NIH Institutes (if appropriate), AAALAC, and the VA's Chief Veterinary Medical Officer.

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.

[redacted] has a portable X-ray machine and AGFA CP100 table top film processor located in the north wing surgical suite. This unit is for large animals and is wiped down with Clidox following use.
The [redacted] VMU has a portable X-ray machine which is also sanitized with Clidox.

2. Other Animal Program Support Facilities

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

The food prep area is located in the [redacted] It contains a refrigerator, a sink and a stainless steel table for food preparation purposes.

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, erasure, restriction 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
ACORP	Animal Component of Research Protocol (the VA animal use form which is reviewed by the IACUC).
ACOS	Associate Chief of Staff for Research
AO	Administrative Officer
APCO	Animal Program Compliance Officer (The APCO works with the, the IACUC, the VMO and VMU stafff, and the PIs to ensure compliance with animal welfare regulations)
AWE	Annual Workplace Evaluation
CM	Community Member (non-affiliated member of the IACUC)
DMR	Designated member review.
FCR	Full Committee Review
GLAVREF	Greater Los Angeles Research & Education Foundation
IBC	Institutional Biosafety Committee
IO	Institutional Official (at our VA this is always the Medical Center Director)
MOU	Memorandum of Understanding
RBSO	Research Biosafety Officer
SRS	Subcommittee for Research Safety
SACC	Sepulveda, one of the two campuses at which the animal research program is located
SEP or Sep	Sepulveda, one of the two campuses at which the animal research program is located
Sepulveda	The Sepulveda campus, which is located about 14 miles north of our West Los Angeles campus in the San Fernando Valley section of Los Angeles.
VA-GLA	VA Greater Los Angeles
VAGLAHS	Veterans Affairs Greater Los Angeles Health Care System. (Refers to the entire institution, including both campuses where research with animals occurs.)
VMO	Veterinary Medical Officer (the director of the animal care facilities)
VMU	Veterinary Medical Unit (Where animals are housed. There is one at the Sepulveda campus and one at the West LA campus.)
WLA	West Los Angeles, one of the two campuses at which the animal research program is located

Appendix 2: Summary of Animal Housing and Support Sites

Briefly summarize in the following Table the animal facility or facilities, noting the number of areas in which animals are housed (buildings, floors, farms, satellite housing facilities, etc.), the total square footage/metres and/or acreage for animal care and use, and the total square footage/metres and/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, cage washing facilities, service corridors, etc. and additional areas to be considered are enumerated in the *Guide*). Detailed information for satellite housing facilities is requested in Appendix 17. Include only one line entry for satellite housing facilities in this table to provide the total square footage for all satellite housing areas listed in Appendix 17. If more than one facility/site, note the approximate distance (yards/miles or meters/kilometers) to each facility from a reference point such as from the largest animal facility. A campus/site map (with a distance scale) may be included as an additional Appendix (Appendix 2.1) to provide this information. See Instructions, Addendum A - Animal Facility Square Footage/Metres Compilation Form for guidance in calculating the size of your animal care and use program.

Animal Housing and Support Sites						
Location (building, site, farm name, etc.[a])	**Distance from main facility[b]**	**Approx. ft^2, m^2, or acreage for animal housing**	**Approx. ft^2, m^2, or acreage for support or procedures**	**Species housed**	**Approx. Daily Animal Census by species**	**Person in charge of site**
[redacted]	~0.1 miles	770 sq. ft.	5,353 sq. ft.	Mice	30 mice	VMU Facilities manager
[redacted]	~500 ft.	1,560 sq. ft.	1,968 sq. ft	Mice	500 mice	VMU Facilities manager
[redacted] VMU housing (rooms [redacted]	~0.25 miles	422 sq. ft.	N/A	Mice and rats	70 mice, 10 rats	VMU Facilities manager
[redacted]	~0.25 miles	3,968 sq. ft.	N/A	Mice and rats	10 mice 20 rats	Various PIs – each PI is responsible for their own space.
[redacted]	N/A	6,222 sq. ft.	17,890 sq ft	Mice, rats, gerbils, hamsters, and cats.	2 cats 0 gerbils 0 hamsters 0 rats 1570 mice	VMU Facilities manager

Appendix 2: Summary of Animal Housing and Support Sites

Animal Housing and Support Sites						
Location (building, site, farm name, etc.[a])	**Distance from main facility[b]**	**Approx. ft², m², or acreage for animal housing**	**Approx. ft², m², or acreage for support or procedures**	**Species housed**	**Approx. Daily Animal Census by species**	**Person in charge of site**
[redacted]	N/A	2,125 sq. ft.	3,485 sq. ft.	Mice and rats	140 rats, 650 mice	VMU Facilities manager
[redacted]	NA	2,755 sq. ft.	N/A	Mice and rats	15 rats, 0 mice	Various PIs – each PI is responsible for their own space.

Totals:	**17,822 sq. ft.**	**28,696 sq. ft.**	
Total animal housing and support space:	**46,518 sq.ft.**		
	(please specify ft² or m²)		

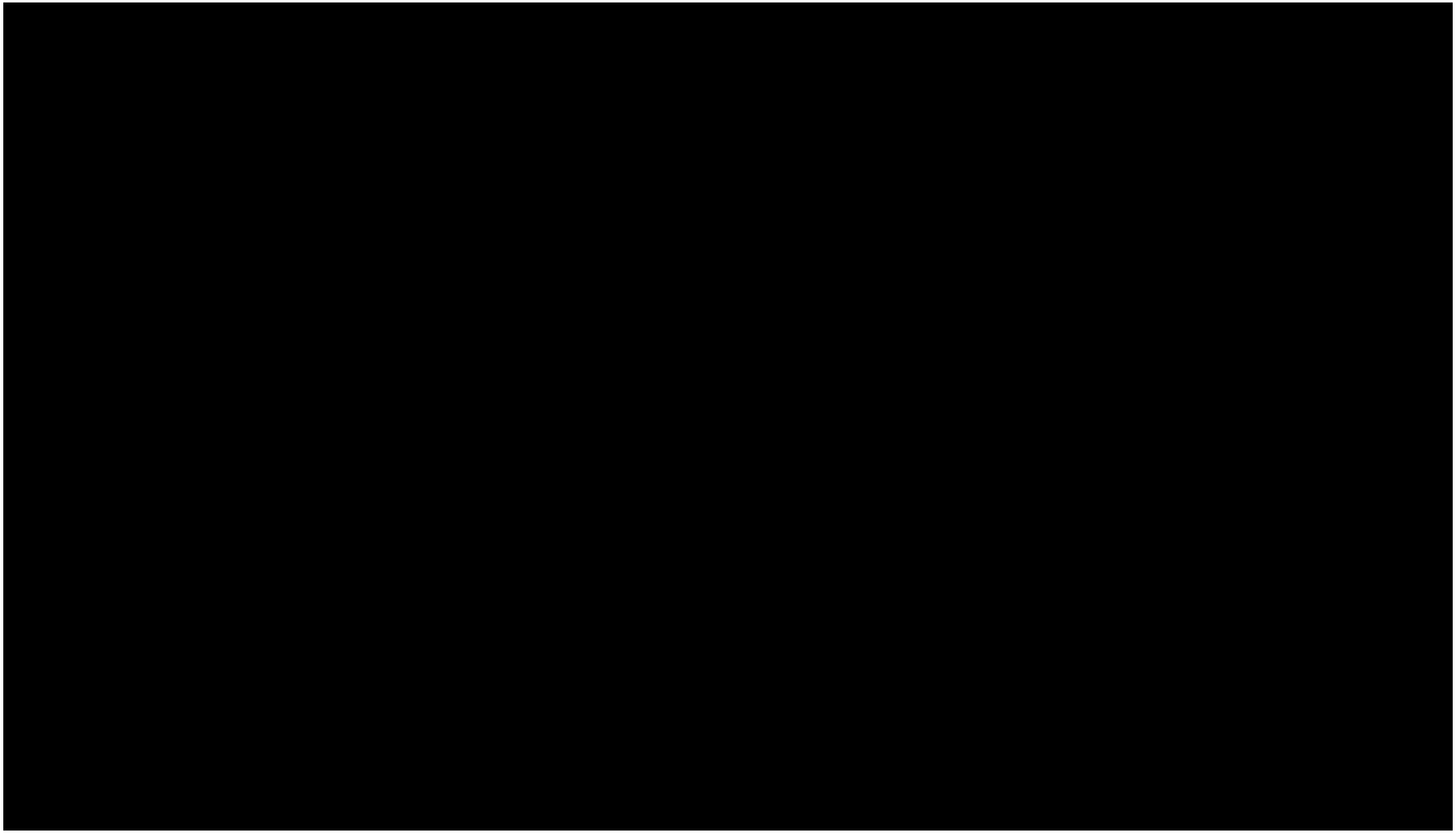
[a]Please state name and/or use acronyms described in **Appendix 1** for building names, if not coded for confidentiality.
[b]Campus or site map(s) may also be provided in lieu of this information.

Appendix 3: Line Drawings

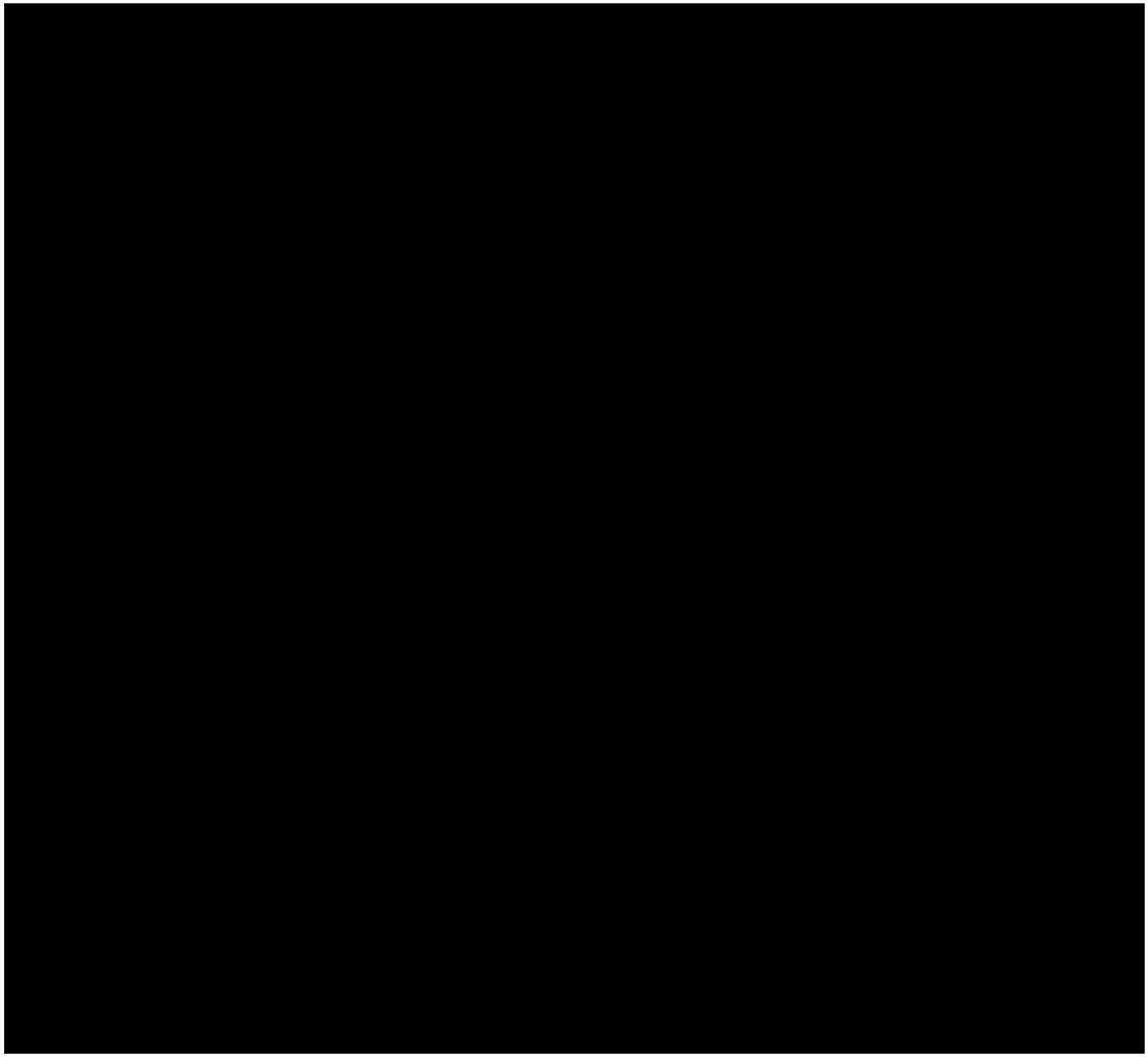
Provide floor plans of each centralized animal housing facility. Plans should be provided on 8.5" x 11" or A4 paper. Ensure that the drawings are legible, including room numbers if used, and the use of each room is indicated (animal housing, procedure room, clean cage storage, hazardous waste storage,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

Drawings are provided for the following buildings:

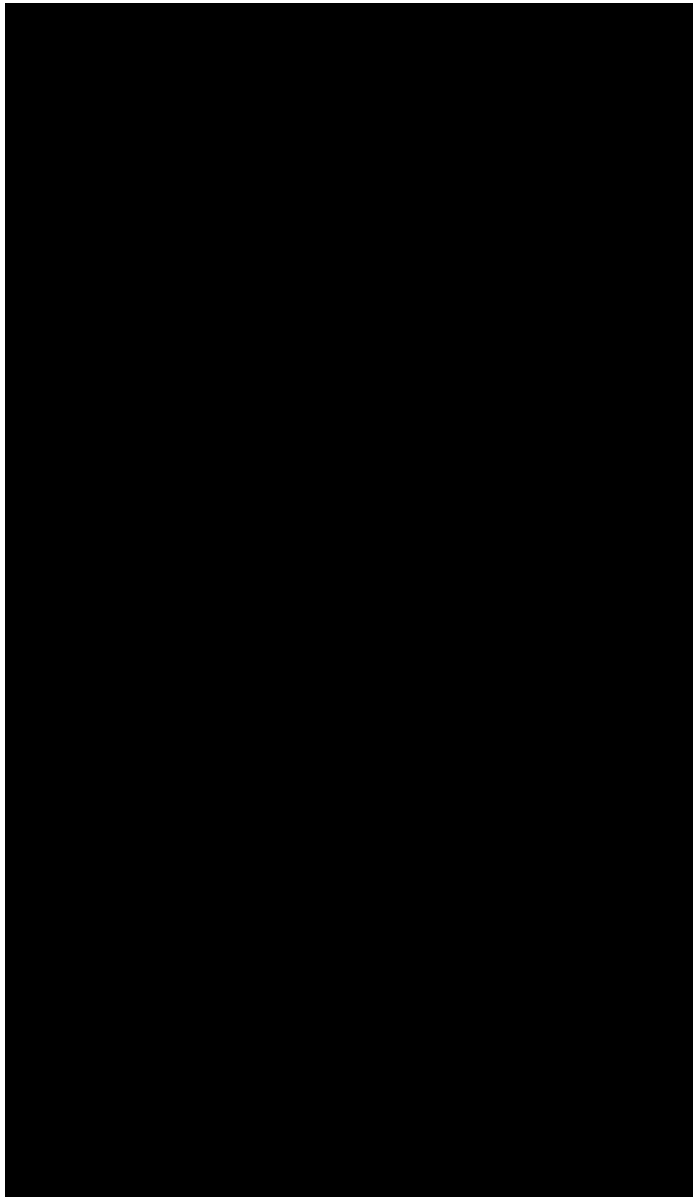
Appendix 3: Line Drawings



Appendix 3: Line Drawings



Appendix 3: Line Drawings



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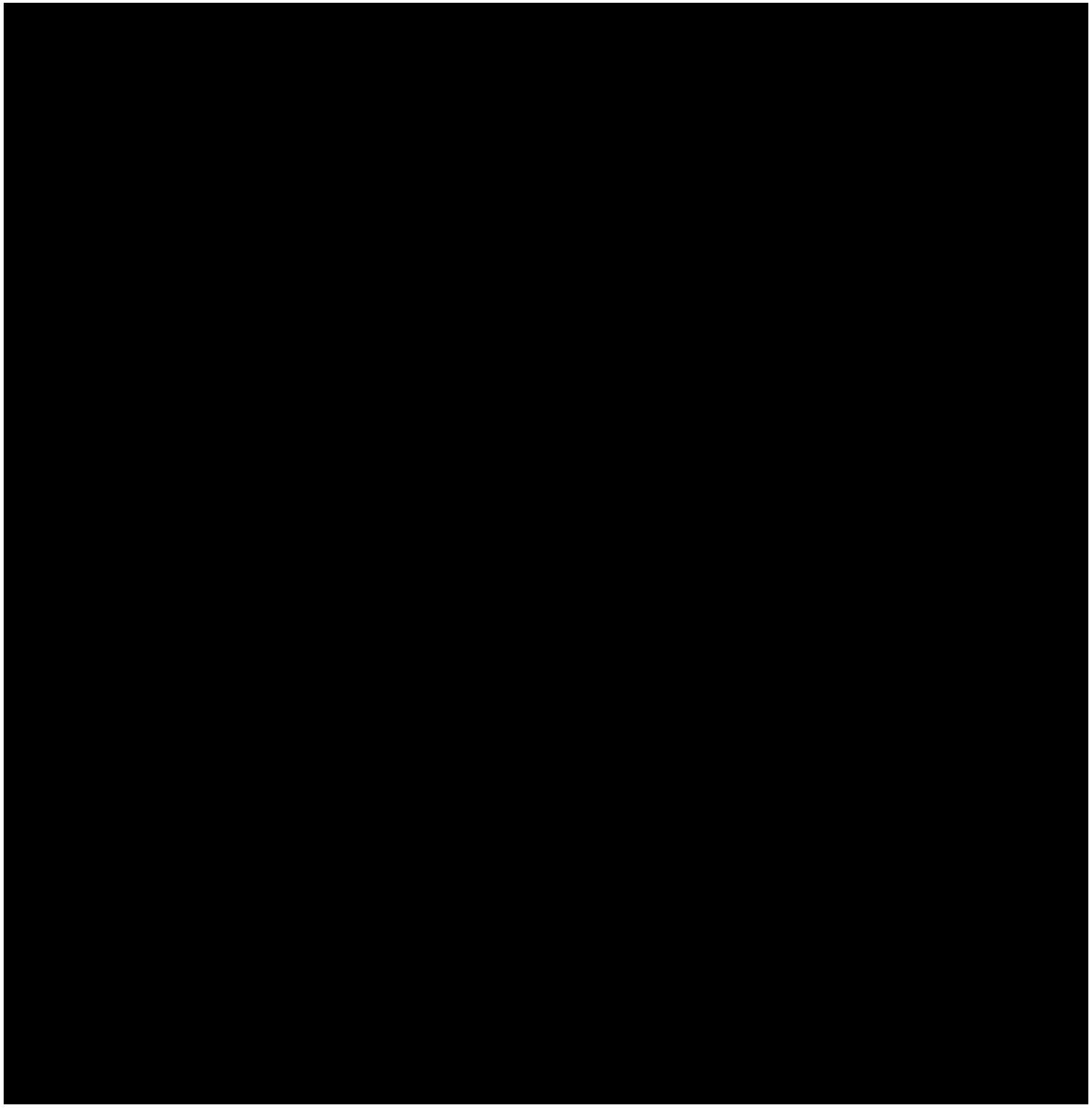

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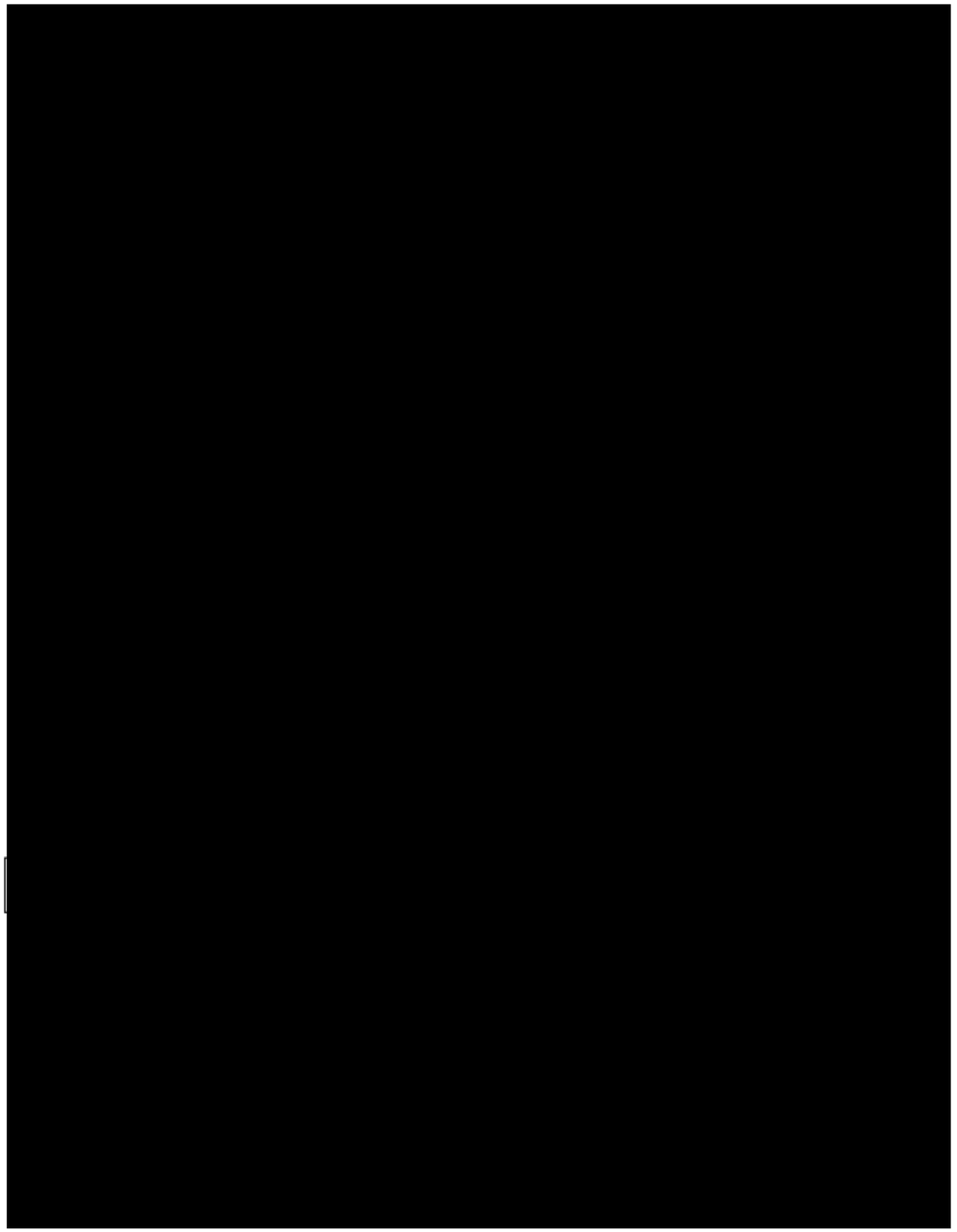

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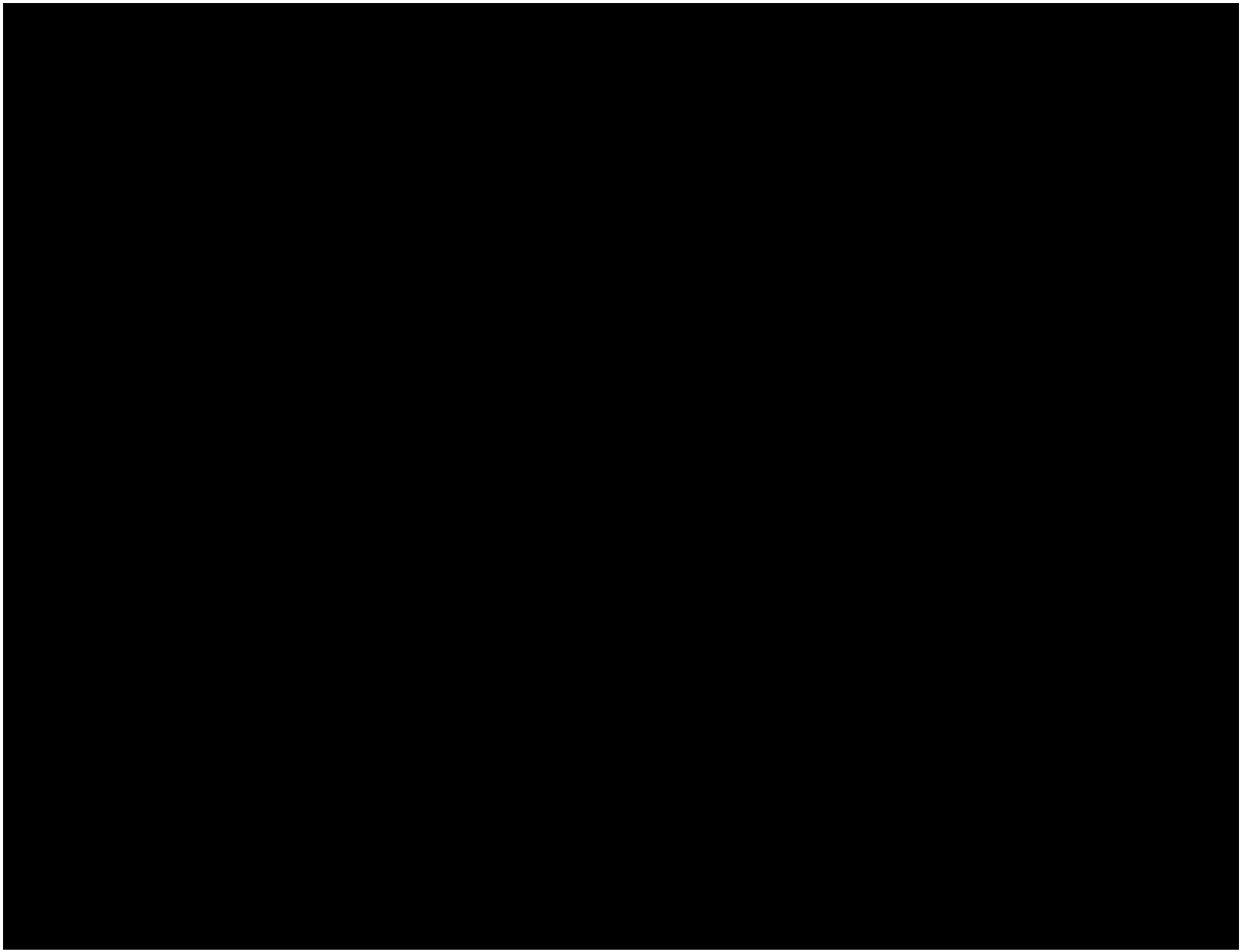
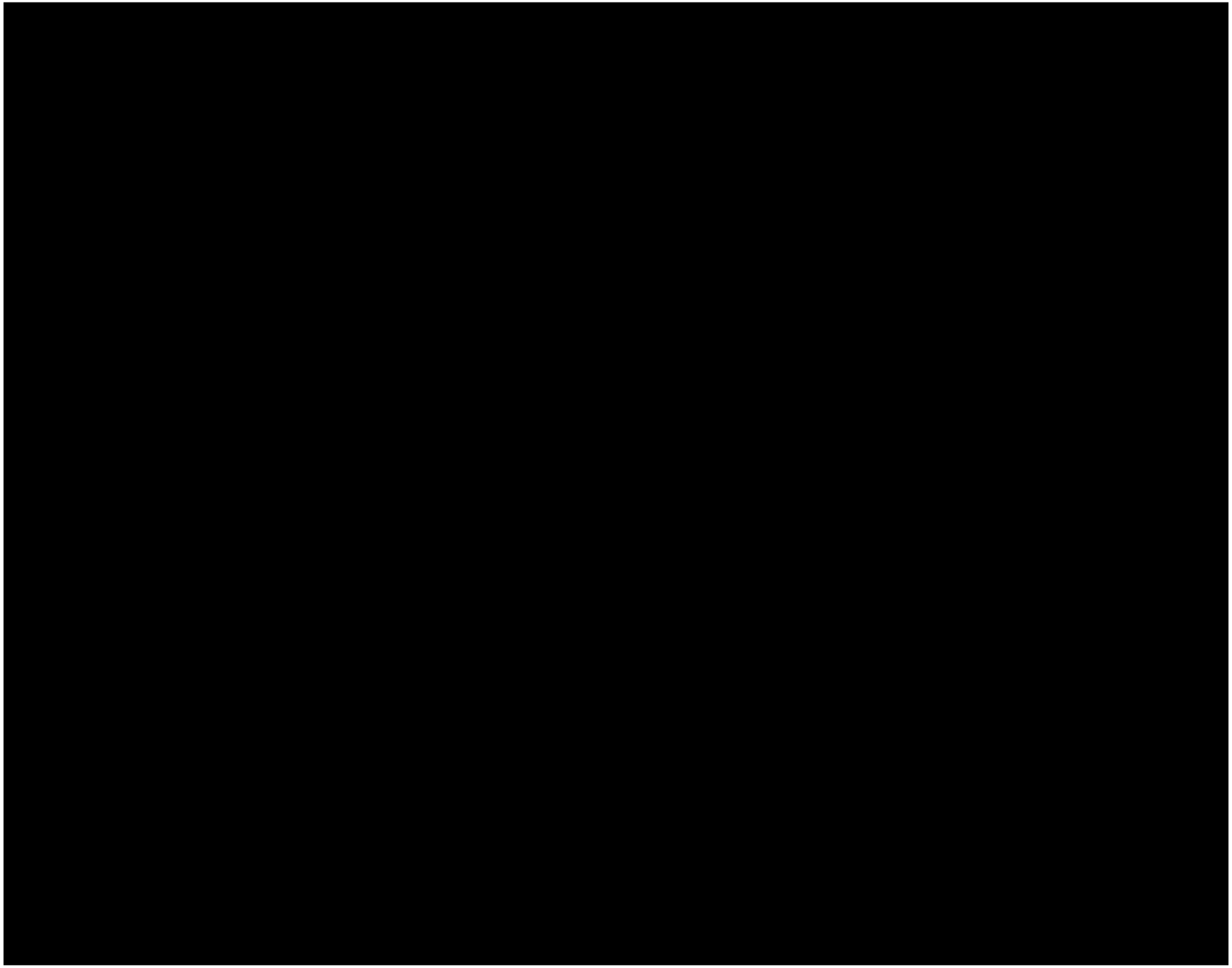


Appendix 3: Line Drawings



Appendix 3: Line Drawings

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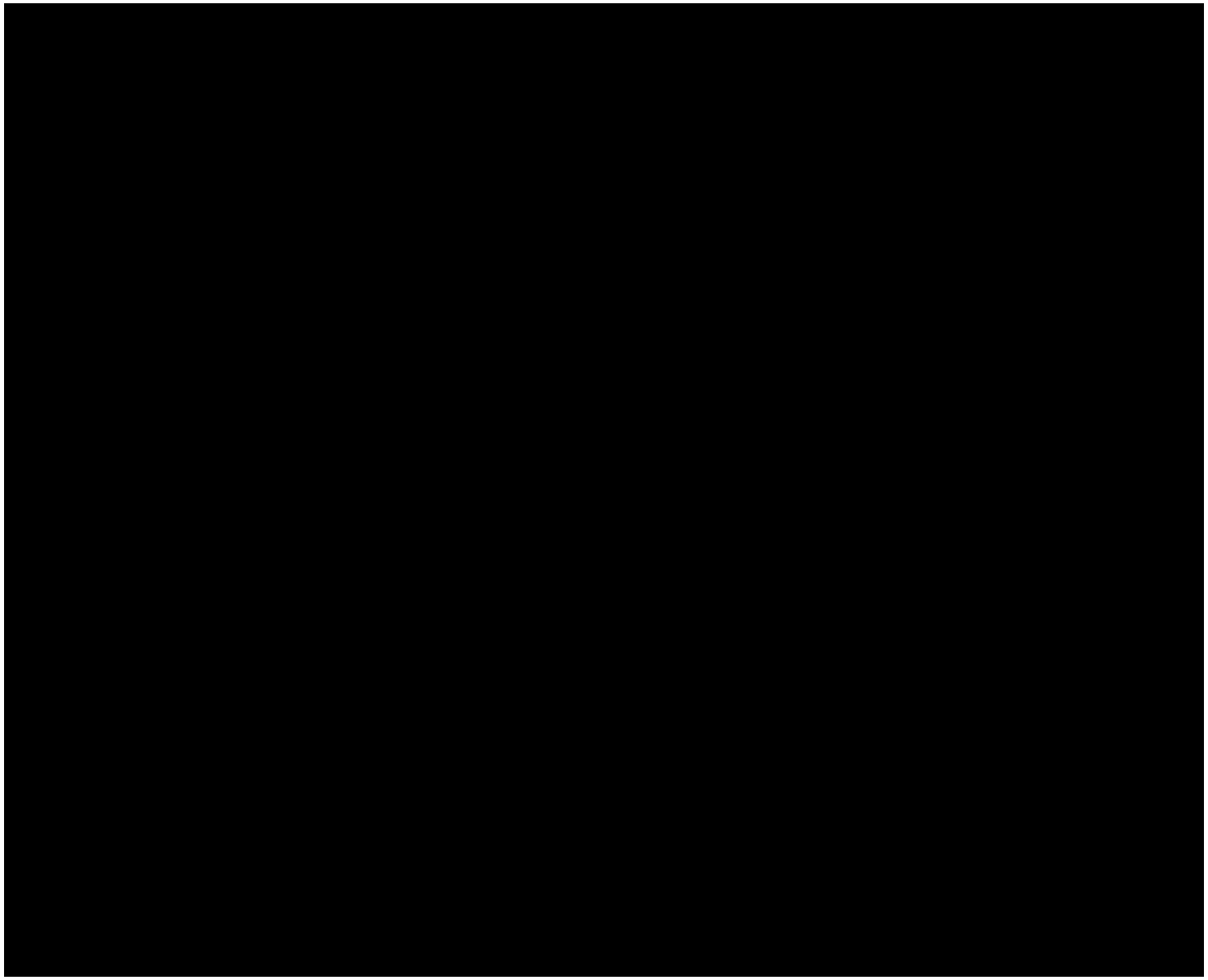


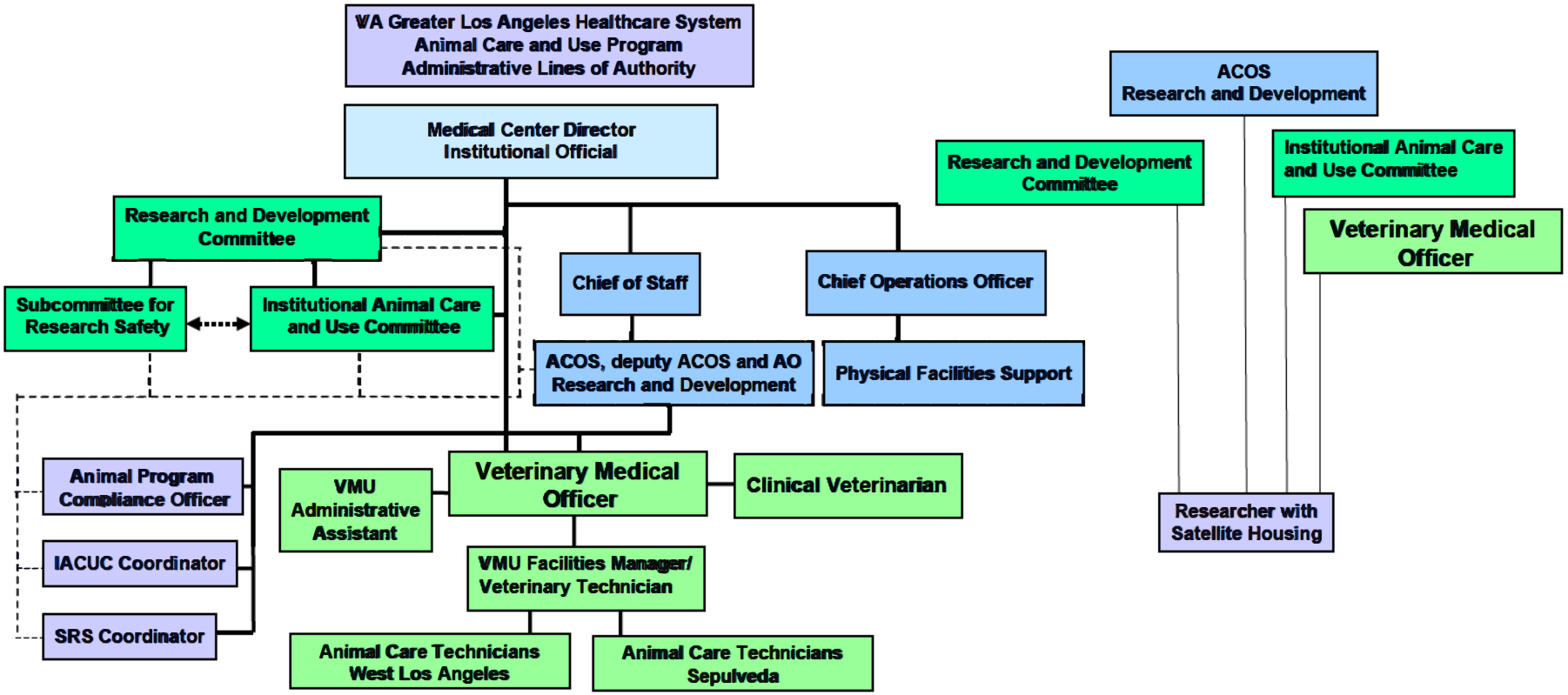
Appendix 3: Line Drawings

Appendix 3: Line Drawings

Appendix 3: Line Drawings

Appendix 4: Organizational Chart(s)

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



Appendix 5: Animal Usage

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

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Preoptic/Hypothalamic Mechanisms of Sleep-Wake Regulation (Old)	2011-020221	[redacted]	Rat	879	D	X				X	
Preoptic/Hypothalamic Mechanisms of Sleep-Wake Regulation (Old)	2011-020221	[redacted]	Mouse	1062	D	X				X	
Preoptic/Hypothalamic Mechanisms of Sleep-Wake Regulation	2016-020184	[redacted]	Rat	1304	D	X				X	
Breeding Protocol for Preoptic/Hypothalamic Mechanisms of Sleep-Wake Regulation (Old)	2019-090756	[redacted]	Mouse	496	B & D						
Preoptic/Hypothalamic Mechanisms Of Sleep-Wake Regulation (2020)	2020-000083	[redacted]	Mouse	270	D		X			X	

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Enhancing the Delivery of Amphotericin B Across the Blood Brain Barrier for Treatment of Cryptococcal Meningoencephalitis	2017-080800	[redacted]	Mouse	900	C & E	X					X
Cyclo-His-Pro + Zinc Regulation of Mesenchymal Stem Cell and Macrophage Immunomodulation	2016-020126	[redacted]	Mouse	270	C & E						X
Regulation of Calcium Signaling in Retinal Ganglion Cells after Nerve Injury	2010-091298	[redacted]	Mouse	524	D	X					X
Thyroid Hormone Receptor Isoform-Specific Actions	2003-091233	[redacted]	Mouse	900	C & D & E	X				X	
Transgenic Mouse Breeding Colony	2005-091364	[redacted]	Mouse	880	B						
Thyroid Hormone and Neuronal Protection	2018-100983	[redacted]	Rat	356	D	X					
Thyroid Hormone and Neuronal Protection	2018-100983	[redacted]	Mouse	760	D	X					
CTBI: Tauopathy in Mice and Human: Surrogate Plasma Biomarkers for Brain Trauma-Initiated Neurodegenerative Disease	2019-040292	[redacted]	Mouse	296	C & D					X	

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Targeting Irritable Bowel Syndrome (IBS) with Astressins	2018-030292	[redacted]	Rat	266	D				X	X	
Alzheimer Transgenic Colony Rat And Mouse Breeding Protocol	2020-000037	[redacted]	Mouse	465	C						
Alzheimer Transgenic Colony Rat And Mouse Breeding Protocol	2020-000037	[redacted]	Rat	180	C						
Effects of Mtor Inhibitors on MM Tumors	2011-080912	[redacted]	Mouse	1320	D					X	X
Targeting the in Vivo Hypoxic Microenvironment of Multiple Myeloma as an Anti-Tumor Strategy	2019-030201	[redacted]	Mouse	1500	D & E					X	X
In Vivo Mechanisms of Status Epilepticus-Induced Neuronal Death	2018-030208	[redacted]	Rat	47	D & E	X				X	X
The Roles of the Necroptotic and Excitotoxic Pathways in Diisopropyl Fluorophosphate-Induced Neuronal Necrosis	2019-080596	[redacted]	Rat	279	D & E	X				X	X

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Resolution of the Mechanisms Responsible for Atonia during REM Sleep	2018-040420	[redacted]	Cat	6	D	X	X		X		X
Breeding Protocol for Tg Glioma Mouse Models	2010-091167	[redacted]	Mouse	180	B & C						
Mechanisms of Resistance to mTOR-Targeted Therapies	2014-010039 (Animal)	[redacted]	Mouse	341	E					X	X
Co-Targeting Mtor and YAP Signaling in Glioblastoma	2017-111110	[redacted]	Mouse	773	C & D & E					X	X
Miniaturized Open Source Devices for Calcium Imaging	2018-070716	[redacted]	Mouse	100	D	X	X				
Using E-Scope to determine changes in hippocampal circuitry that promotes the development of epilepsy and cognitive dysfunction after the initial insult (animal)	2020-000046	[redacted]	Mouse	240	D & E		X	X			
Apoptosis and Necrosis in Pancreatitis	2003-040469	[redacted]	Mouse	780	C & E						X
Mitochondrial Dysfunction, Permeability Transition Pore, and Acute Pancreatitis	2010-040547	[redacted]	Mouse	1080	C & E						X

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Organelle Disorders in Pancreatitis: Sub-Project 1 Dysfunction of Rab GTPases in Pancreatitis	2014-070805	[redacted]	Mouse	800	C & E						
Generic Breeding Protocol for the Pancreatic Research Group	2016-020176	[redacted]	Mouse	27104	B & D						
Cell Death and Autophagy in Chronic Pancreatitis	2018-030262	[redacted]	Mouse	1044	C & E						
NF-kB-NRF2 Interplay Regulates Inflammation in Alcoholic Pancreatitis	2018-090897	[redacted]	Mouse	1380	C & D & E						
Organelle Disorders in Pancreatitis: Animal Sub-core	2014-070804	[redacted]	Mouse	750	C & D & E	X					
Virulence Proteins of Pathogenic Leptospiral Species	2017-060536	[redacted]	Hamster	800	D & E						
Functions of Leptospira Lig Proteins in the Pathogenesis of Leptospirosis	2019-030176	[redacted]	Hamster	412	B & E						
Essential Tremor Research Program	2006-030323	[redacted]	Mouse	1621	C						

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Breeding Colony for Essential Tremor Research Program	2006-040529	[redacted]	Mouse	1410	C						
Breeding Colony for a Delta GABA Receptor as a Target for Essential Tremor Therapy	2013-111519	[redacted]	Mouse	1827	C						
A Delta Gaba Receptor as a Target for Essential Tremor Therapy	2013-111520	[redacted]	Mouse	388	C						
Implantation of Tissue Engineered Mouse Metanephros	2010-121669	[redacted]	Mouse	108	C & D	X					
Exercise-Induced Shear Stress Modulates Metabolic Pathways for Vascular Repair and Protection	2018-050515	[redacted]	Mouse	180	C & D	X					X
Exercise-Induced Shear Stress Modulates Metabolic Pathways for Vascular Repair and Protection	2018-050515	[redacted]	Rabbit	20	C & D	X					X
Modulation of the Intestinal Microbiome in Obesity by a High Protein Diet	2017-121121 (Animal)	[redacted]	Mouse	192	C						

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Eicosanoids As Neuromodulators of Brain Mesolimbic Dopaminergic Systems	2007-030421	[redacted]	Rat	148	E	X					
Mice Breeding Protocol for Duodenal Mucosal Defense Mechanisms (NIH Renewal)	2016-010009	[redacted]	Mouse	1038	B & C						
Teduglutide and Nutrient Receptor Ligands, by Reducing Intestinal Permeability, Improve Outcomes in Critical Illness	2016-050444	[redacted]	Rat	234	E			X			X
Teduglutide and Nutrient Receptor Ligands, by Reducing Intestinal Permeability, Improve Outcomes in Critical Illness	2016-050444	[redacted]	Mouse	306	E			X			X
Teduglutide Therapy Impairs the Progression of the Metabolic Syndrome Through Inhibition of Intestinal Endotoxin Uptake	2018-121120	[redacted]	Mouse	180	D	X	X				
Luminal factors affecting duodenal protection and chemosensing	2020-000077	[redacted]	Rat	749	E			X			X
Health Surveillance of Mice and Rats	2006-081175	[redacted]	Rat	150	C						
Health Surveillance of Mice and Rats	2006-081175	[redacted]	Mouse	650	C						

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Enhanced Soft Tissue-to-Bone Healing via Treatment with Novel Growth Factor NELL-1: Targeted Delivery and Biomimetic Scaffolds	2020-000059	[redacted]	Rat	335	D						
Stress and Sleep Homeostasis	2017-121184	[redacted]	Mouse	42	D	X				X	
Basal Ganglia and Sleep Related Motor Disorders	2014-070806	[redacted]	Rat	41	D	X				X	X
Human Bone Engineering and Resorption in a Novel Mineralized Collagen Scaffold	2015-040380	[redacted]	Mouse	278	D	X					
Human Bone Engineering and Resorption in a Novel Mineralized Collagen Scaffold	2015-040380	[redacted]	Rabbit	176	D	X					
Preclinical Evaluation of Nanoparticulate Mineralized Collagen Glycosaminoglycan Materials in Calvarial Regeneration	2019-040257	[redacted]	Rabbit	71	D	X					
TRPV Receptor Antagonist Modulates Fat Distribution: A Hypothesis-Testing Study in Mice	2016-080761	[redacted]	Mouse	50	C						
Regulation of c-myc Translation by hnRNP A1	2015-090953 (Animal)	[redacted]	Mouse	600	C & E						

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Vocal Cord Tissue Engineering: Pre-Clinical Scale-Up	2018-030281	[redacted]	Pig	5	D	X					
Tissue Engineering to Regenerate Functional Vocal Fold After Scarring or Tissue Loss	2018-100956	[redacted]	Rabbit	108	D	X	X				
Mechanisms of PTEN Signaling Defects in Alzheimer's Disease	2007-081283	[redacted]	Mouse	1572	C & D	X				X	
Mechanisms of PTEN Signaling Defects in Alzheimer's Disease	2007-081283	[redacted]	Rat	48	C & D	X				X	
Investigation of H. Pylori-Host Interactions Contributing to Gastric Pathology	2012-040599	[redacted]	Mouse	5	C					X	
Investigation of H. Pylori-Host Interactions Contributing to Gastric Pathology	2012-040599	[redacted]	Gerbil	25	C					X	
Adaptive Responses of Helicobacter Pylori to Chronic Acid Exposure	2012-040601	[redacted]	Gerbil	80	C						
Mechanisms of Gastric Mucosal Response to H Pylori Infection at Acidic pH	2020-000210	[redacted]	Gerbil	105	C					X	X

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Adult Neurogenesis: Regulation by Sleep	2005-040597	[redacted]	Rat	30	D	X				X	
Reactivating P53 Function with a Novel Structure-Based Peptide as a Therapeutic Approach for Overcoming Platinum Resistance	2019-020090 (Animal)	[redacted]	Mouse	294	D						X
Ammonia Production and Transport by the Proximal Tubule	1996-040003	[redacted]	Mouse	80	C						
Tailoring Stress Cardiac MRI for Women with Ischemic Heart Disease	2018-080821 (Animal)	[redacted]	Pig	33	D						
Precancer Niche Formation in the Fallopian Tube	2020-000089	[redacted]	Mouse	560	B & C						
3-D Intravascular Sensors for Lipid-Rich Plaques	2019-100765	[redacted]	Rabbit	20	D	X	X				
3-D Intravascular Sensors for Lipid-Rich Plaques	2019-100765	[redacted]	Pig	16	D	X	X				
Role of Thyrotropin-Releasing Hormone (TRH) in Antidepressant Treatment	2003-121510	[redacted]	Rat	96	C			X			
Characterization of PACAP Receptor Function and Signaling	2001-081502	[redacted]	Mouse	10053	C & D	X				X	X
Mice Breeding Protocol for Characterization of PACAP Receptor Function and Signaling	2003-050724	[redacted]	Mouse	9372	B & C						

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Characterization of Pacap and Pac1 Receptor Role and Function in a Murine Colitis Model	2005-030335	[redacted]	Mouse	10968	C & E						
Identification of the Growth-Promoting PKD/YAP Axis as a Novel Target for the Statins in Intestinal Epithelial Cells	2018-040424	[redacted]	Mouse	520	C & E						X
Acid Adaptation Targets for Eradication of Helicobacter pylori	2005-030389	[redacted]	Gerbil	60	C						X
The Pharmacokinetics of the Novel Potassium Competitive Acid Blocker, JCHC-PCAB	2017-060562	[redacted]	Rabbit	3	C						
Programming Durable Immune Responses in Lung Cancer	2016-070669	[redacted]	Mouse	3180	B & D & E						
Immune Checkpoint Blockage Drugs for Treatment of Head and Neck and Lung Cancers	2020-000216	[redacted]	Mouse	0	D						X
Effects of Morphine on the Morphology of the Hypocretin and MCH Systems	2012-050804	[redacted]	Mouse	450	D & E	X	X	X		X	X
Effects of Drugs on Hypocretin and Melanin Concentrating Hormone Neurons	2014-080860	[redacted]	Rat	36	D	X	X	X	X	X	X
Effects of Drugs on Hypocretin and Melanin Concentrating Hormone Neurons	2014-080860	[redacted]	Mouse	946	D	X	X	X	X	X	X

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
What Causes Human Narcolepsy	2016-080756	[redacted]	Mouse	520	C					X	
Isolation of Cervical Cancer Tumor Suppressor Gene	2000-040180	[redacted]	Mouse	160	D & E						
Impact of Corticotropin Releasing Factor (CRF) on Sleep Regulation	1997-120022	[redacted]	Rat	95	D	X			X	X	X
Impact of Corticotropin Releasing Factor (CRF) on Sleep Regulation	1997-120022	[redacted]	Mouse	1041	D	X			X	X	X
Mice Breeding Protocol for Impact of Corticotropin Releasing Factor (CRF) on Sleep Regulation	2016-060553	[redacted]	Mouse	1320	B & D						
GABAergic Switches Control Wakefulness, NREM Sleep and REM Sleep (Rat)	2016-070660	[redacted]	Rat	234	D	X				X	X
Comprehensive Structural and Functional Mapping of Mammalian Colonic Nervous System	2017-070637 (Animal)	[redacted]	Mouse	196	C & D	X				X	
Molecular Mechanisms of Stellate Cell Activation in Liver Fibrosis	2000-080478	[redacted]	Mouse	560	C	X					X
Ghrelin Agonists Multiple Beneficial Effects on Parkinson's Non-Motor Symptoms	2015-010007	[redacted]	Rat	192	D	X				X	X

Appendix 5: Animal Usage

Project/Protocol Title	IACUC/OB Number	Principal Investigator	Species	Total Number of Animals Approved	USDA Pain and Distress categories	Survival Surgeries	Multiple Survival Surgeries	Food or Fluid Restriction	Prolonged Restraint	Non-Centralized Housing	Hazardous Agent Use
Ghrelin Agonists Multiple Beneficial Effects on Parkinson's Non-Motor Symptoms	2015-010007	[redacted]	Mouse	216	D	X				X	X
Curcumin Suppression of Head and Neck Cancer	2006-040531 (Animal)	[redacted]	Mouse	210	D	X					X
Rational Polytherapy in the Treatment of Cholinergic Seizures	2011-070736	[redacted]	Rat	508	C & E	X				X	X
Perampanel (Fycompa) in the Treatment of Benzodiazepine-Refractory Status Epilepticus	2018-010073	[redacted]	Rat	466	C & E	X			X	X	X
The Role of Exogenous Type VII Collagen on the Healing of Skin Wounds	2018-121168	[redacted]	Pig	10	E	X	X				X
GABAergic Switches Control Wakefulness, NREM Sleep and REM Sleep	2018-040421	[redacted]	Cat	6	D	X			X		X
Induction of Renal Progenitor Cells	2009-010049	[redacted]	Mouse	336	C & E						
Breeding for Induction of Renal Progenitor Cells	2010-091153	[redacted]	Mouse	90	B						

Appendix 5: Animal Usage

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

Animal Type or Species	Approximate Annual Use
cat	3
rabbit	19
mouse	834
rat	572

Animal Type or Species	Approximate Annual Use

These numbers come from 2019, and are for animals in USDA categories C,D, and E.

Our 2020 numbers have been affected by research shutdowns due to COVID-19 and are not representative of our program.

Appendix 6: Personnel Medical Evaluation Form

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

Our Personnel Medical Evaluation forms are fillable PDFs that do not paste well into Word and are instead provided as separate attachments.

Please see:
App 6 Animal Exposure Baseline form example (for new people)
App 6 Annual Animal Exposure Evaluation Form

U.S. Department of Veterans Affairs
VA Greater Los Angeles Healthcare System

Periodic Animal Exposure Questionnaire

Name:_____ Social Security Number (Last 4)_____

Job Title: _____ Phone:_____Extension: _____

Bldg./Room #:_____ E-mail:_____

1. I no longer work with animals (including animal tissues, waste, body fluids, carcasses, or animal quarters) at the VA Medical Center. Yes No (if Yes, skip to #4).

2. Show any **change** in animal contact within the VA Medical Center in the past year. Write a plus (+) for continuing contact; (++) for new animal contact; (-) for animals no longer working with.

Form 1 - Animal Exposure Listing

Animal Exposure Listing	
_____Dogs	_____Swine
_____Cats	_____Sheep
_____Rabbits	_____Rodents
_____Guinea Pigs	_____Nonhuman Primates
_____Mice	_____Other
_____Goats	_____Gerbils
_____Hamsters	_____Rats

3. Check total amount of contact time with animals in the past year (include contact with animal tissues, waste, body fluids, carcasses, or animal quarters):

_____ More than one hour per week

_____ One hour or less per week

_____ Other (explain): _____

4. List any additions or deletions of human or animal pathogens or infectious diseases you have worked with in the past year:

Additions: _____

Deletions: _____

5. List the date of your last Tuberculosis (TB) screening: (Tuberculin Skin Test or TB Symptoms Checklist): _____

6. List date of Hepatitis B, Tetanus, or Rabies immunizations received this past year:

Hepatitis B: _____ Tetanus: _____ Rabies: _____

7. Circle any condition(s) below that you have developed over the past year:

Hay Fever Asthma Sinusitis Other Chronic Respiratory Infection

Allergic Skin Problems Eczema

Comments: _____

_____

8. Check symptoms you developed this past year and how often you have them:

Form 2 - Symptom Occurrence Checklist

Symptoms	Never	Monthly	Weekly	Daily
Watery, Itchy Eyes				
Runny, Stuffy Nose				
Sneezing Spells				
Frequent, Dry Cough				
Wheezing In Chest				
Rash or Hives				
Shortness of Breath				
Trouble Swallowing				

9. Do animals cause the above symptoms? If so, please list the animals. (in the box below)

_____

Appendix 7: IACUC/OB Membership Roster

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

Name of Member	Degree/ Credentials	Position Title	PHS Policy Membership Requirements	Affiliation
[redacted]	Ph.D.	Research Scientist	Chair/Scientist	Research and Development
[redacted]	D.V.M.	Veterinary Medical Officer	Veterinarian	Research and Development
[redacted]	Ph.D.	Research Scientist	Vice-Chair/Scientist	Research and Development
[redacted]	Ph.D.	Research Scientist	Vice-Chair/Scientist	Research and Development
[redacted]	B.A. (Political Science)	Retired Business Person	Non Affiliated Community Representative	Non-Affiliated
[redacted]	M.A. (History)	Retired High School teacher	Non Affiliated Community Representative	Non-Affiliated
[redacted] (voting alternate for the non-scientist member)	A.A.	Engineer	Non-Scientist Member (voting alternate)	Engineering
[redacted]	B.A.	Engineer	Non-Scientist Member	Engineering
[redacted]	M.D	Attending Physician/Research Scientist	Scientist	Infectious Disease
[redacted]	Ph.D.	Research Scientist	Vice-Chair/Scientist	Research and Development
[redacted]	Ph.D.	Research Scientist	Scientist	Research and Development
[redacted]	M.D.	Research Scientist	Scientist	Research and Development
[redacted]	Ph.D.	Research Scientist	Scientist	Research and Development
[redacted]	M.D.	Attending Physician/Research Scientist	Scientist	Surgery
[redacted]	Ph.D.	Research Scientist	Scientist	Research and Development

Appendix 7: IACUC/OB Membership Roster

[redacted]	Ph.D.	Research Scientist	Scientist	Research and Development
[redacted]	Ph.D.	Research Scientist	Scientist	Research and Development

Appendix 8: IACUC/OB Meeting Minutes

Due to formatting issues, the last two sets of IACUC minutes are attached as a separate appendix.

Please see the attachment **App 8 IACUC-OB Meeting Minutes**

Appendix 8: IACUC/OB Meeting Minutes

VA Greater Los Angeles VA-068

Appendix 8: IACUC/OB Meeting Minutes

VA Greater Los Angeles VA-068

VA Greater Los Angeles Healthcare System
Research and Development Committee
Institutional Animal Care and Use Committee (IACUC)

MINUTES
June 3, 2020

VA Greater Los Angeles Healthcare System—691
Teleconference

MEMBERS PRESENT

[redacted]Chair, Research Scientist (Voting)
[redacted]PhD, Vice-Chair, Research Scientist (Voting)
[redacted]Vice-Chair, Research Scientist (Voting)
[redacted]DVM, MA, DACLAM, VMO (Voting, Ex-Officio)
[redacted]Community Representative (Voting)
[redacted]MD, Research Scientist (Voting)
[redacted]Community Representative (Voting)
[redacted]Research Scientist (Voting)
[redacted]esearch Scientist (Voting)
[redacted]Research Scientist (Voting, Scientist)

MEMBERS ABSENT

[redacted]MD, Research Scientist (Voting)
[redacted]PhD, Research Scientist (Voting)
[redacted]PhD, Research Scientist (Voting)
[redacted]BA, Non-Scientist (Voting)
[redacted]PhD, Research Scientist (Voting)
[redacted]PhD, Research Scientist (Voting)

NON-VOTING MEMBERS PRESENT

[redacted]PhD, IACUC Coordinator
[redacted]PhD, RBSO, Biosafety Liaison
[redacted]PhD, Animal Program Compliance Officer (APCO)

NON-MEMBERS PRESENT

[redacted]RCO
[redacted]MA, CPIA, Director, UCLA OARO

All members attended via teleconferencing. It was confirmed that the members could hear the other meeting participants and the participants could hear them. Votes were also confirmed with all voting participants for the duration of the meeting.

Appendix 8: IACUC/OB Meeting Minutes

VA Greater Los Angeles VA-068

VA Greater Los Angeles Healthcare System
Research and Development Committee
Institutional Animal Use and Care Committee
Minutes: June 3, 2020

I. CALL TO ORDER: [redacted] called the meeting to order on June 3, 2020 at 12:08 p.m. There were *10* voting members present, meeting the quorum requirement of *9 (nine)*.

II. MINUTES: The minutes of the May 6, 2020 meeting were reviewed. There were no additions or corrections.

MOTION: Moved and seconded to *approve the minutes of the May 6, 2020 IACUC meeting.* 10 yes, 0 no, 0 abstentions. MOTION CARRIED

III. ANNOUNCMENTS:

A. *FREE EMAIL WEBINAR:* The APCO informed the committee that a free VA webinar on effective email communications is scheduled for June 8th at 10am PST and encouraged members to attend.

B. *REVISING IACUC FORMS:* The APCO informed the committee that some of the IACUC forms in Imedris will need to be revised now that the system is running, and PIs have provided feedback.

C. *CHANGE IN SECTION B OF THE ACORP:* The APCO informed the committee that it was brought to her attention that there is a question in Section B that asks to explain why the proposed research cannot be done in humans. The committee discussed this and agreed that it is not relevant to the research and it should be removed as is not needed.

MOTION: Moved and seconded to *remove Section B4 from the ACORP.* 10 yes, 0 no, 0 abstentions. MOTION CARRIED

IV. UCLA IACUC REPORT: [redacted] *MA, CPIA, Director – UCLA OARO*

A. *RESEARCH RESUMING:* [redacted] informed the committee that UCLA is getting ready to resume all research activities. A subcommittee provided guidelines for a phased-in approach and is finalizing the review process that will be sent to the Vice-Chancellor for Research when completed.

B. *UCLA AAALAC UPDATE:* [redacted] informed the committee that the UCLA Program Review was submitted to AAALAC. UCLA had initially requested an AAALAC site visit for August but has updated the request to September/October.

C. *PUBLIC RECORDS REQUEST:* [redacted] informed the committee that UCLA has recently received a large number of requests for public records for animal research.

Ms. Perkins left the meeting at 12:22 p.m. This had no effect on quorum.

V. NEW BUSINESS:

A. *IACUC NOMINATIONS FOR JULY 1, 2020*

1. *Renewals for 3-Year Terms:* The Chair presented to the committee the following slate

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of nominations for renewals for 3-year terms on the IACUC.

[redacted] ***MD: Renew for 3-Year Term as Voting Scientific Member (Expires 6/30/2023)***

MOTION: Moved and seconded to ***approve the renewal of*** [redacted] ***MD as a voting scientific member of the IACUC for a three-year term (expiring 6/30/2023).*** 10 yes, 0 no, 0 abstentions. **MOTION CARRIED**

[redacted] ***Renew for 3-Year Term as Voting Community Member (Expires 6/30/2023)***

MOTION: Moved and seconded to ***approve the renewal of*** [redacted] ***as a voting community member of the IACUC for a three-year term (expiring 6/30/2023).*** 10 yes, 0 no, 0 abstentions. **MOTION CARRIED**

2. ***New Membership Nomination:*** The Chair nominated [redacted] PhD, as a new voting IACUC member.

[redacted] ***PhD: New 3-Year Term as Voting Scientific Member (Expires 6/30/2023)***

MOTION: Moved and seconded to ***approve*** [redacted] ***PhD as a new voting scientific member of the IACUC for a three-year term (expiring 6/30/2023).*** 10 yes, 0 no, 0 abstentions. **MOTION CARRIED**

3. ***Member Rotating off the Committee:*** The Chair informed he committee that Dr. [redacted] is leaving the VA to take a position in New York. Members thanked [redacted] for [redacted] years of service on the committee.

B. REVIEW OF NEW SUBMISSIONS

Submission Number 001518 **Project # 2020-000046**
PI: [redacted] **PhD, MD**
Study Title: ***Using E-Scope to determine changes in hippocampal circuitry that promotes the development of epilepsy and cognitive dysfunction after the initial insult (animal)***

ISSUES REQUIRING MODIFICATIONS AND/OR CORRECTIONS: The Committee determined that the following contingencies and comments are to be forwarded to the PI, who must provide a satisfactory response to each before final approval can be considered.

ITEM 1: Number 4.10, Request to Review, Study Budget. Attach the budget pages from the grant for this project.

ITEM 2: Number 8.5, Section B, Number 5. Please verify "...pain-killing drugs for seven days...".

ITEM 3: Number 9.2, Section C, Number 2a. Explain what happens to the mice that cannot complete the task 30 times in 15 minutes.

ITEM 4: Number 9.3(B), Section C, Number 2b. The first sentence does not make sense. Please consult with Dr. [redacted] on this.

ITEM 5: Number 9.3(B), Section C, Number 2b. The LD50 for pilocarpine i.p. in mice is 155 mg/kg. Though the treatment of scopolamine will partially block its cholinergic effects, it might also reduce seizures. You have to expect that some of these mice might not survive the 275 mg/kg dose of pilocarpine. If the group size of 10 will give you the necessary sample size for your analysis, you would possibly have to add 20 extra animals in your seizure groups with current design to reach the same statistical power, as one third would die after status epilepticus, and one third would not develop the status epilepticus. You should consider adding methylatropine bromide 5mg/kg 20-30 min before pilocarpine administration, which would block the peripheral effects of pilocarpine and reduce the mortality rate without stopping the seizure-inducing effects of pilocarpine, thus reduce the total animal number to achieve the goals of the study. Buckmaster & Haney, 2012 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3458129/ (This study used a different strain of mice for their pilocarpine model, and found the condition for two third of the mice developed status epilepticus and survived). i.e. Even with the optimal condition, you would most likely need extra animals to have the same number of usable animals.

ITEM 6: Number 13.1, Section G. Check the "Yes" box for "Current on Interactions with OHSP".

ITEM 7: Number 14.1, Section I. It appears some animals are being counted as both category D and category E. Animals should only go into the highest category so if they get both surgery and water deprivation, they go only in category E.

ITEM 8: Number 16.2, Section K. Add water deprivation to the table.

ITEM 9: Number 16.2, Section K. Please provide the source of the information or modify the sentence: "Additionally, animals experiencing seizure will have no recollection of the pain or distress after the seizure episode is over."

ITEM 10: Number 17.2, Section L. Complete this section.

ITEM 11: Number 18.2, Section M. Please fill out this table.

ITEM 12: Number 22.1, Section Q. It appears the water deprivation is actually in their home cages in the VMU, and that room 136 is where they run the track to get water. Please make the correction to the room number.

ITEM 13: Number 25.1, Section T. The temperature issue is confusing. The first sentence says they may get an elevated temperature, while the second sentence indicates they may have a reduced temperature. Please clarify.

ITEM 14: Number 27.1, Section W, Number 1. Provide a little more detail why *in vitro* or computer models cannot be used.

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ITEM 15: Number 27.4, Section W, Number 4. Please change "Thus no further refinement is proposed" to "Thus no further refinement is possible with current technology."

ITEM 16: Number 28.4, Section X, Number 1. (1) This section indicates all controlled substances will be obtained through the VA pharmacy which contradicts Number 28.2 above. Please reconcile. (2) Please get the Diazepam from the VA pharmacy if you can. It will be a big DEA issue to transfer it from UCLA to another place.

ITEM 17: Number 31.7, Appendix 1. Add the PI phone number.

ITEM 18: Number 31.8, Appendix 1. Please add the PI VA e-mail.

ITEM 19: Number 31.13, Appendix 1. The number provided is the lab phone number. Move that number to Number 31.15 and replace it with a cell phone number here for emergency calls.

ITEM 20: Number 31.14, Appendix 1, Please add an alternate phone number.

ITEM 21: Number 34.1, Appendix 6, Number 1. Add the length of time the water deprivation will go on for.

ITEM 22: Number 31.26, Appendix 1. Add the carprofen here.

ITEM 23: Number 31.28, Appendix 1. Add the diazepam here.

ITEM 24: Number 32.2, Entry 4, Appendix 3. Scopolamine is an anticholinergic agent that can stop seizures when used at a higher dose; it does not aid seizure-induction. Please make the correction.

ITEM 25: Number 32.2, Entry 6, Appendix 3. Change the dose of isoflurane to 5%.

ITEM 26: Number 32.7, Appendix 3. Add the AAV viral vector here.

ITEM 27: Number 32.12, Appendix 3. Complete this table.

ITEM 28: Number 33.2, Appendix 5, Number 2. The isoflurane alone will only provide a brief duration, often less than a minute, of anesthesia once discontinued. It would not be easy to mount the animal onto the stereotaxic frame during the short period without discontinuation of gas anesthesia. Please describe the details how the anesthesia would be maintained with isoflurane in the procedure when putting animal onto stereotaxic frame. The administration of ketamine + xylazine is recommended as the induction of anesthesia.

ITEM 29: Number 33.2, Appendix 5, Number 2. Describe the details about surgical instruments used with details of aspiration of the cortex; how the bleeding during this procedure is controlled etc.

ITEM 30: Number 33.7, Appendix 5, Number 7. Give the maximum volume of 0.9% saline given IP.

ITEM 31: Number 34.1, Entry 2, Appendix 6, Number 1. Weight boats are very light weight and animals will spill the water when they move around. Consider a better water container/source.

ITEM 32: Number 34.3, Appendix 6, Number 3. Answer part b for the water deprivation.

MOTION: Moved and seconded to *require modifications for approval of* Submission Number 001518. *The approval will be for one year from the date of final approval.* 10 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

MOTION: Moved and seconded to *send the PI's response to designated member review.* 10 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

Submission Number 001348 **Project # 2020-000077**
PI: [redacted], MD
Study Title: ***Luminal factors affecting duodenal protection and chemosensing***

ISSUES REQUIRING MODIFICATIONS AND/OR CORRECTIONS: The Committee determined that the following contingencies and comments are to be forwarded to the PI, who must provide a satisfactory response to each before final approval can be considered.

ITEM 1: Number 4.5, Request to Review. Add the funding source.

ITEM 2: Number 8.2, Section B, Number 2. "...whereas no preventory therapy has been established." is not high school language. Please rewrite this. Try something like "...and there is currently no way to prevent it."

ITEM 3: Number 8.3, Section B, Number 3. Is "inured gut" supposed to be "injured gut"?

ITEM 4: Number 8.4, Section B, Number 4. Change "fetal" to "fatal".

ITEM 5: Number 8.5, Section B, Number 5. The explanation for using rats must be changed as it appears to say that it is okay for the rats to suffer because this condition kills humans. Please specify the length of the study and explain that rats are not going to be in pain for a long period of time. Also add that rats that complete the study will be euthanized humanely.

ITEM 6: Number 8.5, Section B, Number 5. Please replace "who are faced to death" with "who face death".

ITEM 7: Number 9.1, Section C, Number 1. The sentence "Give rats an experimental drug that will act like fat in the gut, and test whether the drug increases GLP-2 release into blood." seems to contradict the rest of the experiment which is all about fat increasing LSP movement across the gut into the bloodstream. Please address.

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ITEM 8: Number 11.2, Section E. List each staff member, what procedures they will perform and their qualifications each procedure.

ITEM 9: Number 21, Section P. Aren't the rats being given indomethacin? If so, check the "Yes" box.

ITEM 10: Number 27.1, Section W, Number 1. Please explain why culture models cannot be used.

ITEM 11: Number 31.11, Appendix 1. Please fix this e-mail address.

MOTION: Moved and seconded to *require modifications for approval of* Submission Number 001348. *The approval will be for one year from the date of final approval.* 10 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

MOTION: Moved and seconded to *send the PI's response to designated member review.* 10 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

C. NEW REVIEW OF EXPIRED STUDIES

D. REVIEW OF MODIFICATIONS

E. REQUESTS FOR CONTINUED APPROVAL OF ANIMAL USE

1. ***Triennial Reviews***

2. ***Annual Reviews***

Submission Number 001601 **Project # 2006-040529**
PI: [redacted] **MD**
Study Title: ***Breeding Colony for Essential Tremor Research Program***

DISCUSSION: The Committee had no concerns and recommended approval.

MOTION: Moved and seconded to *approve* Submission Number 001601 *for one year, not to exceed the three-year review date.* 10 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

Submission Number 001537 **Project # 2016-050444**
PI: [redacted] **MD**
Study Title: ***Teduglutide and Nutrient Receptor Ligands, by Reducing Intestinal Permeability, Improve Outcomes in Critical Illness***

DISCUSSION: The Committee had no concerns and recommended approval.

MOTION: Moved and seconded to *approve* Submission Number 001537 *for one year, not to exceed the three-year review date.* 10 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

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Submission Number 001592 **Project # 2019-040257**
PI: [redacted] MD, PhD
Study Title: ***Preclinical Evaluation of Nanoparticulate Mineralized Collagen Glycosaminoglycan Materials in Calvarial Regeneration***

DISCUSSION: The Committee had no concerns and recommended approval.

MOTION: Moved and seconded to *approve* Submission Number 001592 *for one year, not to exceed the three-year review date.* 10 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

Submission Number 001596 **Project # 1996-04003**
PI: [redacted], MD
Study Title: ***Ammonia Production and Transport by the Proximal Tubule***

DISCUSSION: The Committee had no concerns and recommended approval.

MOTION: Moved and seconded to *approve* Submission Number 001596 *for one year, not to exceed the three-year review date.* 10 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

Submission Number 001559 **Project # 2018-040424**
PI: [redacted] PhD
Study Title: ***Identification of the Growth-Promoting PKDTAP Axis as a Novel Target for the Statins in Intestinal Epithelial Cells***

DISCUSSION: The Committee had no concerns and recommended approval.

MOTION: Moved and seconded to *approve* Submission Number 001559 *for one year, not to exceed the three-year review date.* 10 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

Submission Number 001543 **Project # 2012-050804**
PI: [redacted] PhD
Study Title: ***Effects of Morphine on the Morphology of the Hypocretin and MCH Systems***

DISCUSSION: The Committee had no concerns and recommended approval.

MOTION: Moved and seconded to *approve* Submission Number 001543 *for one year, not to exceed the three-year review date.* 10 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

F. TERMINATION OF ANIMAL USE:

1. ***Administrative Termination of Animal Use***

Project # 2017-030244 (Animal)
PI: [redacted] PhD
Study Title: ***Paracrine Mechanisms of Prostate Cancer Metastatic Progression***

Study Summary: Animal use was terminated on May 12, 2020.

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Project # 2013-070309
PI: [redacted] **MD**
Study Title: ***Luminal Factors Affecting Duodenal Protection and Chemosensing***

Study Summary: Animal use was terminated on May 30, 2020.

Project #: 2001-051103
PI: [redacted] **MD**
Protocol Title: ***In Vivo Assay for Osteogenic Activity***

Study Summary: Animal use was terminated on June 1, 2020.

Project # 2013-070898
PI: [redacted] **MD, MSc**
Study Title: ***Treatment of Refractory Cholinergic Seizures in the Immature Brain***

Study Summary: Animal use was terminated on May 22, 2020.

2. ***Investigator Request to Terminate Animal Use***

3. ***Projects at Risk of IACUC Approval Expiration***

Project # 2007-050776 (Animal)
PI: [redacted] **MD**
Study Title: ***Persisting Grand Mal and Myoclonic Seizures in JME including Veterans***

Study Summary: This protocol will expire on June 9, 2020.

Project # 2017-030273
PI: [redacted] **PhD**
Study Title: ***Mechanisms and Therapeutic Intervention of Postoperative Ileus***

Study Summary: This protocol will expire on June 22, 2020.

Project # 2017-050508
PI: [redacted] **PhD**
Study Title: ***Apolipoprotein E Epigenetic Regulation of the Innate Immune System***

Study Summary: This protocol will expire on June 15, 2020.

G. CVMO REFERRALS

H. REVIEW OF REQUESTS TO CHANGE PRINCIPAL INVESTIGATOR

I. APPROVED DESIGNATED REVIEWS

J. APPROVED ADMINISTRATIVE REVIEWS

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PCC: 2020-010066 **Approved: 5/29/2020**
PI: [redacted] **PhD**
Title: ***Stress and Sleep Homeostasis***

Study Summary: The change requested was to add [redacted] to the protocol.

Submission Number 001350 **Project # 2016-060553**
PI: [redacted] **PhD**
Study Title: ***Mice Breeding Protocol for Impact of Corticotropin Releasing Factor (CRF) on Sleep Regulation***
APPROVED June 2, 2020

Study Summary: The change requested was to add [redacted] to the protocol.

Submission Number 001005 **Project # 2018-100983**
PI: [redacted] **PhD**
Study Title: ***Thyroid Hormone and Neuronal Protection***
APPROVED June 2, 2020

Study Summary: The change requested was to add [redacted] to the protocol.

Dr. [redacted] ***left the meeting at 12:56 p.m. and turned the Chair over to Dr.*** [redacted] ***There were 9 voting members present.***

VI. PROGRAM REVIEW AND INSPECTIONS

UPDATE ON SEMIANNUALS: the APCO informed the committee that the Director expressed concerns that the IACUC may not meet the 6-month extension for the inspection deadline if the inspections are postponed until the COVID-19 shelter-at-home orders are lifted. The IACUC had an emergency meeting on 5/21/20 and voted to restart inspections, using the "IACUC Inspections during COVID-19" SOP the IACUC approved on 4/1/20. In order to maximize physical distancing, lab members are asked not to be present but have someone available by phone in case there are questions. Inspections began again on 5/26/20.

VII. COMPLIANCE ISSUES

VIII. BIOSAFETY COMMITTEE LIAISON REPORT: [redacted] *PhD, RBO*

IX. VMO REPORT: [redacted] *DVM, MA, DACLAM*

A. CHANGE IN CONTROLLED DRUG ORDERING PROCESS: The VMO informed the committee that there has been a change in the controlled drug ordering process. There is no longer an animal management system and the VMO does not need to sign a form. Instead the PI is to submit an order to the Budger Order for controlled drugs. The Controlled Substance SOP needs to be updated and a blast email will be sent to PIs explaining the change in procedure.

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B. *2020-2021 RECHARGE RATE ADJUSTMENT (5%):* The VMO reminded the committee of its decision from a couple of years ago to increase the VMU *per diems* 5% annually. Thus, there will be a 5% recharge rate adjustment for the 2020-2021 fiscal year.

X. IACUC CONTINUING EDUCATION

XI. ANIMAL PROGRAM COMPLIANCE OFFICER REPORT: [redacted] *PhD*

A. *REMINDER: PRIMR VIRTUAL IACUC CONFERENCE JUNE 16-17:* The APCO reminded the committee that several members have signed up for the upcoming PRIMR virtual IACUC conference on June 16 – 17.

B. *OLAW CHANGING THEIR ANNUAL REPORT DEADLINE:* The APCO informed the committee that OLAW changed their annual report deadline to be the same as the USDA report deadline.

C. *RECENT FOIA REQUESTS:* The APCO informed the committee that all four FOIA requests have been completed and all the responsive documents have been provided to the FOIA officer. She thanked the VMO, the IACUC Chair, and the IACUC coordinator for their help with locating the documents.

D. *IACUC SOPS:* The APCO suggested that the committee vote on the IACUC SOPs that do not have any substantial reviewer comments or changes. The other SOPs will be reviewed at a later meeting.

1. *Institutional Animal Care and Use Committee SOP:* [redacted] *PhD*

2. *Tumor Induction in Mice and Rats:* [redacted] *PhD:* The purpose of this SOP was to provide guidelines that limit the tumor burden and animal experiments to those which do not cause excessive pain or distress and apply to spontaneous as well as experimentally induced tumors. The Committee had minor editing concerns and recommended approval.

MOTION: Moved and seconded to *approve the Tumor Induction in Mice and Rats SOP with minor edits.* 9 yes, 0 no, 0 abstentions. MOTION CARRIED

3. *Default Endpoints for Use with Research Animals:* [redacted] *PhD*

4. *Safie Biosciences PET/CT:* [redacted] *PhD:* The purpose of this SOP is to provide investigators with general information on animal imaging studies using the PET/CT scanner in the GLA-Small Animal Imaging Facility. The Committee had minor editing concerns and recommended approval.

MOTION: Moved and seconded to *approve the Safie Biosciences PET/CT SOP with minor edits.* 9 yes, 0 no, 0 abstentions. MOTION CARRIED

5. *Use of the Promethion System:* [redacted] *MD:* The purpose of this SOP is to document the procedures employed when mice are to be studied under the Promethion metabolic system. The Committee had no concerns and recommended approval.

MOTION: Moved and seconded to *approve the Use of the Promethion System SOP.* 9 yes, 0 no, 0 abstentions. **MOTION CARRIED**

6. *Basic Animal Incubator Care and Maintenance:* [redacted] *PhD:* The purpose of this SOP is to detail tasks that are required for animal incubator maintenance to house rats or mice. The Committee had no concerns and recommended approval.

MOTION: Moved and seconded to *approve the Basic Animal Incubator Care and Maintenance SOP.* 9 yes, 0 no, 0 abstentions. **MOTION CARRIED**

7. *Rodent Surgery Guidelines:* [redacted] *PhD*

8. *Food and Fluid Regulation in Rodents:* [redacted] *PhD*

9. *. ITS XRMS LUMINA III Optical Imaging (OI/Xray):* [redacted] *PhD*

10. *Euthanasia Policy:* [redacted] *PhD*

11. *Restraint of Conscious Animals:* [redacted] *PhD*

XII. CHAIR'S REPORT: [redacted] *PhD, Vice-Chair*

JULY MEETING: The Vice-Chair informed the committee that because meetings are not in-person and because the next scheduled meeting is scheduled for July 1st, it may be possible to hold the July meeting rather than skipping it as has been done in the past. The IACUC Coordinator will poll the members to see if quorum can be obtained.

XIII. INTERNAL WORKGROUPS

POST APPROVAL MONITORING

XIV. UNFINISHED BUSINESS

A. *FINAL APPROVALS*

1. *New:*

Submission Number 001391 **Project # 2020-000083**
PI: [redacted] **PhD**
Study Title: Preoptic Hypothalamic Mechanisms Of Sleep-Wake Regulation (2020)

Submission Number 000845 **Project # 2020-000037**
PI: [redacted] **PhD, MS**
Study Title: Alzheimer Transgenic Colony Rat And Mouse Breeding Protocol

Submission Number: 001455 **Project Number: 2020-000059**

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PI : [redacted] MD
Study Title: Enhanced Soft Tissue-to-Bone Healing via Treatment with Novel Growth Factor NELL-1: Targeted Delivery and Biomimetic Scaffolds

2. *Modifications:*

Submission Number: 001395 Project #: 2015-040380
PI: [redacted] MD, PhD
Study Title: Human Bone Engineering and Resorption in a Novel Mineralized Collagen Scaffold

Submission Number 001487 Project # 2014-080860
PI: [redacted] M., PhD
Study Title: Effects of Drugs on Hypocretin and Melanin Concentrating Hormone Neurons

B. *PREVIOUSLY APPROVED PENDING WITH RESPONSE RECEIVED AND UNDER REVIEW*

Submission Number 001499 Project # 2019-080596
PI: [redacted] MD
Study Title: The Roles of the Necroptotic and Excitotoxic Pathways in Diisopropyl Fluorophosphate-Induced Neuronal Necrosis

PCC: 2020-020109 VA #: 0001 New Review of Expired Study
PI: [redacted] PhD
Title: Protective Role of CD8+ Treg Cells in Regulating Inflammation in SLE

C. *PREVIOUSLY REVIEWED SUBMISSIONS FOR WHICH A RESPONSE HAS BEEN RECEIVED*

D. *PREVIOUSLY REVIEWED SUBMISSIONS FOR WHICH NO RESPONSE HAS BEEN RECEIVED*

Submission Number 001426 Project # 2020-000039
PI: [redacted] hD
Study Title: Precancer Niche Formation in the Fallopian Tube

XV. ADJOURNMENT: The meeting was adjourned at 1:47 p.m. The next meeting is scheduled for July 1, 2020 at 12:00 PM. Location will be determined at a later date.

July 1, 2020
Date Approved by IACUC

[redacted] PhD
Chair, Institutional Animal Care and Use Committee

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VA Greater Los Angeles Healthcare System
Research and Development Committee
Institutional Animal Care and Use Committee (IACUC)

MINUTES
July 1, 2020

VA Greater Los Angeles Healthcare System—691
Teleconference

MEMBERS PRESENT

[redacted] Chair, Research Scientist (Voting)
[redacted] PhD, Vice-Chair, Research Scientist (Voting)
[redacted] PhD, Vice-Chair, Research Scientist (Voting)
[redacted] DVM, MA, DACLAM, VMO (Voting, Ex-Officio)
[redacted] Community Representative (Voting)
[redacted] PhD, Research Scientist (Voting)
[redacted] Piltz, Community Representative (Voting)
[redacted] PhD, Research Scientist (Voting)
[redacted] PhD, Research Scientist (Voting)
[redacted] PhD, Research Scientist (Voting)
[redacted] PhD, Research Scientist (Voting, Scientist)

MEMBERS ABSENT

[redacted] MD, Research Scientist (Voting)
[redacted] PhD, Research Scientist (Voting)
[redacted] PhD, Research Scientist (Voting)
[redacted] MD, Research Scientist (Voting)
[redacted] BA, Non-Scientist (Voting)

NON-VOTING MEMBERS PRESENT

[redacted] PhD, IACUC Coordinator
[redacted] PhD, RBSO, Biosafety Liaison
[redacted] PhD, Animal Program Compliance Officer (APCO)

NON-MEMBERS PRESENT

[redacted] RCO
[redacted] PhD, Acting ACOS for Research
[redacted] MD

All members attended via teleconferencing. It was confirmed that the members could hear the other meeting participants and the participants could hear them. Votes were also confirmed with all voting participants for the duration of the meeting.

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VA Greater Los Angeles Healthcare System
Research and Development Committee
Institutional Animal Use and Care Committee
Minutes: July 1, 2020

I. CALL TO ORDER: Dr. [redacted] called the meeting to order on June 3, 2020 at 12:08 p.m. There were *11* voting members present, meeting the quorum requirement of *9 (nine)*.

II. MINUTES: The minutes of the June 3, 2020 meeting were reviewed. There were no additions or corrections.

MOTION: Moved and seconded to *approve the minutes of the June 3, 2020 IACUC meeting*. 11 yes, 0 no, 0 abstentions. MOTION CARRIED

III. ANNOUNCMENTS:

A. *NEW IACUC MEMBERS*: The APCO informed the committee that Dr. [redacted] is a new IACUC member and is in attendance. In addition, Dr. [redacted] is in attendance and he will be nominated as a member at today's meeting.

B. *COLLABORATIVE RESEARCH GRANT*: The Chair informed the committee that he has received a small collaborative grant in association with California Health Sciences University, Clovis, Fresno.

IV. UCLA IACUC REPORT: [redacted] *MA, CPIA, Director – UCLA OARO*

V. NEW BUSINESS:

A. REVIEW OF NEW SUBMISSIONS

Submission Number 001666 **Project #2020-000132**
PI [redacted] MD, PhD
Study Title: ***Microbiomal Mediators of TL1A-induced Fibrosis***

ISSUES REQUIRING MODIFICATIONS AND/OR CORRECTIONS: The Committee determined that the following contingencies and comments are to be forwarded to the PI, who must provide a satisfactory response to each before final approval can be considered.

ITEM 1: Number 4.7, Request to Review. This section shows 0 mice are requested. Please correct this by adding the number of mice requested.

ITEM 2: Number 4.7 and Number 9.1, Request to Review, List Animal Species Used and Section C, Number 1. Number 4.7 states that [redacted] is a source for the mice and Number 9.1 indicates "SPF wild-type and DR3Δcoll a2 mice (on C57BL/6 background), housed at [redacted] but housing at [redacted] is not mentioned elsewhere in the ACORP. Is this an error? If animals are to be housed at [redacted] this has to be added to the ACORP.

ITEM 3: Number 4.9, Request to Review, Abstract. Please divide the abstract into sections as in the example.

ITEM 4: Number 4.13, Request to Review, Study Location. This room will need to be approved by the IACUC (a very quick visit is all that is needed).

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ITEM 5: Number 8.0, Section B. This is not high-school language. Please contact Dr. [redacted] for assistance with this.

ITEM 6: Number 9.1, Section C, Number 1. Please contact Dr. [redacted] for assistance with this section.

ITEM 7: Number 9.1, Section C, Number 1. Provide an explanation why mice are being treated and then shipped all the way across the country.

ITEM 8: Number 9.2, Section C, Number 2a. Please explain more about the metabolites. The reader should be able to pretty much understand the experiment without having to refer to the grant application.

ITEM 9: Number 9.2, Section C, Number 2a. Add the description for the gavage procedure.

ITEM 10: Number 10.1, Section D.

(a) Please expand on why it has to be mice, and why you non-mammals cannot be used. Also, it is true that mice are the only species with TL1A transgenics available?

(b) Why are only male mice being used as women also suffer from CD and IBD? If the only reason for excluding female mice is "to abrogate any effects mediated by female hormones," this decision affects the health of female veterans. Please provide a better justification for using only males.

ITEM 11: Number 11.1, Section E. Change the procedure to "Euthanasia by compressed carbon dioxide asphyxiation followed by tissue harvest". Also please specify the number of years you have done this method of euthanasia in mice.

ITEM 12: Number 11.4, Section E. Complete this table by adding the dates the PI completed the required CITI courses.

ITEM 13: Number 17.2, Section L. Replace [redacted] MD with [redacted] DVM, VMO and change the date to May 22,2020.

ITEM 14: Number 18.1, Section M, Husbandry. Briefly explain the germ-free housing.

ITEM 15: Number 18.2, Section M, Caging Needs. Fill this table out.

ITEM 16: Number 18.4, Section M, Customized routine husbandry. Add the name of the genetically modified mouse strain here.

ITEM 17: Number 21.1, Section P. Check the "Yes" box since metabolites and bacteria will be administered to the mice.

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ITEM 18: Number 22.1, Section Q. Add how many days after the arrival at West LA VA from UNC the animals will be sacrificed.

ITEM 19: Number 25.1, Section T. VA policy is for animals be weighed once a week and if they lose 10% of their expected body weight that is an end-point criterion. Add the criteria used at UNC.

ITEM 20: Number 26.4, Section U, Number 3. In the experience column, state that "Dr. [redacted] has x number of years' experience with CO_2 euthanasia will be followed by cervical dislocation" and replace the x with the number of years.

ITEM 21: Number 26.6, Section U, Number 4b. Please add the contact information.

ITEM 22: Number 27.0, Section W. The literature search needs a little more work. Please contact Dr [redacted] for assistance with this.

ITEM 23: Number 31.6, Appendix 1, PI Phone. Add a phone number here.

ITEM 24: Number 31.12, Appendix 1, EMERGENCY CELL PHONE. Please add an emergency phone here.

ITEM 25: Number 32.3, Appendix 3, Table 2a. Complete this table and click on "no FDA-approved version exists".

ITEM 26: Number 32.4, Appendix 3, Table 2b. Fill this out.

ITEM 27: Number 32.5, Appendix 3, Number 3a and 3b. Answer this.

ITEM 28: Number 33.1, Appendix 6, Number 1. In Entry 1, explain why this procedure is necessary.

ITEM 29: Number 33.4, Appendix 6, Number 4. Add "Orogastric gavage " to the first column.

MOTION: Moved and seconded to *require modifications for approval of* Submission Number 001666. *The approval will be for one year from the date of final approval.* 11 yes, 0 no, 0 abstentions, 0 recusal. MOTION CARRIED

MOTION: Moved and seconded to *send the PI's response to designated member review.* 11 yes, 0 no, 0 abstentions, 0 recusal. MOTION CARRIED

B. NEW REVIEW OF EXPIRED STUDIES

Submission Number 001865 **Project # 2017-030273**
PI: [redacted] **PhD**
Study Title: ***Mechanisms and Therapeutic Intervention of Postoperative Ileus***

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ISSUES REQUIRING MODIFICATIONS AND/OR CORRECTIONS: The Committee determined that the following contingencies and comments are to be forwarded to the PI, who must provide a satisfactory response to each before final approval can be considered.

DISCUSSION: Members raised the issue of the large numbers of errors and stipulations that need to be addressed in this protocol. The APCO informed the committee that the lab person responsible for writing this ACORP was new and this could have been the problem. The PI has another ACORP being reviewed at today's meeting that was prepared by an experience lab member and it had many fewer issues. The committee discussed if it could request that lab members with more experience prepare the ACORP and concluded they could.

MOTION: Moved and seconded to ***have the PI assign an experienced research staff member prepare the ACORPs.*** **11** yes, **0** no, **0** abstentions. **MOTION CARRIED**

ITEM 1: Number 4.5, Request to Review. Please fill out the funding source information.

ITEM 2: Number 4.8, Request to Review, Keywords. Add ghrelin as a keyword.

ITEM 3: Number 4.9, Request To Review, Abstract. Please change enflurane to isoflurane, pheal red to phenol red. The research design is a bit confusing, and refers to "abdominal surgery as described before" that is actually not described. Please consult with Dr. [redacted] on rewriting this section.

ITEM 4: Number 5.1, Section A. Change the health status to SPF.

ITEM 5: Number 7.1, Table of Definitions. Add POI, GI, AS, and DMN to the list.

ITEM 6: Numbers 8.1 to 8.5, Section B, Numbers 1 - 5. These sections are not written in high school language. Please contact Dr. [redacted] for assistance with rewriting this.

ITEM 7: Number 8.5, Section B, Number 5. "All rats will be anesthetized during the operation and they are also given post-operative pain-killing drugs. The benefits of this work for people who suffer bloating, distention, nausea, emesis, and abdominal pain all day far outweigh the brief pain some of the rats will experience."

This appears to say that the amount of human suffering justifies these procedures on rats. A lay reader might assume that the argument is stating that human suffering is more important than animal suffering.

To address this concern, please state why POI is such a serious condition effecting many in the veteran population and why benefit of resolving these conditions outweighs pain for the rats. This is very important because the category E rats will experience unrelieved pain.

ITEM 8: Number 9.1, Section C, Number 1.

(a) Why does rubbing with a sterile swab cause inflammation?

(b) Include the anatomical study on the naive rats, and the study where rats get HMOI and

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no surgery,

ITEM 9: Number 9.2, Section C, Number 2a. The numbers in the table and in the text do not match. The first table states 12 rats per group, while the text said 10. The 2nd table said 16 rats per group, but the total number should be 128 instead of 112. Please clarify.

ITEM 10: Number 9.3, Section C, Number 2b. Sections E and G stated N= 14 and 10 by power analysis, respectively, yet elsewhere 12 and 16 animals per group are proposed. If the numbers of animals requested per group are different from 14 and 10, please provide justification and/or a power analysis.

ITEM 11: Number 9.3, Section C, Number 2b. For part A, just put: "The two major outcome variables for this study are gastric emptying and the levels of M1 macrophages."

ITEM 12: For part G (pooled samples) the answer to part G.1 would be something like how many grams of tissue do you need to run the analysis. Please consult with Dr. [redacted] for assistance with this.

ITEM 13: Number 9.4, Section C, Number 2c.

(a) Change enflurane to isoflurane everywhere in this ACORP.

(b) There is no mention of stereotaxic surgery or microinjection in part C2a. Please reconcile.

(c) Please change Stereotactic microinjection to Intracisternal microinjection surgery.

ITEM 14: Number 11.2, Section E. Assign a staff member to do the stereotaxic microinjection surgery.

ITEM 15: Number 12.1, Section F. Move the information provided here to Number 11.2.

ITEM 16: Number 14.1, Section I. The stated number of Category D animals are 56 males and 32 females. Please provide justification and/or reconcile why these would be adequate and different from the group number calculated in the power analysis.

ITEM 17: Number 15.1, Section J. There are two stereotaxic surgeries - one being the intracisternal. Put them both here.

ITEM 18: Number 17.2, Section L. Please add the date if the veterinary consultation.

ITEM 19: Number 18.2, Section M, Caging Needs. Add a row for the singly-housed post-op rats.

ITEM 20: Number 18.4, Section M, Customized routine husbandry. Check the box for "This ACORP does NOT include use of any animals that will require customized routine husbandry."

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ITEM 21: Number 21.1, Section P. Check the yes box since you are administering drugs to the rats.

ITEM 22: Number 22.1, Section Q. Actually, since people such as UPS, FEDEX, etc. come through the hallways, check "Yes" for "requires transport through non-research areas" and fill out the method of transport.

ITEM 23: Number 26.1, Section U. Change the dose to 4-5% for euthanasia.

ITEM 24: Number 26.2, Section U, Number 1. Regarding the last sentence of the response, a secondary method of euthanasia must be used only once the animal is dead or at minimum deeply anesthetized, as in terminal surgery. Animals should not have a heartbeat or be breathing when a secondary method is employed. If the rat is not dead following CO2 narcosis, then it needs to be dead (no breathing or heartbeat) before the secondary method is applied. Please restructure this sentence.

ITEM 25: Number 27, Section W. The English needs editing. Please contact Dr. [redacted] for assistance with this and other aspects of these literature searches.

ITEM 26: Number 32.1, Appendix 3. Phenol red, methylcellulose, and carboxymethylcellulose can all be obtained from the VA Pharmacy. Please contact Dr. [redacted] about this.

ITEM 27: Number 32.1, Appendix 3. BSL 1 is for infectious agents so uncheck the BSL 1 boxes for each item.

ITEM 28: Number 32.2, Appendix 3. HMO1, Carboxymethyl cellulose and methylcellulose will be delivered by gavage not per os (po) which is reserved for food or water, medication etc. that the animal swallows. Please change PO to gavage.

ITEM 29: Number 32.3, Appendix 3, Table 2a. See comment on Number 32.1.

ITEM 30: Number 32.4, Appendix 3, Table 2b. Change microRANI24 to microRNA124 throughout the ACORP.

ITEM 31: Number 33.1, Appendix 5, Number 1. Add the other stereotaxic surgery here.

ITEM 32: Number 33.2, Appendix 5, Number 2. Add the stereotaxic microinjection surgery here.

ITEM 33: Number 33.2, Appendix 5, Number 2. It is not clear here which animals will become conscious following surgery and which will not. Please specify for each surgery if the surgery is terminal.

ITEM 34: Number 33.3, Appendix 5, Number 3. Who is the surgeon on the gastric emptying test?

ITEM 35: Number 33.5, Appendix 5, Number 5a.

(a) Since there are no intravenous catheters, leave that column blank.

(b) The volumes for ketamine and xylazine are not filled out properly.

(c) The preparation for the stereotaxic surgery needs a bit of editing. Please contact Dr. [redacted] for assistance.

ITEM 36: Number 33.5, Appendix 5, Number 5. Human patients are advised not to eat after midnight so that they do not vomit under anesthesia. Rats cannot vomit so this is not a valid comparison to justify pre-surgical fasting.

ITEM 37: Number 33.7, Appendix 5, Number 7(1).

(a) Check the boxes for the sterile items that will be used , at least sterile instruments and gloves for survival surgeries.

(b) Please remove the gastric emptying test from the post-operative sections since it is a non-survival surgery.

ITEM 38: Number 33.7, Appendix 5, Number 7. In Number 33.2 it was stated that there will be water deprivation for 6 hours after abdominal surgery. However, this section indicates water will be provided as post-operative support. Is hydration being achieved by subcutaneous saline administration? Please explain.

ITEM 39: Number 34.1, Appendix 6, Number 1. Add gavage to the "other" column in the first table, and then add the procedure details to the second table.

ITEM 40: Number 34.2, Appendix 6, Number 2. Only the gavage procedure goes in this appendix so remove the other procedures.

ITEM 41: Number 34.3, Appendix 6, Number 3. Answer question B.

ITEM 42: Number 34.4, Appendix 6, Number 4. As indicated in the veterinary pre-review, surgical procedures should be deleted from Appendix 6 as they are described in Appendix 5. Please transfer any additional information about the surgeries to Appendix 5 if it is not there already. Only the gavage procedure needs to go in this appendix.

MOTION: Moved and seconded to ***require modifications for approval of*** Submission Number 001865. ***The approval will be for one year from the date of final approval.*** 11 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

MOTION: Moved and seconded to ***send the PI's response to designated member review.*** 11 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

C. REVIEW OF MODIFICATIONS

Submission Number 001785 **Project # 2017-111110**

PI: [redacted], Ph.D.
Study Title: *Co-Targeting Mtor and EAP Signaling in Glioblastoma*

ISSUES REQUIRING MODIFICATIONS AND/OR CORRECTIONS: The Committee determined that the following contingency be forwarded to the PI, who must provide a satisfactory before final approval can be considered.

ITEM 1: Section W. In Section W, since a couple new compounds are being proposed in the modifications (although in the same class of compounds originally associated with the protocol), safety needs to be documented for the mouse studies with updated searches using specific compound names.

MOTION: Moved and seconded to *require modifications for approval of* Submission Number 001785. *ACORP expiration dates will follow the schedule of the existing study.* 11 yes, 0 no, 0 abstentions, 0 recusal. MOTION CARRIED

MOTION: Moved and seconded to *send the PI's response to designated member review.* 11 yes, 0 no, 0 abstentions, 0 recusal. MOTION CARRIED

D. REQUESTS FOR CONTINUED APPROVAL OF ANIMAL USE

1. Triennial Reviews

Submission Number 001647 Project # 2017-060536
PI: [redacted], MD
Study Title: *Virulence Proteins of Pathogenic Leptospiral Species*

ISSUES REQUIRING MODIFICATIONS AND/OR CORRECTIONS: The Committee determined that the following contingencies and comments are to be forwarded to the PI, who must provide a satisfactory response to each before final approval can be considered.

ITEM 1: Number 4.9, Request to Review, Abstract. Please change "urban slums" to "disadvantaged urban communities" here.

ITEM 2: Number 8, Section B. Overall, the Objectives section is very clear. However, it is interspersed with technical language a lay person would not know. Please define or replace such as "fulminant" and others.

ITEM 3: Number 9.2, Section C, Number 2a. Will both male and female mice be used in the model? If not, please provide a scientific justification for not considering sex as a biological variable.

ITEM 4: Number 32.1, Appendix 3. Entry 1 is not filled, but Entry 2 and 3 are filled. Please move the entries up so Entry 1 is not blank.

ITEM 5: Number 32.4, Appendix 3, Table 2b. Entry 1 is not filled, but Entry 2 and 3 are filled. Please move the entries up so Entry 1 is not blank.

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ITEM 6: Number 32.7, Appendix 3, Infectious Agents. Add the infectious agents to the table.

ITEM 7: Number 32.11, Appendix 3, Potential for Pain or Distress. Please complete this table as potential pain or distress is not addressed.

MOTION: Moved and seconded to *require modifications for approval of* Submission Number 001647. *The approval will be for one year from the date of final approval.* 11 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

MOTION: Moved and seconded to *send the PI's response to designated member review.* 11 yes, 0 no, 0 abstentions, 0 recusal. **MOTION CARRIED**

Submission Number 001866 **Project #** 2017-070637 (Animal)
PI: [redacted] PhD
Study Title: ***Comprehensive Structural and Functional Mapping of Mammalian Colonic Nervous System***

ISSUES REQUIRING MODIFICATIONS AND/OR CORRECTIONS: The Committee determined that the following contingencies and comments are to be forwarded to the PI, who must provide a satisfactory response to each before final approval can be considered.

ITEM 1: Number 4.9, Request to Review, Abstract.

(a) The last sentence under Objectives is not finished: "These data are.."

(b) Under Research Design it lists advances but does not clearly say which are part of this research design.

ITEM 2: Number 4.14, Request to Review. Please check the "Pharmacy" box as this protocol will use buprenorphine from the pharmacy.

ITEM 3: Number 7.1, Table of Definitions. Shouldn't the PBS be phosphate-buffered saline?

ITEM 4: Number 8.1, Section B, Number 1. The word "innervation" is not lay language. Please replace it with another word.

ITEM 5: Number 8.4, Section B, Number 4. Change "include" to "includes".

ITEM 6: Number 8.5, Section B, Number 5.

(a) Explain specifically why the mouse is the best model for this specific type of research, rather than indicating that it is simply the most common.

(b) Change this to say "the mice are treated with pain killers for three days after the surgery". As it stands, it appears they don't get pain killers until after three days.

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ITEM 7: Number 9.1, Section C, Number 1. This is not an experimental design. Please consult with Dr. [redacted] for assistance with this.

ITEM 8: Number 9.2, Section C, Number 2a. This section states: "Use genetic engineering of individual nerve cells to trace how they connect to each other and other cells in the colon."
Please describe how genetic engineering will help trace connections and how this will be done.

ITEM 9: Number 9.2, Section C, Number 2a. This is again a word-for-word repetition of the Objectives section. Please summarize the design of the experiments(s) more fully and state what you will be doing with the mice using language that biomedical scientists outside this specific area of research would understand.

ITEM 10: Number 9.3(A), Section C, Number 2b. Change "wide type mice" to "wild type mice."

ITEM 11: Number 9.3, Section C, Number 2b. This power analysis is unclear. Please consult with Dr. [redacted] for assistance with this.

ITEM 12: Number 10.1, Section D. Please also justify the use of all genetically modified mice.

ITEM 13: Number 15.1, Section J. Give buprenorphine before the first incision is made for "pre-emptive" anesthesia.

ITEM 14: Number 17.2, Section L. Fill this out.

ITEM 15: Number 18.2, Section M, Justification. Change the sentence to "avoid biting on each other's surgical wounds."

ITEM 16: Number 21.1, Section P. Check the "YES" box as the animals are given viral vectors, anesthetics, etc.

ITEM 17: Number 26.4, Section U, Number 3. Write this as "18 years of experience with this method of euthanasia in mice."

ITEM 18: Number 27.3, Section W, Number 3. Please add this information to Numbers 8 (Section B) and 9 (Section C).

ITEM 19: Number 28.2, Section X, Number 1. Please remove the x after the buprenorphine.

ITEM 20: Number 31.15, Appendix 1. Uncheck the 'Yes' box and check the 'No' box.

ITEM 21: Number 31.28, Appendix 1. Remove these drugs from this section as they are entered in Number 31.25.

ITEM 22: Number 32.1, Appendix 3. Uncheck BSL-2 for "Recombinant adeno-

associated virus, type 9 replication-deficient carrying GFP" and check BSL-1 for all items in this section.

ITEM 23: Number 32.4, Appendix 3, Table 2b. Add an entry for the items from ThermoFisher (make just one entry for all three).

ITEM 24: Number 33.1, Appendix 5, Number 1. In surgery "Systemic perfusion of fixative" mention about paraformaldehyde in the procedure.

ITEM 25: Number 33.2, Appendix 5, Number 2. Add bupivacaine to the surgeries in the table.

ITEM 26: Number 33.3, Appendix 5, Number 3. Neuronal tracer injection is a sterile surgery and as such the involvement of an Assistant is preferred. Please assign an Assistant.

ITEM 27: Number 33.5(c), Appendix 5, Number 5c. For surgical preparation of mice, please wipe the surrounding area three times each with betadine and 70% alcohol each, in alternative way.

ITEM 28: Number 33.7, Appendix 5, Number 7e(1). Change the frequency of monitoring to "about every 5 minutes."

ITEM 29: Number 34.1, Appendix 6, Number 1.

(a) The same procedure is listed twice. Please correct this.

(b) In Entry 1, explain why the procedure is necessary.

ITEM 30: Number 35.2, Appendix 8, Number 2a(f). For the weight of the animals, change it to 25 grams.

MOTION: Moved and seconded to *require modifications for approval of* Submission Number 001866. *The approval will be for one year from the date of final approval.* 11 yes, 0 no, 0 abstentions, 0 recusal. MOTION CARRIED

MOTION: Moved and seconded to *send the PI's response to designated member review.* 11 yes, 0 no, 0 abstentions, 0 recusal. MOTION CARRIED

2. Annual Reviews

Submission Number 001975 Project # 2000-040180
PI: [redacted] MS, PhD
Study Title: Isolation of Cervical Cancer Tumor Suppressor Gene

DISCUSSION: The Committee had no concerns and recommended approval.

MOTION: Moved and seconded to *approve* Submission Number 001975 *for one year, not to exceed the three-year review date.* 11 yes, 0 no, 0 abstentions, 0 recusal. MOTION CARRIED

E. TERMINATION OF ANIMAL USE:

1. Administrative Termination of Animal Use

Project # 2007-050776 (Animal)
PI: [redacted] **MD**
Study Title: ***Persisting Grand Mal and Myoclonic Seizures in JME including Veterans***

Study Summary: Animal use was terminated on June 9, 2020.

Project # 2017-030273
PI: [redacted] **. PhD**
Study Title: ***Mechanisms and Therapeutic Intervention of Postoperative Ileus***

Study Summary: Animal use was terminated on June 22, 2020.

Project # 2017-050508
PI: [redacted] **PhD**
Study Title: ***Apolipoprotein E Epigenetic Regulation of the Innate Immune System***

Study Summary: Animal use was terminated on June 15, 2020.

2. Investigator Request to Terminate Animal Use

Submission Number 00125 **Project # 2014090993**
PI: [redacted] **PhD**
Study Title: ***Chemogenetic Dissection of Noradrenergic System and Sleep Apnea***

Study Summary: Animal use was terminated on June 22, 2020 per request of the PI.

Submission Number 001844 **Project # 2018-070644**
PI: [redacted] **PhD**
Study Title: ***Impact of Aging on Noradrenergic Control of Upper Airway Muscles***

Study Summary: Animal use was terminated on June 22, 2020 per request of the PI.

3. Projects at Risk of IACUC Approval Expiration

Project # 2017-030249
PI: [redacted] **MD, PhD**
Study Title: ***Role of Thyroid Hormone Signaling in Sarcopenia***

Study Summary: This protocol will expire on **July 10, 2020.**

Project # 2017-060562
PI: [redacted] **MD**

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Study Title: ***The Pharmacokinetics of the Novel Potassium Competitive Acid Blocker, JCHC-PCAB***

Study Summary: This protocol will expire on July 26, 2020.

G. CVMO REFERRALS

H. REVIEW OF REQUESTS TO CHANGE PRINCIPAL INVESTIGATOR

I. APPROVED DESIGNATED REVIEWS: ***The Chair called for Designated Reviews of the following submissions. The submissions were sent to all the Committee members and there was no call for a full Committee review. The Designated Reviews were conducted.***

Submission Number 001748 **Project # 2019-040292**
PI: [redacted] **PhD**
Study Title: ***CTBI: Tauopathy in Mice and Human: Surrogate Plasma Biomarkers for Brain Trauma-Initiated Neurodegenerative Disease***
APPROVED: June 14, 2020

SUBMISSION SUMMARY: This is a review of an annual continuation of an animal research project.

OUTCOME: There were no reviewer concerns requiring modification to the submission or review by the full committee. The reviewer recommended approval. The Chair has granted approval.

Submission Number 001779 **Project # 2000-080478**
PI: [redacted] **DVM, PhD**
Study Title: ***Molecular Mechanisms of Stellate Cell Activation in Liver Fibrosis***
APPROVED: June 12, 2020

SUBMISSION SUMMARY: This is a review of an annual continuation of an animal research project.

OUTCOME: There were no reviewer concerns requiring modification to the submission or review by the full committee. The reviewer recommended approval. The Chair has granted approval.

J. APPROVED ADMINISTRATIVE REVIEWS

PCC: 2020-010066
PI: [redacted] **PhD**
Title: ***Stress and Sleep Homeostasis***
APPROVED: May 29, 2020

Study Summary: The change requested was to add [redacted] to the protocol.

Submission Number 001350 **Project # 2016-060553**

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PI: [redacted], PhD
Study Title: ***Mice Breeding Protocol for Impact of Corticotropin Releasing Factor (CRF) on Sleep Regulation***
APPROVED: June 2, 2020

Study Summary: The change requested was to add [redacted] to the protocol.

Submission Number 001005 Project # 2018-100983
PI: [redacted], PhD
Study Title: ***Thyroid Hormone and Neuronal Protection***
APPROVED: June 2, 2020

Study Summary: The change requested was to add [redacted] to the protocol.

Dr. [redacted] left the meeting at 12:56 p.m. and turned the Chair over to Dr. [redacted]. There were 9 voting members present.

VI. PROGRAM REVIEW AND INSPECTIONS

A. ***FACILITY DEFICIENCIES:*** The APCO presented the committee with the list of facility deficiencies based on the inspections. She proposed the committee change the correction date for all items that have a 7/15/2020 scheduled date of correction.

MOTION: Moved and seconded to ***change the scheduled date of correction to 9/15/2020 for all items with a current correction date of 7/15/2020.*** 11 yes, 0 no, 0 abstentions. **MOTION CARRIED**

B. ***PROGRAM REVIEW:*** The APCO informed the committee that the last Program review was done on 12/4/2020, so the next one should be done soon.

C. ***FACILITY INSPECTIONS:*** The APCO informed the committee that facility inspections have resumed.

The APCO proposed changing the inspection process for labs that never have animals in them. The regulation states that facilities and areas where animals are used in procedures or housed longer than 12 hours must be inspected by the IACUC. There are several labs that never have animals. The inspection for these labs involves only reviewing their ACORPs to ensure they have the current copies. With IRIS/IMEDRIS, the latest version is always available. The APCO proposed that (1) not to inspect these labs during the pandemic as it is not required and (2) in the future, the inspection of labs that do not have animals should only involve asking the staff to demonstrate they know how to pull up the approved protocols from IRIS.

MOTION: Moved and seconded to ***not inspect the labs during the pandemic that do not have any animals.*** 11 yes, 0 no, 0 abstentions. **MOTION CARRIED**

VII. COMPLIANCE ISSUES: The APCO informed the committee that in a recent visit, ORO expressed concerns of two compliance issues the committee had voted not to report. The committee discussed these two issues.

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A. ***NONCOMPLIANCE WITH A PROTOCOL: USING UNAPPROVED DRUG DOSES:*** Summary: At the February 5, 2020, IACUC meeting, the Chair reported that a review of research records associated with Protocol No. 05005-18 had revealed that the volume and concentration of substances injected in the hypoglossal nucleus was greater than listed in the approved protocol and that 100% nitrogen gas was used to induce hypoxia rather than 90% nitrogen as described in the protocol. Subsequently, the research group submitted a protocol modification request to obtain IACUC approval for these significant changes and an IACUC member conducted an investigation, which did not identify any further issues. At the end of the meeting, the committee unanimously voted that the incident was reportable. A memorandum to notify ORO of this reportable incident was drafted and sent for the facility Director's signature on February 6, 2020. During interviews with ORO, a member of the Research Service revealed she had contacted the CVMO subsequent to the February 5, 2020, meeting regarding this incident. She indicated that the CVMO recommended consulting with NIH-OLAW for guidance and that the facility should follow OLAW's recommendation. OLAW advised that the incident was reportable, and this information was shared with the IACUC during an emergency meeting held February 7, 2020. Minutes indicated that "Some members felt the differences in the amounts used were very small and animals were not harmed … so it was not reported. Others argued it was a deviation from an approved protocol and, regardless of the amount changed, should be reported." A new motion was made that this compliance issue constituted a reportable event; however, the motion failed to pass, which contradicted NIH-OLAW's direct advice and written guidance on reporting deficiencies, and neither OLAW nor ORO were notified of the protocol deviation.

The Chair asked many members for their opinions on this issue. The IACUC concluded that in accordance with NIH-OLAW's guidance on reporting deficiencies, this was an incident of protocol violation and needs to be reported.

MOTION: Moved and seconded to ***report this incident of noncompliance.*** 11 yes, 0 no, 0 abstentions. **MOTION CARRIED**

B. ***NONCOMPLIANCE WITH A PROTOCOL: UNAPPROVED SURGICAL PROCEDURE:*** Summary: At the April 3, 2019 IACUC meeting, the IACUC reviewed a post approval monitoring report that indicated personnel working on Protocol No. 05005-18 had anesthetized an animal using an induction method not described on the protocol and performed a minor surgical procedure (re-suturing a surgical incision that was not adequately healed) without seeking veterinary evaluation, guidance, and direction; this procedure was not described in the IACUC-approved protocol. Although the committee indicated in the minutes that "the laboratory did not follow proper protocol and performed a procedure that was not described in the approved ACORP," and "[p]rocedures performed that are not described in the ACORP are prohibited and are a protocol violation," the committee indicated that since "the animal was not harmed … reporting of this incident is not necessary or required."

The Chair asked many members for their opinions on this issue. The IACUC concluded that in accordance with NIH-OLAW's guidance on reporting deficiencies, this was an incident of protocol violation and needs to be reported.

MOTION: Moved and seconded to *report this incident of noncompliance.* **11** yes, 0 no, 0 abstentions. **MOTION CARRIED**

The VMO informed the committee that according to OLAW reporting guidelines, any deviation from an approved protocol, even if animal is not harmed, is reportable. The committee agreed that any protocol deviation in the future should be reported.

VIII. **BIOSAFETY COMMITTEE LIAISON REPORT:** [redacted] ***PhD, RBO***

IX **VMO REPORT** [redacted] ***DVM, MA, DACLAM***

X. IACUC CONTINUING EDUCATION: The APCO informed the committee of an IACUC education opportunity. VA Central Office paid for a recorded PRIM&R Webinar called Advanced Noncompliance Scenarios for IACUCs: Laboratory Animals and Wildlife Recording. The APCO will send the link to the members so they can watch it at their convenience.

XI **ANIMAL PROGRAM COMPLIANCE OFFICER REPORT:** [redacted] ***PhD***

A. *ORO DRAFT REPORT*: The APCO informed the committee that the ORO draft report from the May inspection has been received. She briefly raised the issues in the report pertaining to the IACUC.

1. Not reporting some compliance issues. This was discussed earlier at the meeting.

2. Some animal research protocols did not contain an adequate rationale for the appropriateness of the numbers of animals requested for use. In some cases, there was not congruence between the numbers proposed in Section C and those requested in Section I. In some cases, Section I had more animals than were justified in the statistical section.

3. The IACUC did not consistently ensure that approved protocols included complete, clear, internally congruent, and accurate descriptions of research activities. Examples included (1) substances in Appendix 3, Number 2 but not in Number 1, (2) a substance in Section C used in a surgery but then not added to Appendix 5 and (3) controlled substances described in the surgeries but not listed in Section X.

4. The IACUC did not consistently ensure that the use of non-pharmaceutical grade compounds was identified, scientifically justified and adequately described in approved protocols.

5. The IACUC needs to get copies of the UCLA/USC protocols for VA-funded research conducted at UCLA/USC.

6. There must be a scientific justification for single housing of social species.

B. *THE ACTING ACOS FOR RESEARCH RECOMMENDS THE IACUC APPOINT A TASK FORCE TO ADDRESS SOME OF ORO'S ISSUES*: The Acting ACOS for Research recommended the IACUC appoint a subcommittee to work on a draft response to the ORO report. The subcommittee is also tasked to ensure the IACUC reports deficiencies and to create a plan to

make sure the IACUC reviews meet ORO's standards. In addition, the APCO will attempt to find VAs where ORO found their ACORP reviews acceptable.

The Chair assigned [redacted] Dr [redacted] and Dr [redacted] to be on the subcommittee along with the VMO, APCO, and Acting ACOS for Research.

C. ***IRIS/IMEDRIS UPDATE:*** The APCO informed the committee that Dr [redacted] completed the setup of the triennial documents in Imedris for every animal user.

D. ***UCLA CHANGED THE ALLOWABLE WEIGHT LOSS TO 20%:*** The APCO informed the committee that UCLA changed the allowable weight loss to 20% based on the Canadian Council on Animal Care's guidelines for choosing appropriate endpoints. These guidelines recommend 20% weight loss as the endpoint in infectious disease studies, cancer studies, etc. The issue for the committee is VA-funded protocols at UCLA that could have an ACORP with 10% as the limit, and the UCLA-approved protocol having 20% as the limit. These protocols need to be reviewed for congruence. The IACUC will need to decide to adopt the 20% weight loss or to keep it at 10%. The VMO preferred to keep the level at 10%.

E. ***VAPORIZER TESTING:*** The APCO informed the committee that vaporizing testing will be scheduled for later in the month.

F. ***ORO PRESENTATION ON IBCs:*** The APCO informed the committee that at an ORO presentation on IBCs on 6/24/20 she discovered that the IACUC must report any escaped transgenic animals to the NIH Office of Science Policy.

G. ***NEW PROCESS FOR ORDERING CONTROLLED SUBSTANCES:*** The APCO informed the committee that there is a new process for ordering controlled substances. The PI will send a controlled substance order form to the IACUC coordinator and/or the APCO who will confirm that the drug is approved for that protocol and send the order form onto to budget office. The new process and forms will be sent out in a blast email and put in the Help file in IRIS.

H. ***AAALAC UPDATE:*** The APCO informed the committee that the AAALAC Program Description is due on August 1, and they will probably try to schedule their site visit in the fall.

I. ***IACUC SOPs:*** The remaining IACUC SOPs will be deferred to the August meeting.

VII. CHAIR'S REPORT: [redacted] *PhD*

A. ***NEW IACUC MEMBER NOMINATION:*** The Chair nominated [redacted] MD, as a new voting IACUC member for one year.

[redacted] MD: New 1-Year Term as Voting Scientific Member (Expires 6/30/2021)

MOTION: Moved and seconded to ***approve [redacted] PhD as a new voting scientific member of the IACUC for a one-year term (expiring 6/30/2021).*** 11 yes, 0 no, 0 abstentions. **MOTION CARRIED**

Appendix 8: IACUC/OB Meeting Minutes

VA Greater Los Angeles VA-068

B. *PRIMR VIRTUAL IACUC CONFERENCE JUNE 16-17:* The Chair informed the committee that four members and the APCO attended the PRIMR virtual IACUC conference June 16-17. The Chair stated that it was a very helpful and informative meeting.

C. *NOT REPORTING NONCOMPLIANCE ISSUES TO NIH-OLAW AND ORO:* This was discussed earlier in the meeting.

D. *PI READY TO ALIQUOT DFP:* The Chair informed the committee that he received a request to have representatives of the IACUC and SRS present when the PI aliquots diisopropyl fluorophosphate (DFP) as mandated by the IACUC and the SRS. The IACUC Chair and the SRS Chair will be present later today to observe the procedure.

XIII. INTERNAL WORKGROUPS

POST APPROVAL MONITORING

XIV. UNFINISHED BUSINESS

A. FINAL APPROVALS

1. New:

Submission Number 001518 Project # 2020-000046
PI: [redacted] PhD, MD
Study Title: *Using E-Scope to determine changes in hippocampal circuitry that promotes the development of epilepsy and cognitive dysfunction after the initial insult (animal)*

Submission Number 001426 Project # 2020-000089
PI: [redacted] PhD
Study Title: *Precancer Niche Formation in the Fallopian Tube*

2. New Review of an Expired Study:

Submission Number 001948 Project# 2020-000077
PI: [redacted], MD
Study Title: *Luminal factors affecting duodenal protection and chemosensing*

3. Modifications:

Submission Number 001499 Project # 2019-080596
PI: [redacted], MD
Study Title: *The Roles of the Necroptotic and Excitotoxic Pathways in Diisopropyl Fluorophosphate-Induced Neuronal Necrosis*

B. PREVIOUSLY APPROVED PENDING WITH RESPONSE RECEIVED AND UNDER REVIEW

Appendix 8: IACUC/OB Meeting Minutes

VA Greater Los Angeles VA-068

PCC: 2020-020108 VA#: 0001 New Review of Expired Study
PI: [redacted] PhD
Title: *Protective Role of CD8+ Treg Cells in Regulating Inflammation in SLE*

C. PREVIOUSLY REVIEWED SUBMISSIONS FOR WHICH A RESPONSE HAS BEEN RECEIVED

D. PREVIOUSLY REVIEWED SUBMISSIONS FOR WHICH NO RESPONSE HAS BEEN RECEIVED

XV. ADJOURNMENT: The meeting was adjourned at 2:20 p.m. The next meeting is scheduled for August 5, 2020 at 12:00 PM. Location will be determined at a later date.

August 5, 2020
Date Approved by IACUC

[redacted] PhD
Chair, Institutional Animal Care and Use Committee

Appendix 9: IACUC/OB Protocol Form

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

Our protocol form is an on-line form that we can export as a PDF, but it does not paste well into Word.

Please see the attachment **App 9 Blank IACUC Form**

ACORP - Request to Review

PI Status for this research proposal:

- ◯ Awardee or initiator
- ◯ Participant in VA Cooperative Study
- ◯ Participant in Multicenter Trial
- ◯ Not awardee, but responsible VA investigator

PI's VA appointment

--none--

Is there a Co-PI? (Co-PIs split the funding equally in ePromise) Do not answer for Co-Investigators.

◯ Yes ◯ No

Is this study unfunded?

◯ Yes ◯ No

Explain how expenses or resources incurred by GLA will be reimbursed. If your service or section chief agrees to the use of departmental funds or resources for the conduct of this unfunded study, please state that in this section and route this initial application to them for review and approval *(if you need assistance with routing for signature please contact* [redacted] *at* [redacted]*, this routing will be done at the very end of the application)*

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Funding source and administration:

Funding source:

View Details	Sponsor Name	Sponsor Type	Funding Through	Contract Type:	Award Number

No Prime Sponsor has been added to this Study

Funding administration:

- ☐ VA
- ☐ UCLA
- ☐ GLAVREF
- ☐ Other:

Project uses:

Human Subjects?

○ Yes ○ No

Animal Subjects?

○ Yes ○ No

Investigational Drug being tested in human subjects?

○ Yes ○ No

Investigational Device?

○ Yes ○ No

Radioisotopes?

○ Yes ○ No

Biohazards?

○ Yes ○ No

For the below 3 questions, mark "yes" only if the major reason for the research project is to study the particular topic:

Agent Orange (dioxin)?

○ Yes ○ No

Females?

○ Yes ○ No

Prisoners of War?

○ Yes ○ No

List animal species used:

View Details	Species Name	Is Species USDA	Scientific Name	Common Name

No species have been added to this Study

Keywords for this project. List 3-8 MeSH terms. *(ONLY 1 MeSH TERM PER ROW)*

- ***MESH website: https://www.ncbi.nlm.nih.gov/mesh***
- ***MESH list search: https://meshb.nlm.nih.gov/search***

Abstract:

1. **Objectives: If more than one objective is addressed, the main objective should be indicated and only key secondary objectives stated. *[Example: There is evidence that at least some kinds of cancer cells can actually reprogram nearby normal cells (called mesenchymal stromal cells or MSCs) to become cancer cells themselves and thus speed tumor growth. The goal of this study is to see if liver cancer cells can do this. The secondary objective is to determine how the liver cancer cells do this reprogramming.]***
2. **Research Design: Describe the design of the study. *[Example: This study will look at tumor growth with liver cancer cells alone compared to tumor growth with liver cancer cells mixed with MCS cells to see if the second kind actually grow faster. If this does indeed occur, we will then use molecular biology techniques to determine how the cancer cells are able to reprogram the normal MSCs to become cancerous themselves.]***
3. **Methodology: Indicate the methods used. *[Examples: randomized clinical trial, survey, tissue culture, molecular biology, PET/CT imaging, etc.]***
4. **Results: The main results of the study to date should be provided (unless this is a new study). *[Example: The work so far shows that liver cancer cells mixed with MSCs did produce tumors which grew 60% faster than tumors made with cancer cells alone. Experiments to determine the mechanism are ongoing.]***
5. **Clinical Significance: What is the clinical significance of this project? *[Example: Worldwide, the most common risk factor for liver cancer is chronic infection with hepatitis B virus or hepatitis C virus, and the incidence of liver cancer has tripled since 1980. Even when caught at its earliest stage, only 31% of liver cancer patient are still alive five years after diagnosis, so better treatments are clearly needed. If our hypothesis is correct, a new way to approach liver cancer will be to find drugs that stop the cancer cells from reprogramming surrounding MSCs to become cancer cells themselves.]***
6. **Relevance: Describe the relevance of the research to the VA's mission and the care of Veterans: *[Example: As many as 1 in 10 Veterans test positive for hepatitis C and are therefore at high risk for liver cancer, making this is an important issue for Veterans health care.]***

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Study Budget: ***(no action is needed on this question, please read everything below carefully)***

- **In the Initial Review Submission Packet attach the budget pages from the grant for this project**
- **If these are not available, fill out the 'RDC Study Budget' document found in the help link above and attach that the Initial Review Submission Packet**

The 'Initial Review Submission Packet' is the short form where you attach ALL your study documents and/or consents. This form will automatically pop up to fill out AFTER you finish your entire application. Reach out to your research office if you have any questions regarding this process.

Budget-related Comments: Use this section to explain special situations, such as if this project is a subcontract from another project, etc. If it is an unfunded project, please also answer the next question.

Financial Conflict of Interest: ***(no action is needed on this question, please read everything below carefully)***

- **Submit a signed FCOI form (FCOI OGE Form 450 Alternative) for the PI, Co-PI, Co-I, collaborators with VA appointments, study chair or site principal investigator to [redacted] at [redacted] These FCOI forms are required before a study may be initiated.**

Study location: Please indicate the building and room numbers where this work will take place. If any of the work is done off-campus, please explain why it has to be done off-campus. If the work is VA funded, attach an off-site waiver ***(click the help button to access the off-site waiver form)*****.**

Will the study require support from other VA services, such as the clinical laboratory, pathology, nuclear medicine (such as the cyclotron), etc.?

- [ ] Pathology & Laboratory
- [ ] Pharmacy
- [ ] Radiology Service
- [ ] Hematology / Oncology
- [ ] Medicine
- [ ] Other
- [ ] None of the above

List other services needed:

When you are ready to submit the ACORP, attach the grant. If it is not funded by a grant attach the project description. These will be attached in the Initial Review Submission Packet which is the short form you will be

prompted to complete after finishing the ACORP.

In the Initial Review Submission Packet, attach Scopes of practice (if needed) for staff working on this project. *(reminder only, no action is needed on this question)*

Animal Component of Research Protocol (ACORP)

Protocol Demographics (A.)

Add all strains below:

View Details	Species	Strain	Special Care	Special Conditions

No Strain(s) have been added to this Study

ACORP Documentation and Status (A.6-7)

Related Documentation for IACUC reference.

a. If this protocol applies to a project that has already been submitted to the R&D Committee for review, identify the project (note: this is unusual):

Title of Project	If approved by the RDC, give the date of approval
No records have been added	

b. Triennial review. If this protocol is being submitted for triennial de novo review, complete the following:

Identify the studies described in the previously approved ACORP that have already been completed	Indicate the numbers of animals of each breed/strain/genotype that have already been used, and adjust the numbers shown in Item I accordingly
No records have been added	

Describe any study results that have prompted changes to the protocol, and <u>briefly summarize</u> those changes, to guide the reviewers to the details documented in other items below:

c. List any other relevant previously approved animal use protocols (copy the lines below as needed for each protocol listed).

If yes, please complete the following information

Title of other protocol	IACUC approval number of other protocol	Name of the VA station or other institution that approved it
No records have been added		

A.7: Indicate the type(s) of animal use covered by this protocol (check all that apply):

- ☐ Research
- ☐ Teaching or Training
- ☐ Testing
- ☐ Breeding and colony management only; not for any specific research project
- ☐ Holding protocol (as specified by local requirements; not required by VA, PHS or USDA)
- ☐ Other

If **"Other"** please specify:

Table of Definitions

Please provide definitions for any abbreviations or non-standard vocabulary you will be using in this ACORP:

Common Abbreviations:

***In Vitro:* Performed in cells or tissues outside the living animals**
***In Vivo:* Performed in live animals**
SC: Subcutaneous
IM: Intramuscular
IP: Intraperitoneal
IV: Intravenous
VAGLA: VA Greater Los Angeles
PI: Principal Investigator
VMU: Veterinary Medical Unit
VMO: Veterinary Medical Officer (Veterinarian)
KSP: Key Study Personnel

If you have definitions to add click "Add a new row" to begin.

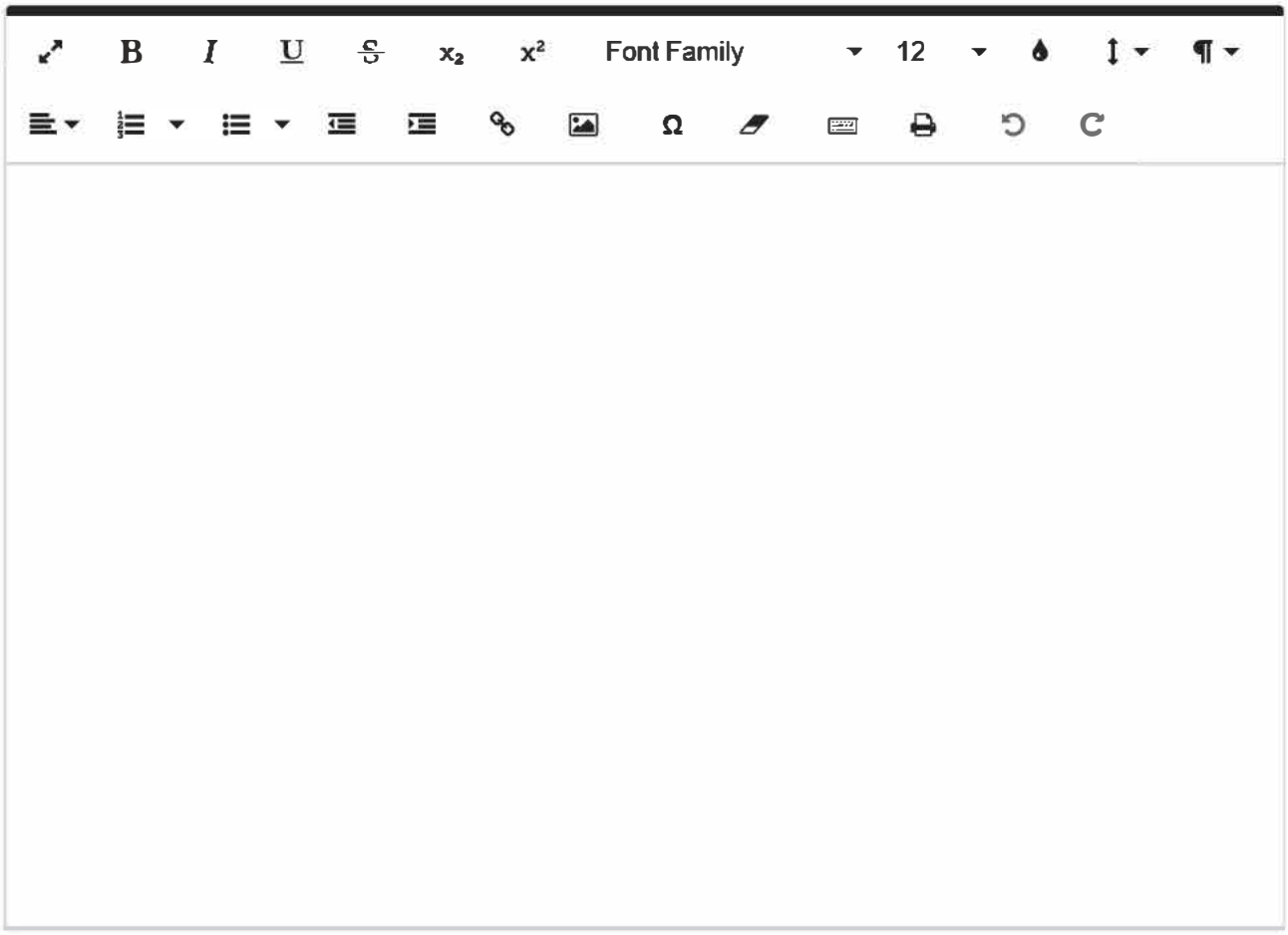
Term or Abbreviation	Definition
No records have been added	

Description of Relevance and Harm/Benefit Analysis (B.)

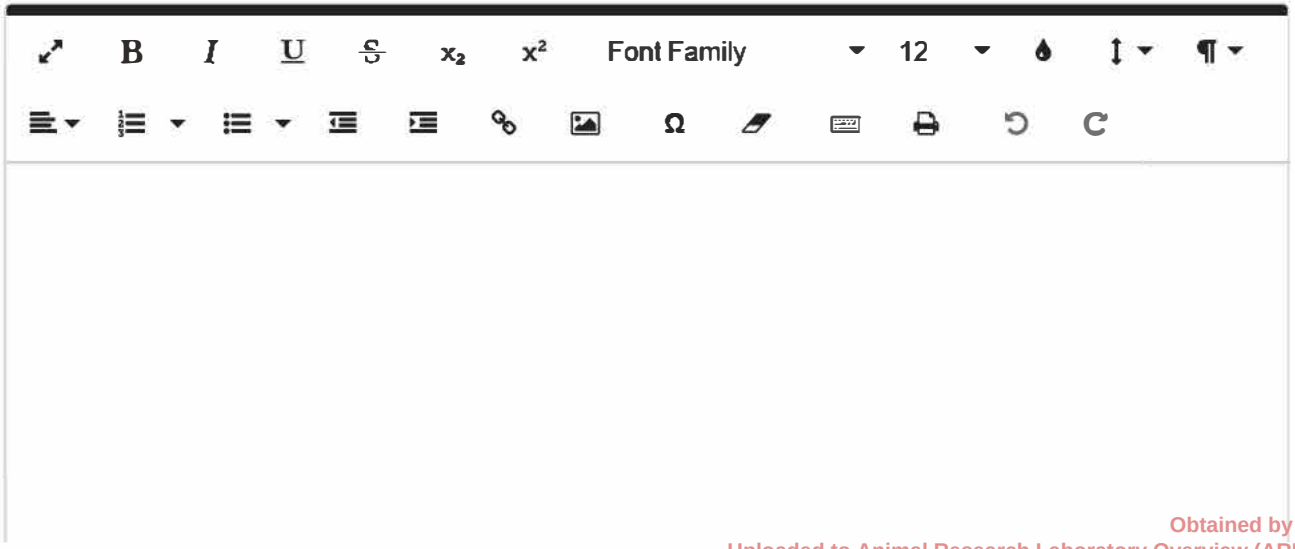
B. Description of Relevance and Harm/Benefit Analysis. Use non-technical (lay) language that an average senior high school student would understand. You can test the

approximate grade level of your text by entering it into the "test by direct input" section of this URL https://www.webfx.com/tools/read-able/check.php clicking "calculate readability", and scrolling down to see the results. The grade level should be 12 or lower.

B1: In one or two sentences: describe/explain the condition or disease this research is about in language a high school student could understand without having to run a Google search. ***[Example: This project is about gastric ileus, which often happens after abdominal surgery. The gut stops working for days or even weeks and the patient is not allowed to eat and has to be put on intravenous feeding until it starts working again.]***



B2: Briefly describe how this work will benefit Veterans or society in general. ***[Example: Traumatic brain injury (TBI) can be caused by things like being hit on the head or by having a stroke. Many Veterans have TBI from battlefield injuries, while members of the general public can acquire TBI from things like traffic accidents, sports injuries, falling down stairs, strokes, etc. TBI is difficult to treat and is a leading cause of disability in the United States.]***



B3: Briefly describe the approach this project will use. ***[Example: We know that chemicals that stop nerve cells from releasing a chemical called substance P reduce pain. This project will study in detail what happens inside nerves and the spinal cord neurons when substance P is released and substance P release is stopped by these chemicals. This information will help scientists develop drugs that could be used in people to turn off the release of substance P. We will study nerves and spinal cord neurons from rats because they are very similar to nerves and spinal cord neurons in humans.]***

B4: Why do the benefits of this research outweigh any pain or distress to the animals? ***[Example: Many of these experiments involve no pain at all to the rats because they are anesthetized during the work and they are also given post-operative pain-killing drugs. Other experiments involve only brief pain (heat or pressure) on the paw, and the rats can move their paws away from the heat or pressure anytime they want. The benefits of this work for people who suffer serious pain all day, every day far outweigh the brief pain some of the rats will experience.]***

Experimental Design (C.)

C1: Lay Summary. Using non-technical (lay) language that a senior high school student would understand, summarize the basic design of the protocol. ***[Example: We will put mice on a high-fat diet to make them obese and diabetic. After three months we will divide them into two groups.***

1. ***One group will get no treatment (controls) and just get saline injection each day.***
2. ***The other group will be treated with Miracle Juice A-2176 injections each day.***

Both groups of mice will stay on the high-fat diet. After 6 weeks we will measure their body weight, body fat content, abdominal fat content, metabolic rate, and markers for diabetes. We anticipate that Miracle Juice A-2176 will reduce body weight, body fat, abdominal fat, and diabetic markers while increasing the metabolic rate.
[Click the help button for other examples]

C2a: Scientific summary: using language that biomedical scientists outside this specific area of research would understand, summarize the design of the experiments(s) in this protocol. Please include a table of the experimental groups and animal numbers. ***[Note: For complicated experimental designs, a flow chart or diagram is strongly recommended to help the IACUC understand what is being proposed. Attach this as a separate document.]***

C2b: STATISTICS: justify the group sizes and the total number of animals requested.

A) What is the primary outcome of this study (the most important thing that is being measured? ***[Examples: in a cancer study this might be tumor growth rate. In an Alzheimer's study there might be a behavioral primary outcome such as maze performance, and an anatomical primary outcome such as prevalence of amyloid deposits.]***

B) What is the mean and standard deviation of the primary outcome under control conditions? ***[This can be from data from your own earlier work, or data from the literature, or data on similar conditions.]***

C) What is the smallest change in the primary outcome that would be clinically or biologically relevant? ***[For example, you could have a drug that reduces tumor growth by 1% and the effect is so consistent that it is statistically significant, but this would not be clinically or biologically relevant.]***

Click the help button for directions on how to run the power analysis. [NOTE: a power analysis is not appropriate for pooled samples (such as pooled tissue samples from multiple animals for biochemical analysis). Pooled samples are handled in question G below.]

D) What alpha did you set the power analysis for? (usually 0.05, two-tailed).

E) What N did the power analysis calculate?

F) What power did it calculate? (it should be at least 80%)

G) Does the study involved pooled samples (where you have to combine tissues or fluids from multiple animals to get enough for an assay, cell culture etc.)?

○ Yes ○ No

G.1) How much sample (such as tissue) do you need to run the analysis?

G.2) How much sample do you get from each animal?

G.3) How many animals per group do you need to get enough sample?

H.) Will you need extra animals because of anticipated problems with surgeries not working, implanted tumor cells not forming tumors etc. ?

○Yes ○No

H.1) Please explain why you need extra animals and how many extra animals per group you will need:

C2c: Describe each procedure to be performed on any animal on this protocol, including procedures that go in Appendix 6. Use Appendix 9 to document any of these procedures that involve "departures" from the standards in the Guide. Procedures can often just be listed here and the reader referred to the appropriate appendix for details. ***[Example: stereotaxic surgery for implanting cannulas for icv injections – see Appendix 5 for details.]***

View Description	Species	Is USDA Species	Procedure Type	Procedure Name

No Procedures have been added to this Study

Species (D.)

Justify the choice of species for this protocol.

- Additionally, if multiple strains, stocks, mutants or breeds are needed, describe the characteristics of each that justify its use in the proposed study.
- Consider such characteristics as body size, availability of specific strains, breeds, or mutants, data from previous studies, and unique anatomic or physiologic features. Explain why these are important to the work proposed.

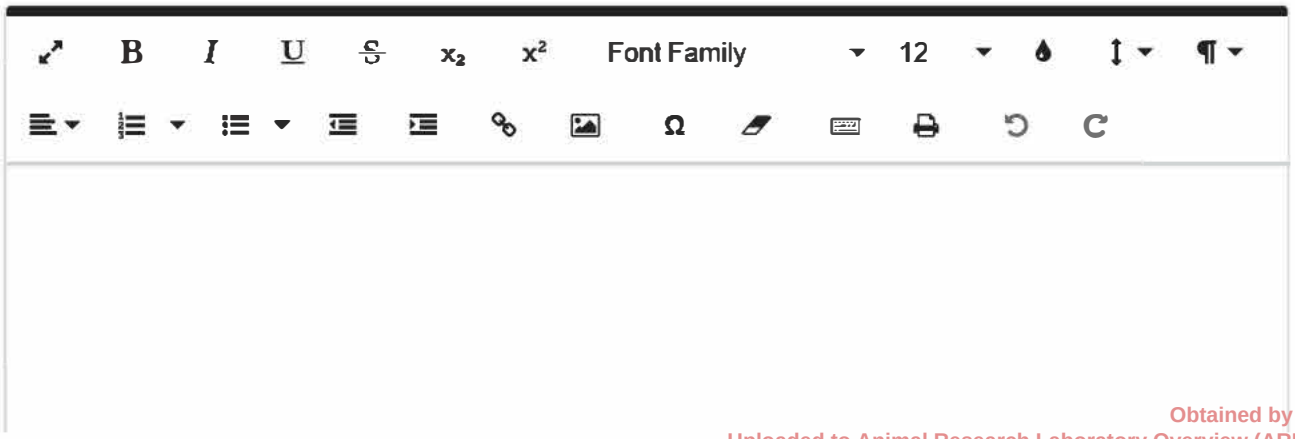
Current qualifications and training (E.)

PI Information

Will the PI have any animal contact?

○Yes ○No

Describe the Principal Investigators Animal Research Experience:



Specific procedure(s) that the PI will perform personally	Experience with each procedure in the species described in this ACORP
No records have been added	

List each staff member, what procedures they will perform and their qualifications each procedure.

Personnel	Procedure	Qualification
No records have been added		

VMU animal care and veterinary support staff personnel (copy the lines below for each individual member of the VMU animal care and veterinary staff who will perform support procedures other than routine husbandry on the animals on this protocol.)

Names:

Qualifications to perform specific support procedures in the animals on this protocol

Specific support procedure(s) assigned to this individual	Qualifications for performing each support procedure in the species described in this ACORP (e.g., AALAS certification, experience, or completion of special training)
No records have been added	

For each of the research personnel listed above, enter the most recent completion date for each course

Name of Individual	Working with the IACUC	ORD web-based species specific course (Identify the species and completion date(s))	Any other training required locally (Identify the training(s) and completion date(s))
No records have been added			

Training to be provided (F.)

List here each procedure in Item E for which anyone is shown as "to be trained", and describe the training. For each procedure, describe the type of training to be provided, and give the name(s), qualifications, and training experience of the person(s) who will provide it. If no further training is required for anyone listed in Item E, enter "N/A"

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Occupational Health and Safety (G.)

Complete one line in the table below for each of the personnel identified in Item E:

Name	VA Occupational Health and Safety Program	Equivalent Alternate Program – identify the program and submit documentation of participation	Current on Interactions with OHSP?
No records have been added			

Are there any non-routine OHSP measures that would potentially benefit, or are otherwise required for, personnel participating in or supporting this protocol?

- ◯ Yes
- ◯ No

If "**Yes**" please describe these non-routine measures here:

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Number of Animals Requested (I.)

Which of the following does this ACORP address?

- ☐ Category B Procedures (Breeding colony)
- ☐ Category C Procedures (procedures involving minimal or transient pain or distress)
- ☐ Category D Procedures (procedures involving potential pain or distress that is relieved by appropriate anesthetics, sedatives, or analgesics)
- ☐ Category E Procedures (procedures in which pain or stress is NOT relieved with the use of anesthetics, analgesics, tranquilizers, or by euthanasia. Examples include studies in which animals are allowed to die without intervention (e.g. LD50, mortality as an end-point), studies that allow endpoints that are painful or stressful, addictive drug withdrawals without treatment, pain research, and noxious stimulation)

Assign all requested animals to a USDA category of pain/distress. If you have difficulty determining the appropriate category, please contact the attending veterinarian or IACUC Chair for assistance. The same animal cannot be assigned to more than one USDA category. If several different procedures are planned, the animal should be placed in a category based on the most painful/distressful procedure. You are required by VA policy to describe planned procedures for the fourth and fifth years of a submitted VA grant even though, under PHS policy, the IACUC must perform a new review three years after the initial approval date.

USDA Category B

Examples of procedures:

1. Animals in breeding colonies.
2. Animals being held in VMU (i.e. Holding Protocol) colonies but not yet used in research activities.

	SPECIES and GROUP	PROCEDURE(S)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	Category B TOTAL
No records have been added								

USDA Category C

Examples of procedures:

1. Holding or weighing animals in teaching or research activities.
2. Injections, blood collection or catheter implantation via superficial vessels.
3. Tattooing animals.
4. Tail snipping of rodents.
5. Ear punching of rodents.
6. Routine physical examinations.
7. Observation of animal behavior.
8. Feeding studies, which do not result in clinical health problems.

9. AVMA approved humane euthanasia procedures.
10. Behavioral studies such as maze performance.
11. Gavage.
12. Momentary use of isoflurance anesthesia in rodents for certain blood collection techniques (not retro-orbital)
13. Use of anesthetics to produce temporary immobility for irradiation or imaging studies.
14. Minor manipulation and minimally invasive procedures that are best accomplished with chemical restraint (i.e., sedative or anesthetic) to minimize distress or struggling, or to improve the technical aspects of the procedure, but are otherwise not necessarily considered to be painful.
15. Positive reward projects. (from **https://www.uthsc.edu/research/compliance/iacuc/protocol-submission/pain-and-distress-categories.php**)

	SPECIES and GROUP	PROCEDURE(S)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	Category C TOTAL
No records have been added								

USDA Category D

Examples of procedures:

1. Diagnostic procedures such as laparoscopy or needle biopsies.
2. Non-survival surgical procedures.
3. Survival surgical procedures.
4. Post operative pain or distress.
5. Ocular (retro-orbital) blood collection in mice.
6. Terminal cardiac blood collection.
7. Any post procedural outcome resulting in evident pain, discomfort or distress such as that associated with decreased appetite/ activity level, adverse reactions, to touch, open skin lesions, abscesses, lameness, conjunctivitis, corneal edema and photophobia.
8. Exposure of blood vessels for catheter implantation.
9. Exsanguination under anesthesia.
10. Induced infections or antibody production with appropriate anesthesia and post-op/post-procedure analgesia when necessary.

	SPECIES and GROUP	PROCEDURE(S)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	Category D TOTAL
No records have been added								

USDA Category E

Examples of procedures:

1. Toxicological or microbiological testing, cancer research or infectious disease research that requires continuation until clinical symptoms are evident or death occurs.
2. Ocular or skin irritancy testing.
3. Food or water deprivation beyond that necessary for ordinary pre-surgical preparation.
4. Application of noxious stimuli such as electrical shock if the animal cannot avoid/escape the stimuli and/or it is severe enough to cause injury or more than momentary pain or distress.
5. Infliction of burns or trauma.
6. Prolonged restraint (defined as 15 minutes or longer).

	SPECIES and GROUP	PROCEDURE(S)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	Category E TOTAL
No records have been added								

Management of USDA Category D procedures (J.)

Indicate which statement below applies, and provide the information requested.

- ◯ This protocol does NOT include any Category D procedures.
- ◯ This protocol INCLUDES Category D procedures. List each Category D procedure and provide the information requested. (For surgical procedures described in Appendix 5, only identify the procedure(s) and enter "See Appendix 5 for details.)

Procedure	Monitoring: indicate the method(s) to be used, and the frequency and duration of monitoring both during the procedure AND throughout the post-procedure recovery period.	Person(s) responsible for the monitoring	Method(s) by which pain or distress will be alleviated both during AND after the procedure (include the dose, route, and duration of effect of any agents to be administered).
No records have been added			

Category E Procedure Specifications (K.)

List the Category E procedures in the table below:

- ◯ This protocol does NOT include any Category E procedures
- ◯ This protocol INCLUDES Category E procedures. Identify each Category E procedure included in this ACORP and justify scientifically why the pain or distress cannot be relieved.

Identify each Category E procedure included in this ACORP and justify scientifically why the pain or distress cannot be relieved.

Category E Procedure	Justify scientifically why the pain or distress cannot be relieved
No records have been added	

Veterinary Support (L.)

Identify the laboratory animal veterinarian who is responsible for ensuring that the animals on this protocol receive appropriate veterinary medical care. *[If it is not [redacted] please update the table with the appropriate information]*

Name	Institutional Affilliation	Email contact

Veterinary consultation during the planning of this protocol (must have occurred within one year of submission).

Name of the laboratory animal veterinarian consulted	Date of the veterinary consultation (meeting date, or date of written comments provided by the veterinarian to the PI)

Husbandry (M.)

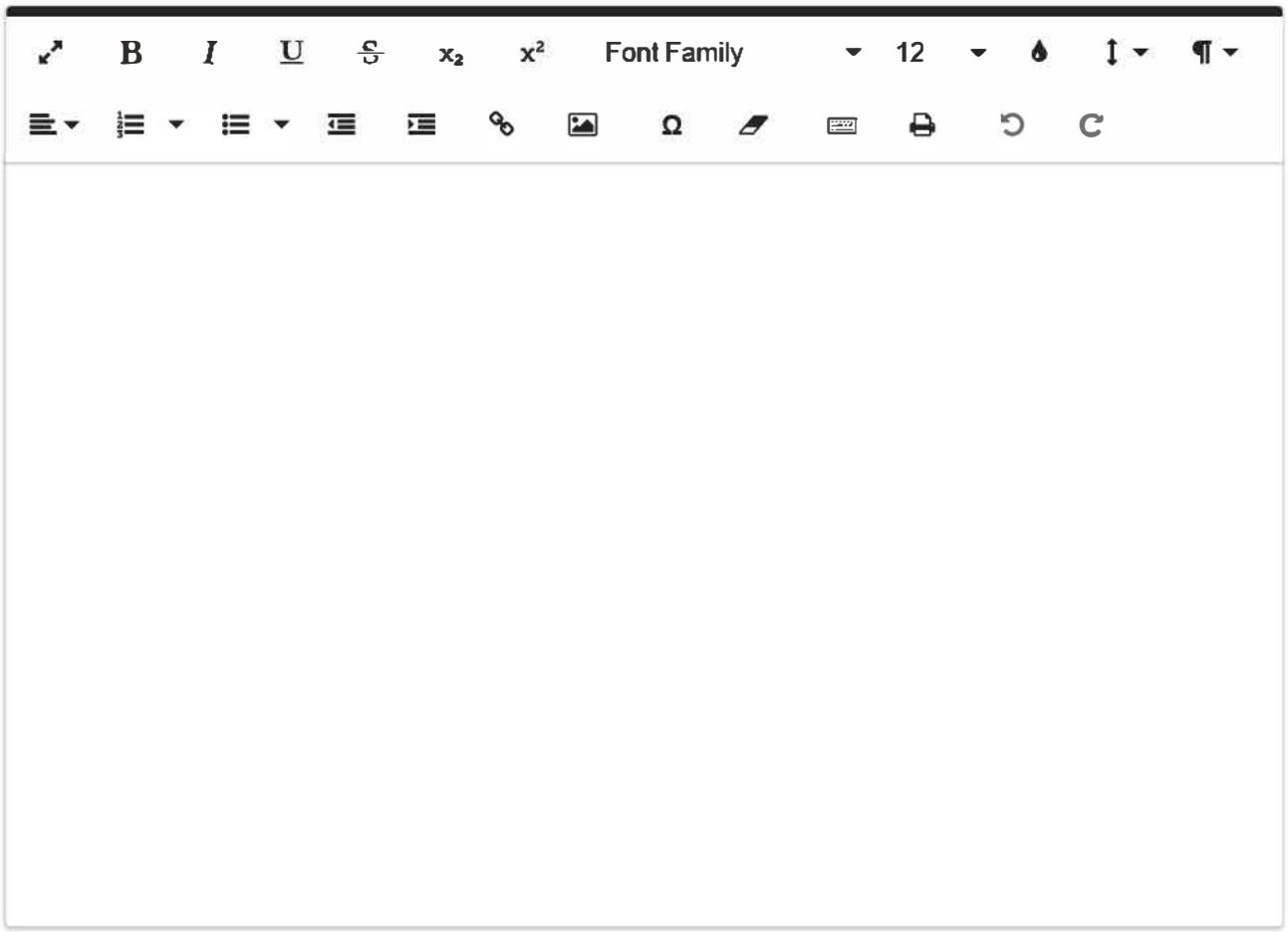
As a reference for the animal husbandry staff, summarize here the husbandry requirements of the animals on this protocol:

Caging needs - Complete the table below to describe the housing that will have to be accommodated by the housing sites for this protocol:

Species	Type of housing*	Number of individuals per housing unit**	Is this housing consistent with the Guide and USDA regulations?***	Estimated maximum number of housing units needed at any one time
No records have been added				

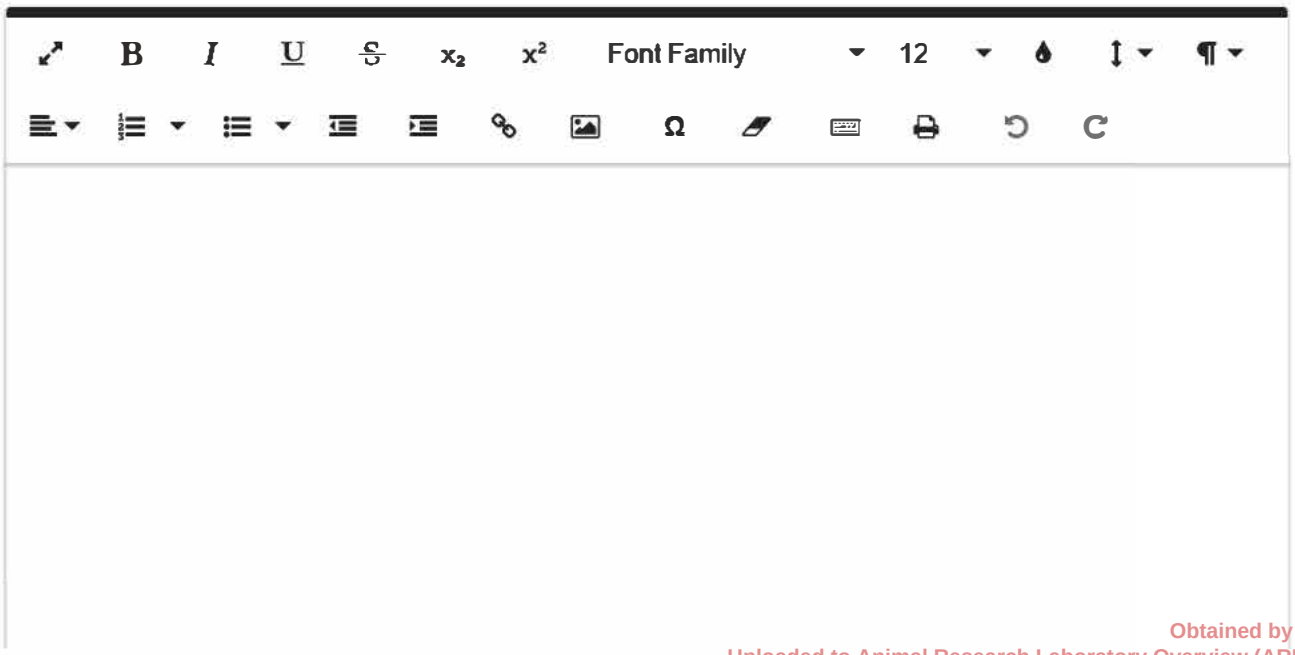
- **Note**: See ACORP Instructions, for guidance on describing the type of housing needed.
- If animals are to be housed according to a local Standard Operating Procedure (SOP), enter "standard (see SOP)".

Describe the custom housing (if applicable):



- **Note:** The *Guide* states that social animals should generally be housed in stable pairs or groups.

Provide a justification if any animals will be housed singly (if species is not considered "social", then so note):



Enrichment - Complete the table below to indicate whether "standard" exercise and environmental enrichment will be provided to the animals on this protocol, or whether any special supplements or restrictions will be required:

- **Note:** See ACORP Instructions, for more information on enrichment requirements.

Species	Type of enrichment	Frequency of enrichment
No records have been added		

- **Note:** If enrichment will be provided according to a local SOP, enter "standard (see SOP)" and enter the SOP into the table.

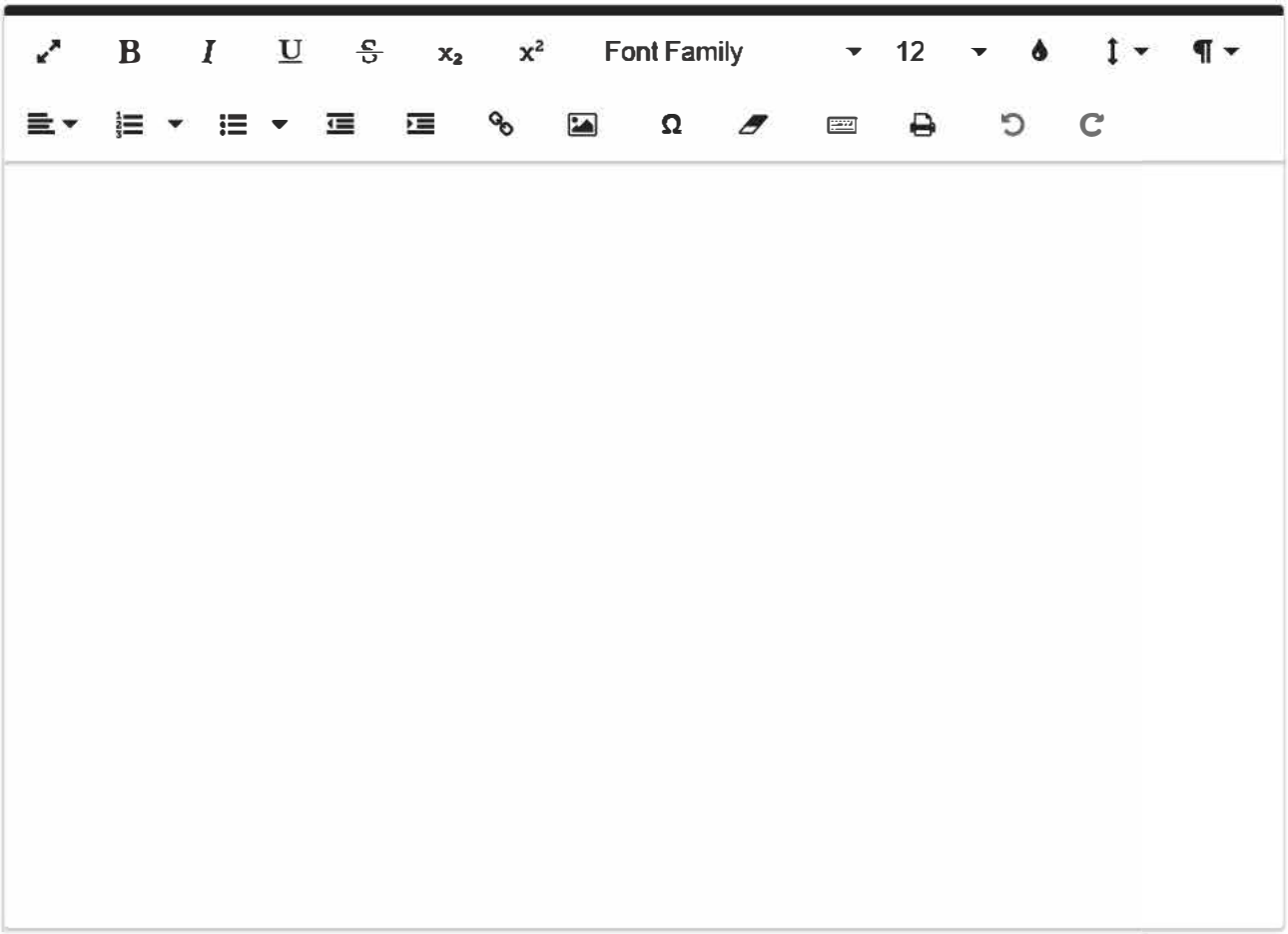
If the local standard enrichment is not described in a SOP, enter "standard, see below", and describe the standard species-specific enrichment here:

Customized routine husbandry - Check all of the statements below that apply to the animals on this protocol, and provide instructions to the animal husbandry staff with regard to any customized routine husbandry needed:

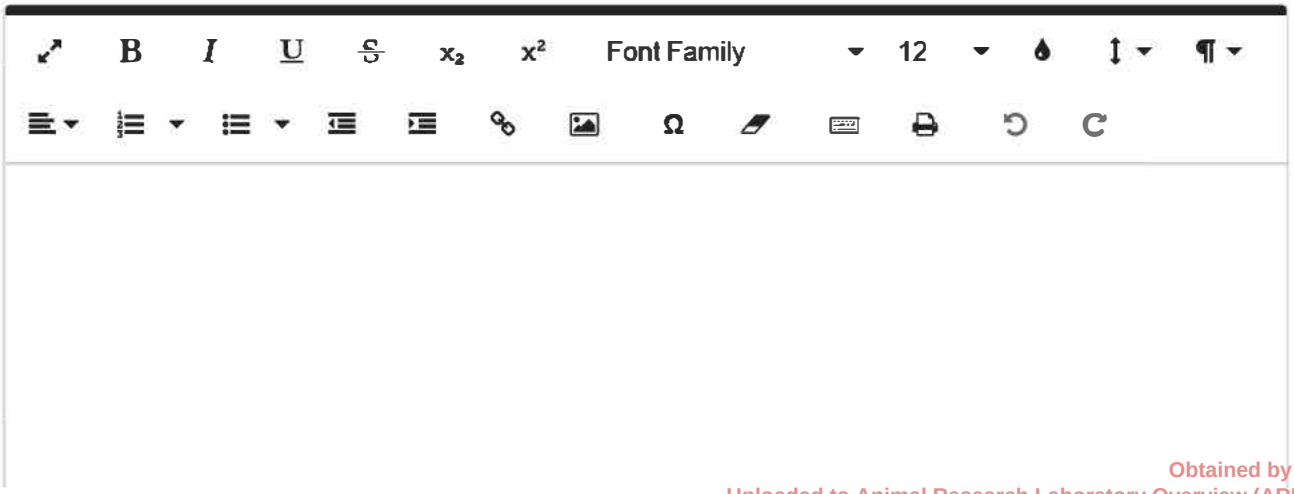
- [ ] This ACORP INCLUDES genetically modified animals.
- [ ] Devices that extend chronically through the skin WILL be implanted into some or all animals on this protocol.
- [ ] Some or all of the animals on this protocol WILL require other customized routine husbandry by the animal husbandry staff, beyond what has been described above
- [ ] This ACORP does NOT include use of any animals that will require customized routine husbandry.

List each group of genetically modified animals, and describe for each any expected characteristic clinical signs or abnormal behavior related to the genotype and any customized routine husbandry required to address these:

- For genetic modifications that will be newly generated on or for this protocol, describe any special attention needed during routine husbandry to monitor for unexpected clinical signs or abnormal behavior that may require customized routine husbandry.



Describe any care that will be provided to minimize the chances of chronic infection where the device(s) penetrate the skin.



Describe the special husbandry needed:

Housing Sites (N.)

N1a. Identify each location on VA property where animals on this protocol will be housed, and indicate whether or not each location is inside the VMU.

Click "Add New Row" to complete

Facility	Building/Room Number	Inside VMU?
No records have been added		

Housing in non-VA facilities. Identify each location not on VA property where animals on this protocol will be housed, and provide the information requested in the table.

Name of the Non-VA Facility	Is this facility accredited by AAALAC?	Building	Room Number
No records have been added			

Antibody Production (O.)

Will any of animals on this protocol be used for the production of antibodies?

- ◯ Some or all of the animals on this protocol WILL be used in the production and harvesting of antibodies.
- ◯ NO animals on this protocol will be used in the production and harvesting of antibodies.

Biosafety (P.)

Will any substances be administered (drugs, tumor cells, pathogens, viral vectors, etc.) or items implanted (minipumps, EEG electrodes, cannulas, etc.)?

- ◯ Yes (Must complete Appendix 3)
- ◯ No

Locations of Procedures (Q.)

Complete the table below, listing the location(s), inside or outside of the animal facility, for each of the procedures to be performed on animals on this protocol.

Procedure	Surgical?	Bldg/Room Number	Requires Transport through non-research areas?	If Yes Describe method of transport
No records have been added				

Body Fluid, Tissue, and Device Collection (R.)

List each body fluid, tissue, or device to be collected, and complete the table below to indicate the nature of the collection.

Body Fluid, Tissue, or Device to be Collected	Collected AFTER Euthanasia	Collected BEFORE Euthanasia: Blood Collection Associated with Antibody Production (Appendix 2, "Antibody Production")	Collected BEFORE Euthanasia: Collected as Part of a Surgical Procedure (Appendix 5, "Surgery")	Collected BEFORE Euthanasia: Other Collection from Live Animals (Appendix 4, "Antemortem Specimen Collection")
No records have been added				

Surgery (S.)

Does this protocol include any surgical procedure(s)?

- ◯ Surgery WILL BE PERFORMED on some or all animals on this protocol.
- ◯ NO animals on this protocol will undergo surgery.

Endpoint Criteria (T.)

Describe the criteria that will be used to determine when animals will be removed from the protocol or euthanatized to prevent suffering.

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Termination or removal from the protocol (U.)

Complete each of the following that applies:

- [ ] Some or all animals will NOT be euthanatized on this protocol.
- [ ] Some or all animals MAY be euthanatized as part of the planned studies

IACUC Euthanasia Data Value

View Details	Species	Euthanasia Method	Route	Dose	Monitoring

No Euthanasia methods have been added to this Study

1. For each of the methods above that is designated as "Conditionally Acceptable" by the AVMA, describe how the conditions for acceptability will be met:

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2. For each of the methods above that is designated as "Unacceptable" by the AVMA, give the scientific reason(s) that justify this deviation from the AVMA Guidelines:

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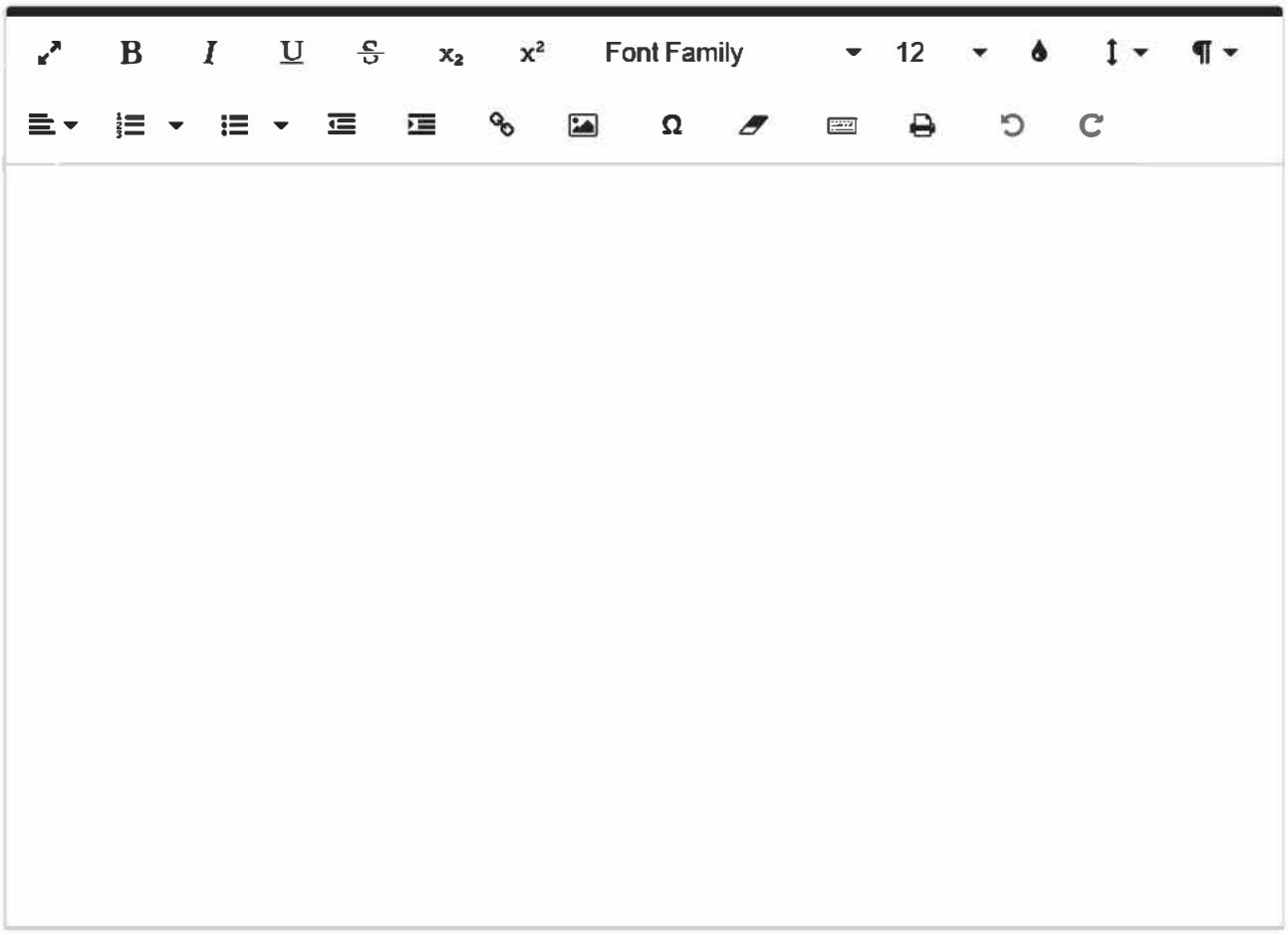
3. Identify all research personnel who will perform euthanasia on animals on this protocol and describe their training and experience with the methods of euthanasia they are to use in the species indicated.

Personnel	Experience
No records have been added	

4. Instructions for the animal care staff in case an animal is found dead.

☐ There are no safety concerns – dispose of in accordance with the appropriate VMU SOP.

☐ There are some safety concerns. Describe any safety issues and specific instructions for carcass disposal:



4b: Describe how the PI's staff should be contacted.

◯ Please contact a member of the PI's staff immediately.
◯ There is no need to contact the PI's staff immediately

Name	Contact Information
No records have been added	

Literature Search (W.1-5)

W1: In vitro models and computer models: Run a literature search to see if there are in vitro models or computer models for this kind of work. If such models exist, discuss why they cannot provide the information this study will provide; please be specific. Since this is a fairly technical search, please click the Help button for instructions and examples on how to do it.

If a search brings up more than 30-40 papers, the search should be redone using more specific search terms.

Entry 1

Name of the database

Date of search

Period of years covered by the search (you can say "All available years to present")

Key words used

Number of papers found

W2: Less-sentient or non-mammalian species: **Run a literature search to see if there are less-sentient or non-mammalian species that can be used for this work rather than the species being proposed. If there are such models, discuss why they cannot provide the information this study will provide. Please click the Help button for instructions and examples on how to run this search.**

If a search brings up more than 30-40 papers, the search should be redone using more specific search terms.

Entry 1

Name of the database

Date of search

Period of years covered by the search (you can say "All available years to present")

Key words used

Number of papers found

W3: Reduction of animals used.

Part A: In section C2b above, the sample sizes were statistically justified. In this section please discuss other ways the number of animals used in this study is being minimized.

[Examples:
A) For behavioral/metabolic/diet studies, one way to minimize the number of animals needed is to carefully acclimate the animals to the procedure/room/apparatus/diet so that variation between animals is minimized, thus reducing the standard deviation. This then reduces the number of animals needed to get statistically valid results.
B) For cancer studies where the tumor is in an orthotopic location (such as lung cancer implanted into the lungs), rather than sacrificing animals at various time points to monitor tumor growth just do imaging on one set of mice at various time points to monitor tumor growth.
C) Do multiple studies per animal (such as behavioral studies followed by biochemical analyses and gene expression studies).
D) For work that requires pooling tissues from a number of animals (cell culture, molecular biology, etc.), use more sensitive methods that work with smaller tissue samples. This then requires pooled tissue from fewer animals.]

Part B: Please discuss why the number of animals used cannot be further reduced.

[Examples:
A) Reducing the sample size will reduce the statistical power of the study to less than 80%, which is not acceptable,
B) Our literature search showed we are already using the most sensitive biochemical techniques available so reducing the number of animals any further will leave us with too little tissue for reliable analysis.]

Please click the Help button for instructions and examples on how to run this search.

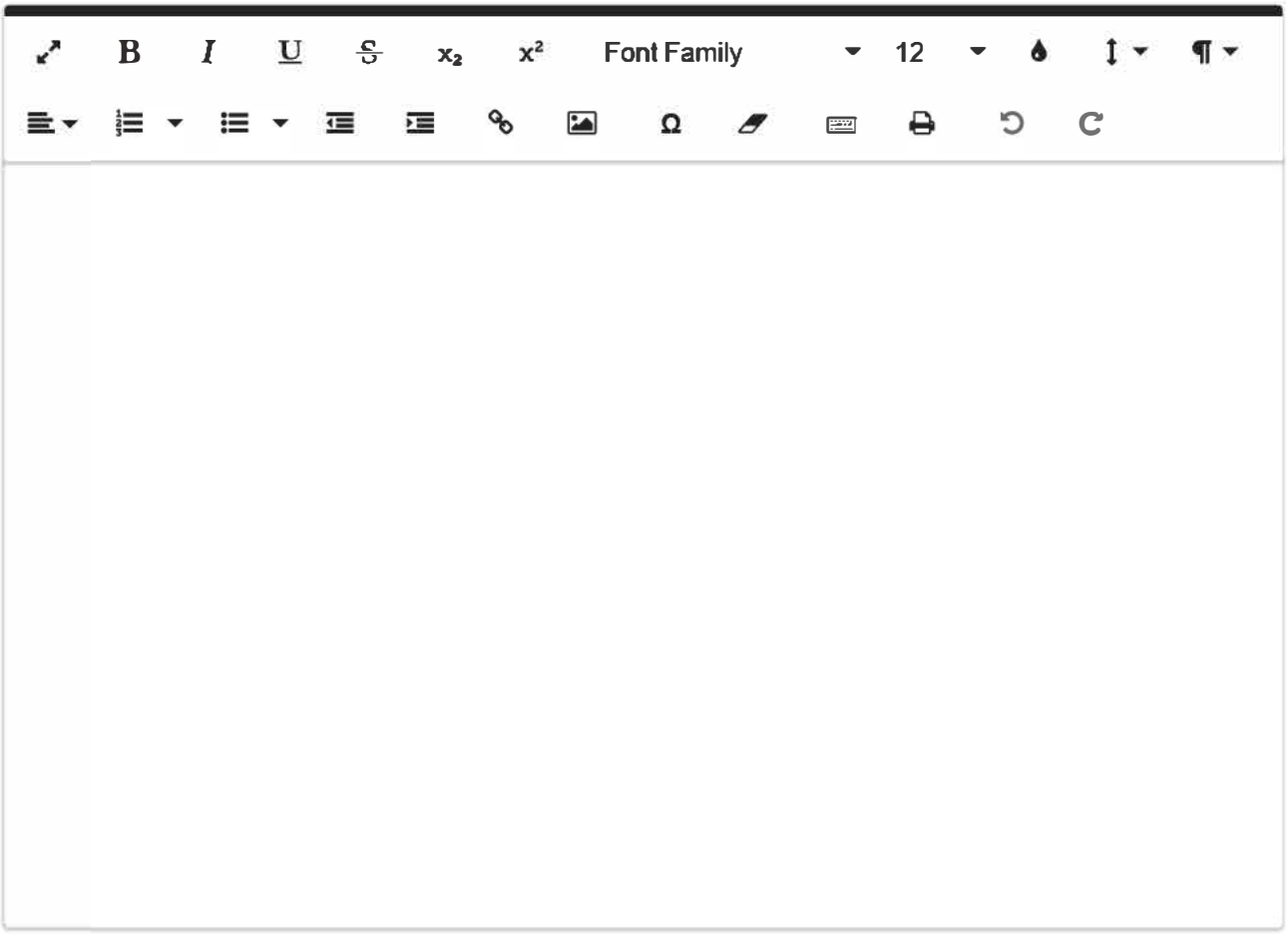
If a search brings up more than 30-40 papers, the search should be redone using more specific search terms.

Entry 1

Techniques in use (behavioral, molecular biology, etc.)	
Name of the database	
Date of search	
Period of years covered by the search (you can say "All available years to present")	
Key words used	
Number of papers found	

W4: Minimizing pain and distress for the animals ("refinement"): Describe what procedures have been incorporated into the study to minimize pain and distress. Some examples: less invasive surgery, shorter fasting period, smaller tumor size, etc. A study may involve more than one painful or distressing procedure, so a separate search should be run on each one. Explain why further "refinement" (further reduction of pain and distress) is not possible. Please click the Help button for instructions and examples on how to run this search.

If a search brings up more than 30-40 papers, the search should be redone using more specific search terms.



Entry 1

Painful or distressing procedure

Name of the database

Date of search

Period of years covered by the search (you can say "All available years to present")

Key words used

Number of papers found

W5: Describe how it was determined that the proposed work does not unnecessarily duplicate work already documented in the literature. In many cases, the work has never been done before in any species, so a simple search focusing on the specific point of the project will show this. In other cases, the project builds upon earlier published work in the same area. Please click the Help button for instructions and examples on how to run this search.

If a search brings up more than 30-40 papers, the search should be redone using more specific search terms.

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Entry 1

Focus of proposed work

Name of the database

Date of search

Period of years covered by the search (you can say "All available years to present")

Key words used

Number of papers found

Controlled Substances (X.1)

Are controlled substances being used on animals in this protocol?

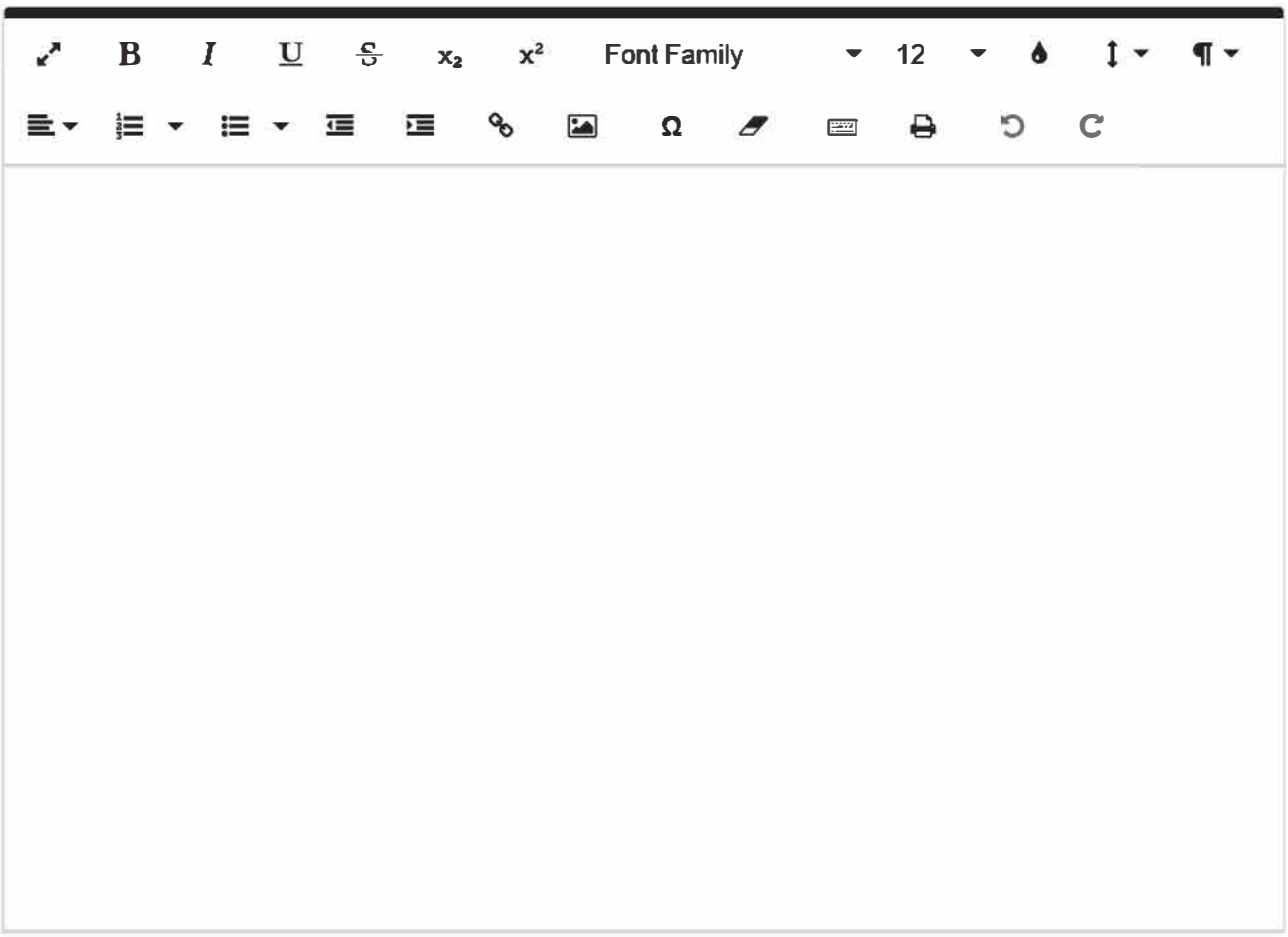
○ Yes ○ No

Complete the information below for each drug that is used in animals on this protocol and is classified as a controlled substance by the DEA:

Controlled Substances*	Storage: Double Locked	Location for Use: VA Property	Procurement: VA Pharmacy
No records have been added			

- **Note:** Just list the drug name - doses, volumes, etc. will be provided, in the anesthetic, analgesic, and/or euthanasia sections elsewhere in this ACORP.

For any controlled substance that will NOT be stored under double lock, with limited access, describe how it will be stored, and explain why this is necessary:



Check each statement below that applies, to confirm that all controlled substances used on this protocol will be procured according to VA pharmacy policies:

◉ Some/All controlled substances will be used on VA property, and all of these will be obtained through the local VA pharmacy.

○ Some controlled substances will not be obtained through the local VA pharmacy, but none of these will be used on VA property.

If any controlled substances that are to be used on VA property will NOT be procured through the local VA pharmacy, please explain below how they will be procured and why this is necessary.

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Other Regulatory Considerations (X.2-3)

X.2: Human patient care equipment or procedural areas. Does this protocol involve use of any human patient care equipment or procedural areas?

This question has been set to default as "No"

- ○ Yes. See Appendix 7 for details
- ◉ No

X. 3: Explosive agents. Does this protocol involve use of any explosive agent? *[Examples: perfusion with a fixative containing picric acid, or ether used as an anesthetic.]*

This question has been set to default as "No"

- ○ Yes. See Appendix 8 for details
- ◉ No

Appendix Selection

Indicate which appendix's are needed for this application:

- ☐ ACORP (Appendix 1) - Additional Local Information (required for all ACORPS)
- ☐ ACORP (Appendix 2) - Antibody Production
- ☐ ACORP (Appendix 3) - Biosafety
- ☐ ACORP (Appendix 4) - Antemortem Specimen Collection

- [ ] ACORP (Appendix 5) - Surgery
- [ ] ACORP (Appendix 6) - Special Husbandry and Procedures
- [ ] ACORP (Appendix 7) - Use of Patient Care Equipment and/or Areas for Animal Studies
- [ ] ACORP (Appendix 8) - Use of Explosive Agent(s) within the VMU or in Animals
- [ ] ACORP (Appendix 9) - Departures from "Must" and "Should" Standards in the Guide (2011)
- [ ] ACORP (Appendix 10) - Overnight Housing
- [ ] ACORP (Appendix 11) - Breeding

ACORP (Appendix 1)
Additional Local Information

This protocol involves the following (check all that apply):

- [ ] Breeding
- [ ] Survival surgery
- [ ] Multiple survival surgery
- [ ] Antibody/Ascites Formation
- [ ] Tumor formation
- [ ] Hazardous agents used in animals
- [ ] Food and/or Fluid Restriction
- [ ] Hazard to VMU Personnel
- [ ] Prolonged Restraint (>15 minutes)

E-mail addresses should be [redacted] email addresses. No [redacted], etc.

VA project #

3-year expiration date

PI name:

PI phone:

PI VA e-mail:

PI university e-mail:

Protocol title:

Contact name 1:

e-mail:

Contact name 2:

e-mail:

EMERGENCY CELL PHONE # (responsible party must be available at all times)

Alternate phone:

Laboratory phone:

Animals taken to lab?

○ Yes ○ No

If yes, Bldg and Rooms:

Animals taken to lab and then returned to vivarium (VMU)

○ Yes ○ No

Animals housed in the lab for 12 or more consecutive hours?

○ Yes ○ No

If yes, Bldg and Room(s):

Is wire-floored caging required?

○ Yes ○ No

Do animals need to be exempted from the environmental enrichment program?

○ Yes ○ No

Maximum allowable body weight loss (10% unless scientifically justified):

Hazards used in animals (check all that apply):

- ☐ None
- ☐ Toxic
- ☐ Infectious
- ☐ Biological
- ☐ Radioactive
- ☐ Other

Other, please list:

Will VMU personnel be exposed to any of these hazards? (This includes animals housed in labs since VMU staff check them, wash the cages, etc.)

○ Yes ○ No

If yes, list which hazards:

Body fluid, tissue and/or device collection?

- ○ None
- ○ Live
- ○ Dead
- ○ Both

Surgery?

- ○ None
- ○ Minor
- ○ Major
- ○ Both
- ○ Non-survival

Multiple survival surgeries?

○ Yes ○ No

If there are multiple survival surgeries, list surgery types:

Anesthetics/analgesics used (excluding euthanasia)?

○ Yes ○ No

If yes, list:

Euthanasia methods (must include anesthetic plus physical method unless scientifically justified):

All controlled substances used:

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List any other drugs from Appendix 5 (surgery appendix):

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ACORP (Appendix 2)
ANTIBODY PRODUCTION

Immunization. Provide the information requested below for any animals to be used for raising antibodies specifically for use in this protocol.

1a. Describe the immunization protocol in the table below, using a separate row for each day on which any agent (including primer, antigen, and/or adjuvant) will be administered (make sure that each primer, antigen, and adjuvant is also included in Appendix 3).

Click "Add a new row" to respond to this item.

Entry 1

Injection day (e.g. day 0, 7, 30, etc.)	
Antigen	
Total amount (mg) and volume (ml) of antigen injected	
Identity and volume (ml) of adjuvant injected	
Total injection volume per animal (antigen plus adjuvant; ml)	
Divided into how many injections?	
Injection route and location of injections on body	

1b: Describe how each antigen will be screened to make sure that it does not harbor infectious agents that could infect other laboratory animals or people after injection.

1c: List possible adverse effects that might be observed in animals receiving the proposed primer, antigen, and/or adjuvant injections, and describe the measures that will be taken if these adverse effects occur:

1d: Give the justification for using any primer or adjuvant that is expected to cause pain or distress in the animals.

Survival Blood Collection. Will blood be collected as a survival procedure for the production and harvesting of antibodies on this protocol?

- ◯ No, the production and harvest of antibodies on this protocol does not involve survival collection of blood.
- ◯ Yes, this protocol requires the collection of blood in a survival procedure, before (as a "pre-bleed") and/or after immunization. Make sure this is included in Item R of the ACORP, and complete items 2.a, 2.b, and 2.c, below.

2a: Describe each survival collection of blood in the table below, including any "pre-bleeds" prior to immunizations.

In the section titled "Method of Collection", include the vessels and method used. Create one entry for each collection method. Indicate if blood is collected under anesthesia (do not include dosage information).

View Details	Species	Fluid Extraction	Frequency	Volume	Method of Collection

No Fluid Extracts have been added to this Study

#2b: Will anesthetics, tranquilizers, or analgesics be used for blood collection?

- ◯ Yes (Describe the administration of pain-relieving agents in the table below)
- ◯ No (Justify the omission of pain-relieving agents below)

#2b: Please indicate the pain relieving agents (anesthetic and/or analgesic agents) that will be given. Details of these agents (e.g. dose (mg/kg), volume (ml), route, and frequency/duration) will be requested in the "Pain-Relieving Agents" section that occurs later in the ACORP.

If "No" justify the omission of pain-relieving agents - either scientifically or because the collection method involves no or momentary pain - and **completely describe the physical restraint that will be used during collection** below (note that p*rolonged* restraint [greater than 15 minutes] must also be described in appendix 6.

2b. Will anesthetics, tranquilizers, or analgesics be administered for blood collection?

- ◯ No anesthetics, tranquilizers, or analgesics will be administered for blood collection.
- ◯ Yes. Describe the administration of pain-relieving agents, including the name of each agent, and its dose (mg/kg), volume (ml), and route and frequency/duration of administration (Make sure this information is also included in Appendix 3)

2c: Will volume replacement be provided for blood that is collected?

- ◯ Volume will NOT be replaced for some of the blood collection listed. For each collection listed in Item 2.a, above, for which volume will NOT be replaced, explain why not.
- ◯ Volume WILL be replaced for some of the blood collection listed. For each collection listed in Item 2.a, above, for which volume WILL be replaced, describe the replacement(s) that will be provided (including the composition of the replacement(s), volume, and route of administration).

Terminal Blood Collection. Will animals be euthanatized by exsanguination, for harvest of antibodies?

- ◯ No, this protocol does NOT involve terminal blood collection for harvest of antibodies.
- ◯ Yes, this protocol DOES require terminal blood collection for the harvest of antibodies. Make sure this is included in Item R of the ACORP, and complete Items 3.a., 3. b., and 3.c., below:

3a. Describe the method(s) to be used for euthanasia and exsanguination:

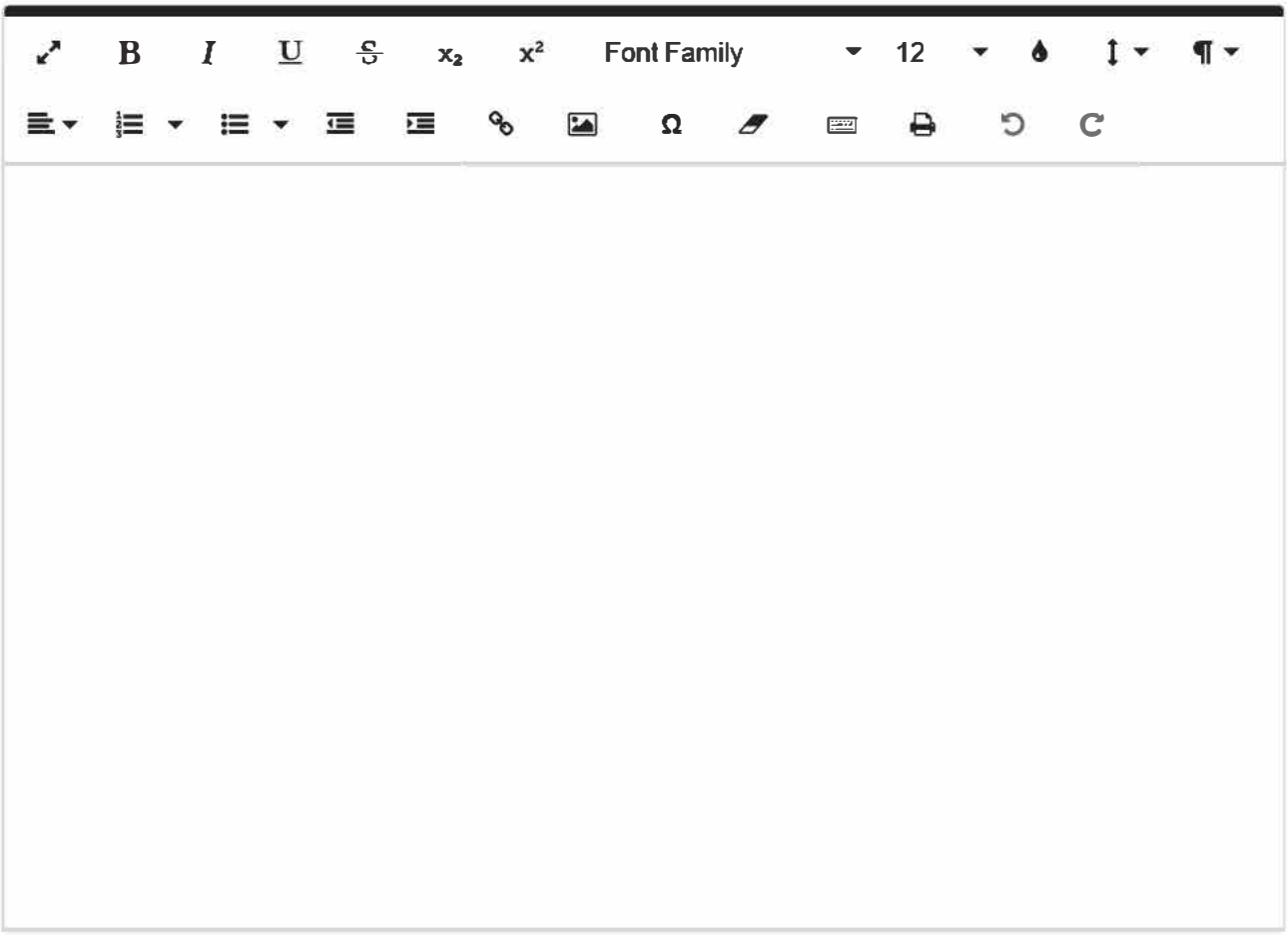
View	Species	Euthanasia	Route	Dose	Monitoring

Details	Method
No Euthanasia methods have been added to this Study	

3b. Will anesthetics, tranquilizers, or analgesics be administered for exsanguination?

- ○ No anesthetics, tranquilizers, or analgesics will be administered for the exsanguination(s). Explain why it is appropriate or necessary NOT to administer pain-relieving agents:
- ○ Yes. Describe the administration of pain-relieving agents including the name of each agent, and its dose (mg/kg), volume (ml), and route and frequency/duration of administration (Make sure this information is also included in Appendix 3):

3c. Describe how you will make sure that the animals are dead after collection of the blood:



4. Harvesting Feeder Cells.Describe the exact procedures (including administration of pain-relieving agents) that will be used on any donor animals from which feeder cells will be collected for this protocol, and estimate the number of animals needed for this purpose. Make sure that these animals are included in Item I of the ACORP, and that the harvesting of feeder cells is included in Item R of the ACORP.

5. Expansion of Hybridoma Cell Line(s) *in vivo*. Will any animals be used to expand hybridoma cell lines so that antibody can be harvested from ascites fluid?

- ○ No animals will be used on this protocol for in vivo expansion of hybridoma cell lines.
- ○ Yes, this protocol requires use of some animals for in vivo expansion of hybridoma cell lines. Make sure that the animals used for this are included in Item I of the ACORP, the priming agent and the hybridoma cells are documented in Appendix 3, and the collection of ascites fluid is included in Item R of the ACORP.

5a. Explain why alternate research methods that do not require the use of additional animals (e.g., *in vitro* cell culture systems for harvesting monoclonal antibodies) are not adequate to meet the research objectives of this project.

5b: Complete the following table to summarize the procedures to be performed in expanding the hybridoma cell lines and collecting ascites fluid:

Click "Add a new row" to respond to this item

	Hybridoma cell line designation	Number of animals used for ascites production	Priming agent and volume	Number and timing of priming injections	Volume of injected hybridoma cells	Number of abdominal taps before euthanasia
No records have been added						

5c: Describe the exact procedures (including the administration of pain-relieving agents) that will be used for the abdominal taps to be performed on this protocol. Details of the pain-relieving agents (doses, etc) will be described in the Pain Relieving Agents section of the ACORP.

5d: List the criteria for euthanasia of animals prior to the last planned abdominal tap. Use Appendix 9 to document any "departures" from the standards in the *Guide* represented by these procedures. Consult the IACUC or the Attending Veterinarian for help in determining whether any "departures" are involved. Click on the orange question mark ? to view the *Guide* standards for establishing humane endpoints.

ACORP (Appendix 3)
BIOSAFETY

Summary of All Materials Administered to Animals on this Protocol. Complete the table below for all materials to be administered to any animal on this protocol, indicating the nature of the material by marking EVERY box that applies.
For infectious agents and biological agents (but not chemicals), please include the BSL level.
Here is a link to some commonly studied organisms and their BSL levels: https://ehs.stanford.edu/reference/biosafety-levels-biological-agents
Biological agents include cells, bacteria, viruses, fungi, other microorganisms and their associated toxins.
See https://www.osha.gov/SLTC/biologicalagents/ for additional information.

Material	Source	Check is any of these	Infectious Agents (Virus, bacterial, fungus)
No records have been added			

Summary of How Materials will be Administered.Complete the table below for each of the materials shown in the table in Item 1 above:

Entry 1

Material (e.g. agent, device, construct, compound; label with * any non-pharmaceutical grade drugs)

Dose (mg/kg, CFU, mCi) and Volume (ml)

Diluent or vehicle (label with * any non-pharmaceutical grade diluents or vehicles). If the drug will not be diluted, put N/A.

Route of admin

Frequency or Duration of admin

Reason for admin and Expected Effects

Location of further details in protocol (Main Body, Append. 5, etc)

Admin under Anesthesia/Sedation? (Y/N) ○Yes ○No

*Each material, diluent, or vehicle that is listed as FDA approved or is labeled "USP" is pharmaceutical grade. Check on-line for formulations that are FDA approved for administration to humans (**http://www.fda.gov/Drugs/InformationOnDrugs/ucm129662.htm**) or animals (**http://www.fda.gov/AnimalVeterinary/Products/ApprovedAnimalDrugProducts/UCM042847**). Designate with a * each material and each diluent or vehicle to be used that is not pharmaceutical grade. For each of these, explain here why the use of a non-pharmaceutical grade formulation is necessary, and describe how it will be ensured that the material is suitable for use. (See ACORP App. 3 Instructions, for specifics about the level of detail required.)

TABLE 2A. Why the use of a non-clinical/non-pharmaceutical grade formulation necessary? Please put an X in the appropriate column, and add rows as needed.

***Note: Injectables that are too concentrated can usually be diluted with saline.**

List all items from table 2 that are not USP grade, FDA approved, a fixative, or a special diet	No FDA approved version exists	The FDA approved injectable forms are too dilute or have the wrong dilutents for this study*	The FDA approved versions are only in pills or other forms that aren't suitable for this study	Other (please explain)
No records have been added				

TABLE 2B: How it will be ensured that the material is suitable for use? Please put YES, N/A, or an explanation in each row, and add entries as needed.

Entry 1

List all items from table 2 that are not USP grade, FDA approved, a fixative, or a special diet

Purity/grade/pyro-genicity: The certificate of analysis from the manufacturer will be examined to ensure the material is suitable.

Sterility: If the drug does not come as a sterile solution, it will be sterile filtered before use.

Osmolality: Sterile USP grade isotonic diluents will be used, such as USP grade normal saline.

Stability: The supplier's guidelines on storage and stability will be followed.

Formulation and pharmacokinetics: The literature has been consulted to determine the appropriate formulation and that the pharmacokinetics are suitable

pH: The pH of the solution will be tested (with pH paper or a meter) before injection

Anesthesia, Sedation, or Tranquilization. Complete 3.a. and 3.b. below:

3.a) For each material with "Y" entered in the last column of the table in Item 2 above, describe the anesthesia, sedation, or tranquilization to be used, identifying the anesthetic, sedative, or chemical tranquilizer, and detailing the dose, volume, and route of administration in Table 2 [kg1] (Make sure that these agents are also included in Item 1 of this appendix, as materials to be administered):

3.b) For each material with "N" entered in the last column of the table in Item 2 above, explain why no anesthesia, sedation, or tranquilization is necessary, or can be provided, and describe any alternate methods of restraint that will be used

Toxic Agents. Complete the table below for each of the materials listed as a "toxic agent" in the table in Item 1 above, checking all of the properties that apply.

Select Agents are pathogens that could be used in germ warfare, and also certain toxins derived from living organisms such as ricin, tetrodotoxin, and botulinum neurotoxins. Here is a link to the Select Agents list:

https://www.selectagents.gov/SelectAgentsandToxinsList.html

Name of Toxic Agent	Mutagen, Carcinogen or Teratogen	Select Agent information	Other - specify toxic properties
No records have been added			

Are any of the above items Select Agents that require registration?

○Yes ○No

Name of Select Agent	Registered with CDC or USDA	Registration Number	Registration Date	Expiration Date of Registration	Name of official who granted approval on behalf of VACO	Date of Approval
No records have been added						

Infectious Agents. Complete the table below for each of the materials listed as an "infectious agent" in the table in Item 1 above. Select Agents are pathogens that could be used in germ warfare, and also certain toxins derived from living organisms such as ricin, tetrodotoxin, and botulinum neurotoxins. Here is a link to the Select Agents list:
https://www.selectagents.gov/SelectAgentsandToxinsList.html

Name of Infectious Agent	BSL Number*	ABSL Number*	Drug Sensitivity Panel Available?	Describe panel:	Select Agent information
No records have been added					

***Complete the following for each agent for which the BSL Number is less than the ABSL Number (copy the lines below for each agent):**

Name of agent	Justification for applying ABSL measures that are less protective than those recommended
No records have been added	

****For each Select Agent that requires registration/approval (copy the lines below for each agent):**

Name of agent	Registered with CDC or USDA	Registration Number	Registration Date	Expiration Date of Registration	Name of official who granted approval on behalf of VACO	Date of approval
No records have been added						

Biological Agents. Complete the table below for each of the materials listed as a "biological agent" in the table in Item 1 above.

Name of Biological Agent	Screening for Infectious Agents
No records have been added	

Radioactive Agents. Complete the table below for each of the agents listed as a "radioactive agent" in the table in Item 1 above.

Name of Radioactive Agent (specify the isotope)	Authorized Individual	Approving Committee or Official
No records have been added		

Agents Containing Recombinant Nucleic Acid. For each of the materials checked in the table in Item 1, above, as "contains recombinant nucleic acid", indicate which of the conditions applies.
Here is a link to the *NIH Guidelines for Research Involving Recombinant DNA Molecules*: https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.html

Name of Agent that Contains Recombinant Nucleic Acid	Subject to the NIH Guidelines for Research Involving Recombinant DNA Molecules	Excempt
No records have been added		

Potential for Pain or Distress. Complete the table below for each of the agents listed in Item 1, above, that is expected to have potentially painful or distressing effects on the animals.

Name of agent	Nature of Potential Pain/Distress	Measures to Alleviate Pain/Distress
No records have been added		

Protection of Animal Facility Staff from Hazardous Materials. Complete Items 10.a and 10.b, below, for each of the agents listed in the table in Item 1, above, as "toxic", "infectious", "biological", "radioactive", or "contains recombinant nucleic acid" (detailed in Items 4 – 8). This item specifically addresses members of the animal facility staff; protection of the research staff from each of these agents must be addressed in Item G of the main body of the ACORP.

Name of Hazardous Agent	Approving Committee or Official	Institution (VA or affiliate)
No records have been added		

Detail how the individuals listed in the table above (Item 10.a.) have been (or will be) informed of the possible risks of exposure, and have been (or will be) trained to avoid exposure to these agents.

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ACORP (Appendix 4)
ANTEMORTEM SPECIMENT COLLECTION

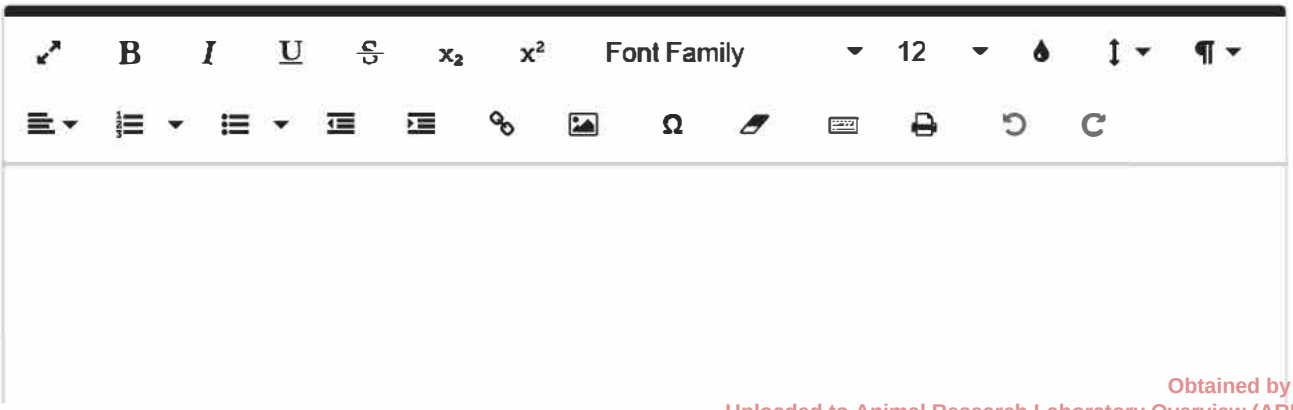
1. SUMMARY Complete the table below for each specimen to be collected from a live animal on this protocol (see ACORP App. 4 Instructions, for details).

	Specimen Collected	Site and Method of Collection	Anesthesia	Amount Collected Each Time	Volume replacement	Total Number of Collections per Animal	Time Intervals Between Successive Collections
No records have been added							

Use of Anesthetics, Tranquilizers, or Analgesics.
2a. For each specimen described in Item 1, above, as being collected WITHOUT anesthesia, complete Items 2.a(1) and 2.a(2), below:

1. Explain why no measures will be taken to prevent pain (e.g., because of scientific requirements described here, or because the collection method involves no more than minor or momentary pain).

2 Completely describe any method of physical restraint that may be used.



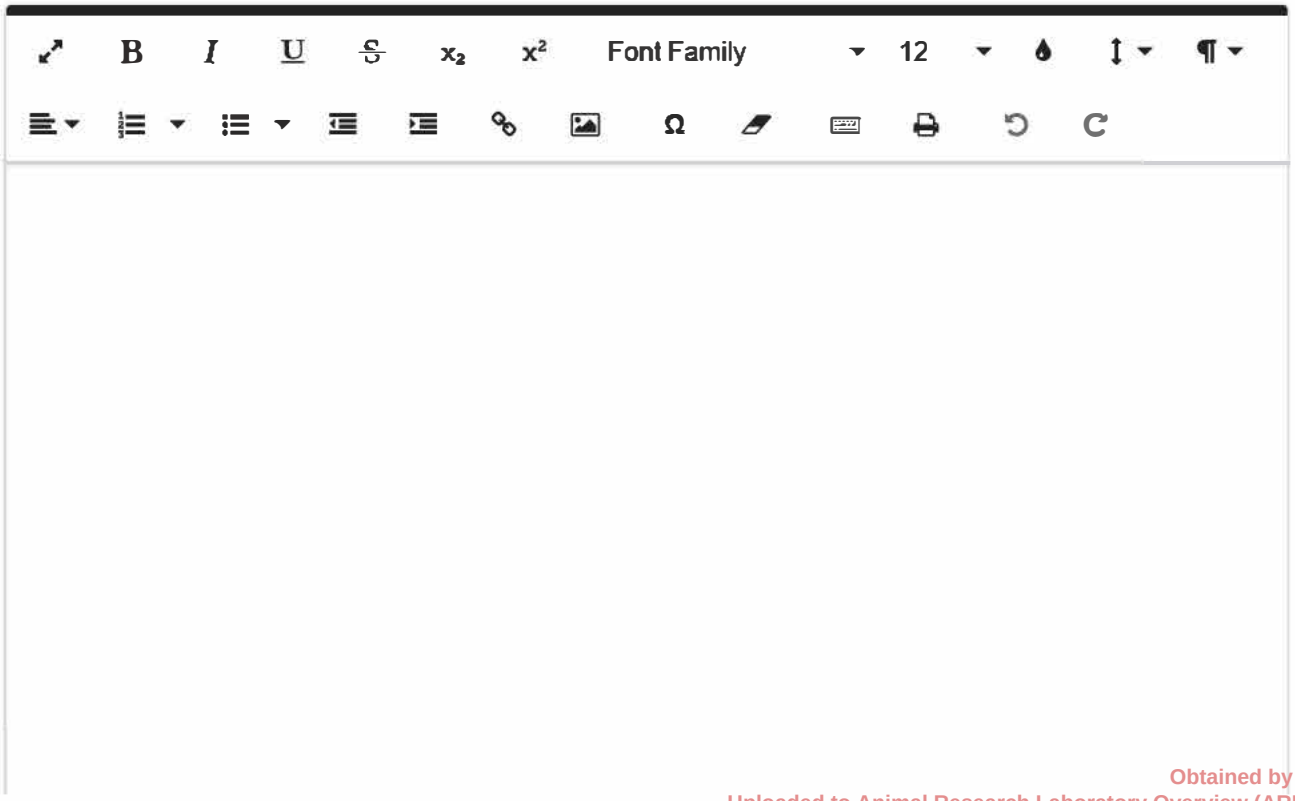
2b. For each specimen described in Item 1, above, as being collected WITH anesthesia, complete the following table:

Anesthetic, tranquilizer, or analgesic agent	Dose (mg/kg) and volume (ml)	Route of administration	Frequency of administration
No records have been added			

3. Volume Replacement for Fluid Collections.
a. For each fluid specimen described in Item 1, above, for which NO volume replacement will be provided, explain why not.

b. For each fluid specimen described in Item 1, above, for which volume replacement WILL be provided, describe the replacement fluids that will be administered (including their composition, volume, and route of administration).

4. Monitoring the animals. Detail how the animals will be monitored after collection of specimens to ensure that they recover appropriately (see ACORP App. 4 Instructions, for details).



ACORP (Appendix 5)
SURGERY

1. Surgery Classification. Complete the table below for each surgery included in this protocol, and indicate how it is classified (terminal, minor survival, major survival, one of multiple survival).
See ACORP App. 5 Instructions, for details.

If you need to add another Type of Surgery that is not in the list below, search for it and then select Add new procedure.

View Description	Species	Is USDA Species	Procedure Type	Procedure Name

No Procedures have been added to this Study

Surgery Description	Terminal	Minor	Major	One of Multiple
No records have been added				

a. Provide a complete scientific justification for performing the multiple survival surgeries on an individual animal:

b. Give the interval(s) between successive surgeries, and the rationale for choosing the interval(s):

2. Description of Surgeries. Describe each surgery listed in Item 1, providing enough detail to make it clear what the effects on the animal will be. (Pre-operative preparation, anesthesia, and post-operative recovery will be covered in items 5, 6, and 7, below.)

Surgery	Description
No records have been added	

3. Complete the table below for each individual who will be involved in any of the surgeries on this protocol.

	Name	Surgery	Surgeon	Assistant	Manage Anesthesia	Other (describe)
No records have been added						

4. Location of surgery. Complete the table below for each location where surgery on this protocol will be performed.

	Building	Room	Surgery	Dedicated Surgical Facility	Other Dedicated Surgical Space	Other Space not Dedicated to Surgery
No records have been added						

*For each space that is not in a dedicated surgical facility, provide the justification for using this space for surgery on this protocol

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5. Pre-operative protocol.
a. Pre-operative procedures. Complete the table below for each pre-operative procedure that will be performed to prepare the animal(s) for surgery.

Surgery	Fast (Specify Duration)	Withold Water (Specify Duration)	Place Intravenous Catheter(s) (Specify Site(s))	Other - Describe
No records have been added				

b. **Pre-operative medications.** Complete the table below. Include agent(s) for induction of anesthesia, as well as any other pre-treatments that will be administered prior to preparation of the surgical site on the animal.

View Details	Species	Anesthetic	Route	Dose	Frequency	Monitoring

No Anesthetic have been added to this Study

c. **Pre-operative preparation of the surgical site.** For each surgery, identify each surgical site on the animals, and describe how it will be prepared prior to surgery.

Entry 1

Surgery --none--

Site and how it will be prepared prior to surgery

6. Intra-operative management.

a. Intra-operative medications. Complete the table below for each agent that will be administered to the animal during surgery

	Species	Surgery	Agent	Dose (mg/kg) & volume (ml)	Route of administration	Frequency of dosing
No records have been added						

b. Intra-operative physical support. For each surgery, describe any physical support that will be provided for the animals during surgery (e.g., warming, cushioning, etc.).

c. Intra-operative monitoring. Describe the methods that will be used to monitor and respond to changes in the state of anesthesia and the general well-being of the animal during surgery.

d. Are any of these agents paralytics such as pancuronium, tubocurarine, succinylcholine, or gallamine? *NOTE: ketamine and isoflurane are anesthetics, not paralytics.*

○ Yes ○ No

d.1) What is the paralytic agent?

d.2) Why is it needed during the surgery?

d.3) Describe how the animals will be monitored to ensure that the depth of anesthesia is sufficient to prevent pain:

7. Survival surgery considerations. For each survival surgical procedure indicated in Item 1 and described in Item 2, complete Items 7.a. – 7.g.
1. Complete the table below for each survival surgery listed in Item 1, above.

Surgery	Survival Period	Sterile Instruments	Surgical Cap	Sterile Gloves	Surgical Scrub	Sterile Drapes	Sterile Gown	Face Mask	Other
No records have been added									

b. For each surgery, describe the immediate post-operative support to be provided to the animals.

Entry 1

Surgery --none--

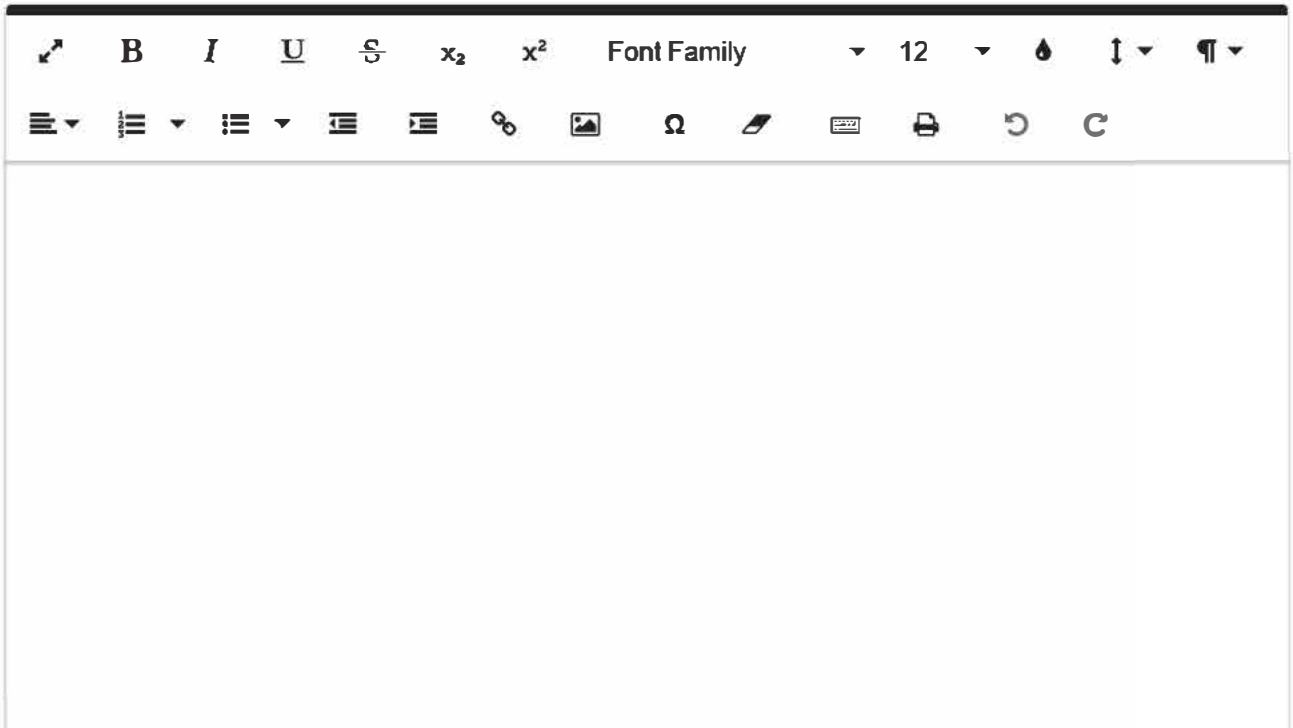
Describe post-operative Support to be provided to the animals

View Details	Species	Analgesia	Route	Dose	Frequency	Monitoring

No Analgesia have been added to this Study

*For each surgery for which NO post-operative analgesic will be provided, enter "none" in the "Agent" column, and explain here why this is justified:

d. Other post-operative medications. Please add to and describe all other medications that will be administered as part of post-operative care.



e. Post-operative monitoring. After-hours contact information for the personnel listed must be provided to the veterinary staff for use in case of an emergency.

1. Immediate post-operative monitoring

Surgery	Frequency of Monitoring	Duration at this Frequency	Names(s) of Responsible Individuals(s)
No records have been added			

2. Post-operative monitoring after the immediate post-operative period

Surgery	Frequency of Monitoring	Duration at this Frequency	Names(s) of Responsible Individuals(s)
No records have been added			

Entry 1

Surgery --none--

Describe Surgery

List the criteria for euthanasia related specifically to post-operative complications:

View Details	Species	Euthanasia Method	Route	Dose	Monitoring

No Euthanasia methods have been added to this Study

3. In case an emergency medical situation arises and none of the research personnel on the ACORP can be reached, identify any drugs or classes of drugs that should be avoided because of the scientific requirements of the project.(If the condition of the animal requires one of these drugs, the animal will be euthanatized instead.)

g. Maintenance of post-surgical medical records.Complete the table below for each surgery, specifying where the records will be held, and identifying at least one individual who will be assigned to maintain accurate, daily, written post-surgical medical records.Indicate whether the named individuals are research personnel involved in this project, or members of the veterinary staff.

Surgery	Location of Records	Name(s) of Individual(s) Responsible for Maintaining Written Records	Research Personnel	Veterinary Staff
No records have been added				

SPECIAL HUSBANDRY AND PROCEDURES

[If you need to add additional procedures to the ACORP, go back to Section C question C2c to add them to the list, so they will show up in the procedure choices for this appendix]

1. Description of Procedures. Complete the table below for each procedure that is not detailed in another Appendix of the ACORP or in part C2c of the ACORP main body. For each special procedure, check all features that apply. If there is an SOP for the procedure, please refer to it and attach that SOP when you upload the ACORP for review.

Procedure	Description	Husbandry	Restraint	Noxious Stimuli	Exercise	Behavioral Conditioning	Irradiation	Imaging	Other
No records have been added									

Describe any "Other" features that are involved.

Fill out the panel below for each procedure listed above, including the duration of the procedure, how frequently it will be repeated in any one animal, and any effects it is expected to have on the animal:

Entry 1

Procedure --none--

Complete Description, how frequently repeated, effects on animal

Explain why this special procedure is necessary

2. KSP Procedure Selection List

(Select the Procedure and then who will be working on it)

Entry 1

IACUC Procedure --none--

KSP Selection --none--
--none--
--none--
--none--
--none--

3. Potential Pain or Distress. Complete the table below for each special procedure identified in Item 1, above, indicating for each procedure, whether potential pain and/or distress is expected, and, if so, describing the potential pain and/or distress and indicating whether any measures are to be taken to prevent or alleviate it.

a. For each procedure for which potential pain and/or distress is expected, but WILL be prevented or alleviated by administration of the analgesic(s) or stress-relieving agents, complete the table below:

View Details	Species	Tranquilizing Drug	Route	Dose	Monitoring

No Tranquilizing Drugs have been added to this Study

Describe any non-pharmacological measures to be taken to address the potential pain and/or distress:

b. For each procedure for which potential pain and/or distress is expected and will NOT be prevented or alleviated, provide the scientific justification for this:

4. Describe how the condition of the animals will be monitored during and after each of the special procedures, and list the criteria that will be used to determine when individual animals will be removed from groups undergoing these procedures, because of pain or distress (see ACORP App. 6 Instructions, for details):

Procedure	Monitoring Methods	Endpoint Criteria
No records have been added		

ACORP (Appendix 7)
Use of Patient Care Equipment and/or Areas for Animal Studies

1. Full Name(s) of Principal Investigator(s)

2. Equipment to be Used.

Identify the equipment	Procedure to be performed with this equipment	Prevent Contamination
No records have been added		

3. Human Patient Care Procedural Areas to be Used.

Entry 1

Location(s)

Animal species to be studied or treated –none–

Number of individual animals to be studied or treated

Date(s)

Time(s) of day

Procedure(s) to be performed on teh animals in these areas –none–

Protection and cleaning of patient care room surfaces

Benefits to VA patients. Briefly describe how this use of the human patient care areas for research on animal subjects potentially benefits VA patients.

Necessity for use of human patient care areas. Explain why this work on animal subjects cannot be performed within the animal facility or a research laboratory area.

Animal transport. Describe how the animals will be transported back and forth between the animal housing area and the human patient care areas.

Preventing human patients and patient care personnel from being affected by the presence of the animals. Provide detailed descriptions of the measures to be taken to address noises and odors, allergens, and zoonotic pathogens associated with the animals.

ACORP (Appendix 8)
USE OF EXPLOSIVE AGENT(S) WITHIN THE VMU OR IN ANIMALS

1. Full name(s) of Principal Investigator(s)

2a. Identify the explosive agents in the table below:

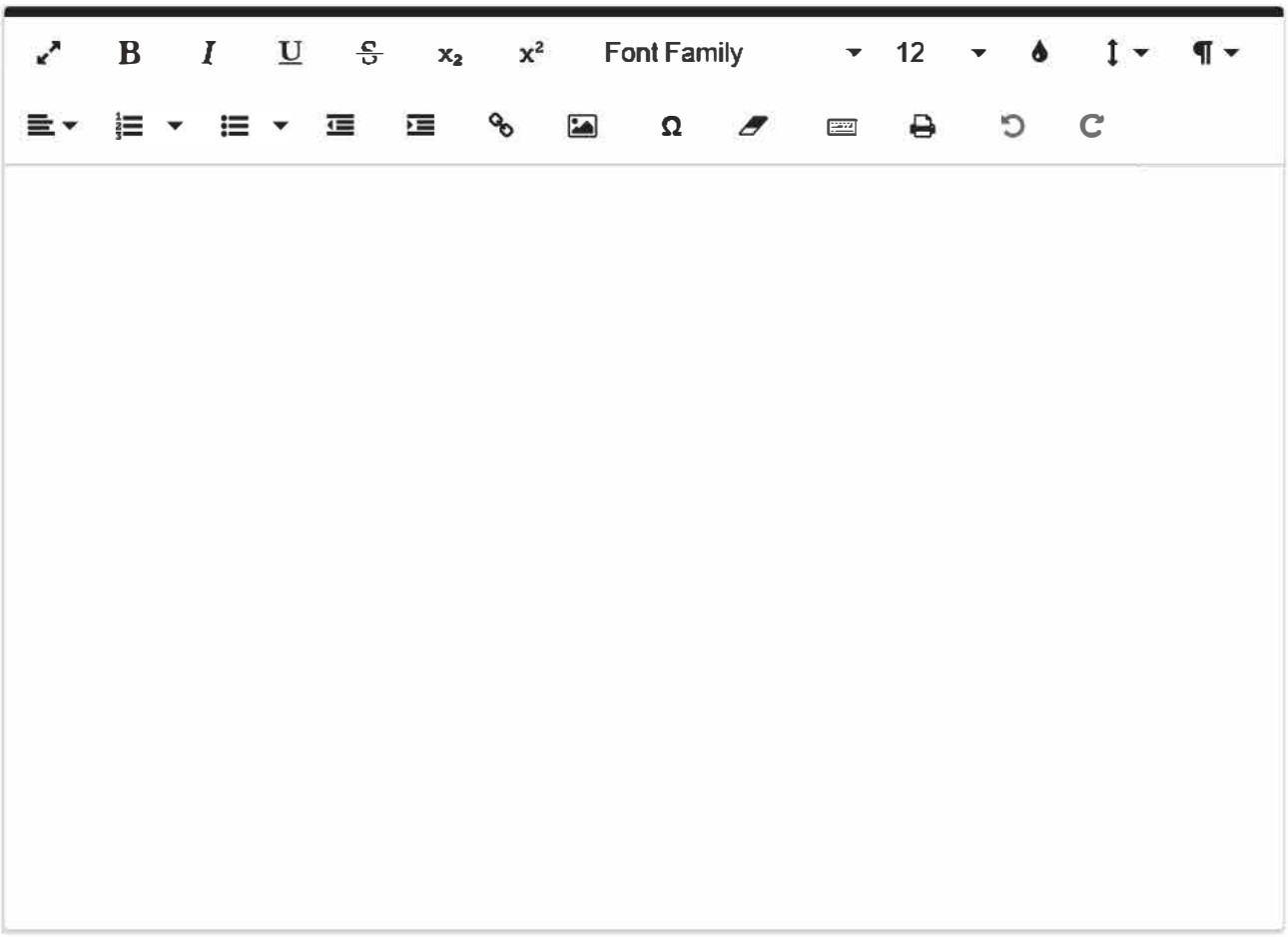
Explosive Agent	Name(s) Used to Refer to the Agent in This ACORP	CAS Number	Location of the MSDS on File
No records have been added			

b. Locations where the explosive agents will be used. Complete the table below

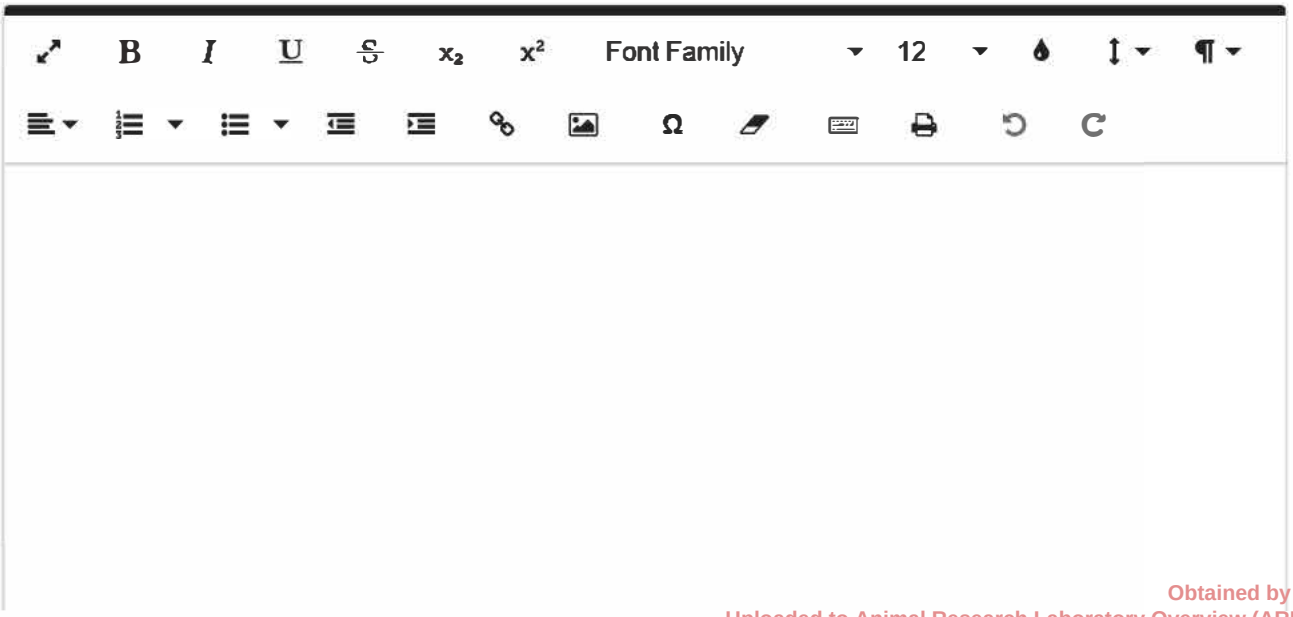
Agent Name	Building	Room Number	Within the VMU	Outside of VMU

No records have been added

c. Procedure(s) to be performed.Briefly describe the use of each of the explosive agents on this protocol and explain why it is necessary to use these agents (why non-explosive replacements cannot be used instead).



d. Precautions to be taken to prevent explosions.Describe the measures to be taken to store, use, and dispose of safely each explosive agent and any materials contaminated with it, and to prevent the generation of sparks in its presence.See ACORP App. 8 Instructions, for a list of commonly used precautions.



e. Period of use.

Beginning no earlier than (date)	Ending no later than (date)

f. Animals that will be administered explosive agents:

Species	Approximate weights of individual animals	Approximate number of animals
No records have been added		

3. Complete the table below for each individual who will handle any of the explosive agents as part of this protocol.

Name of Individual	Explosive Agent(s) to be Handled	Training and Experience Pertinent to Handling Explosive Agents
No records have been added		

ACORP (Appendix 9)
Departures from "Must" and "Should" Standards in the *Guide (2011)*

See ACORP App. 9 Instructions, for more detailed explanations of the information requested.

For each IACUC-approved "departure" of this protocol from a "Must" or "Should" standard in the *Guide*, provide the following information. (Consult the IACUC or the Attending Veterinarian for help in determining whether any "departures" are involved.):

Entry 1

Briefly summarize the "Must" or "Should" standard, and provide the number(s) of the page(s) on which it appears in the Guide

Describe the specific alternate standard(s) that will be met on this protocol, and how they will be monitored.

Provide the scientific, veterinary medical, or animal welfare

considerations that justify this departure

Was it previously indicated that anesthetics or analgesics would be withheld for potentially painful procedures?

○ Yes ○ No

Did your previous justifications for withholding analgesics or anesthetics for painful procedures meet the *Guide* standard?

Guide Section 1, page 5: Studies that may result in severe or chronic pain or significant alterations in the animals' ability to maintain normal physiology, or adequately respond to stressors, should include descriptions of appropriate humane endpoints or provide science-based justification for not using a particular, commonly accepted humane endpoint."

○ Yes
○ No
○ N/A

If "no", describe the specific alternate standard(s) that will be met on this protocol, and how they will be monitored

If "no", provide the scientific, veterinary medical, or animal welfare considerations that justify this departure

For any IACUC-approved "departure" of this protocol from a "Must" or "Should" standard in the *Guide* that was not previously identified, provide the following information for each departure (consult the IACUC or the Attending Veterinarian for help in determining whether any additional "departures" are involved):

Briefly summarize the "Must" or "Should" standard, and provide the number(s) of the page(s) on which it appears in the *Guide*

Describe the specific alternate standard(s) that will be met on this protocol, and how they will be monitored;

And/or, provide the scientific, veterinary medical, or animal welfare considerations that justify this departure.

ACORP (Appendix 10)
Overnight Housing

Basic Information

Overnight housing location:

Campus :

○ [redacted]
○ [redacted]

Building	Room(s)
No records have been added	

Will the animals have had surgery?

○ Yes No

If so, what kind of surgery?

Justification

Provide a scientific justification for housing the animals in the lab (special equipment, habituation issues, etc.). Please note that approval to house animals outside of the VMU will not be granted without a compelling and well justified reason for doing so.

The PI is required to consult with the VMO and determine whether the study could be accommodated inside the VMU.

Enter the date the VMO informed the PI that the study could NOT be accommodated inside the VMU

Responsibilities

The PI listed above is responsible for reviewing and updating this document annually or as needed.

All personnel working with the animals are responsible for reading and complying with the provisions herein.

The following people will be responsible for carrying out the procedures in the "PROCEDURES" section below:

- ☐ The VMO or VMU designee is responsible for checking the animals every day, including weekends and holidays. (This must be pre-arranged with the VMU using a "Special Service" request.)
- ☐ The PI and his/her staff are responsible for checking the animals every day, including weekends and holidays. The VMO or VMU designee will check on the animals at least once a week to verify that the PI and his/her staff are providing adequate daily care.

Describe the reason for your choice here:

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Room Reqirements

A **thermometer/hygrometer** that stores maximums and minimums is located in the room.

The **VMO has free access** to the housing area, and:

- ☐ the room can be opened with the master key, or
- ☐ a key has been provided to the VMO.

Food **is stored** in a container with a lid that seals and the container is labeled with the milling date of the food.

All bottles, cages, etc. must be covered when not in use (such as with a plastic bag).
• Clean items from the VMU must be covered to prevent dust and debris from getting on them.
• Dirty items (such as used cages) should be covered to limit allergens in the room.

A timer-regulated **light/dark cycle** is maintained.

- ☐ A normal 12/12 hour light/dark cycle is used.
- ☐ A special x/x hour light/dark cycle is used.

If special, what x/x hour light/dark cycle used:

Windows (if any) are completely covered to exclude natural light that could interfere with the light/dark cycle.

Clean bedding is stored in a container with a secure lid.

Dirty bedding is not kept in a trash can or other receptacle – it is left in the dirty cages and the cages are immediately covered to contain the allergens in the litter. The cages are subsequently returned to the VMU.

Each cage is labeled an accurate cage card at all times. (Additional cage cards can be obtained from [redacted] in the VMU office at [redacted]). Animals cannot be transferred to another protocol without expressed written approval from the VMO via a transfer form.

Study area logs, standard for GLA, are maintained in the room.

Air changes are routinely measured by Engineering and meet the requirement of 10-15 room-air changes per hour.

Animals are provided with suitable species-specific **environmental enrichment** unless the IACUC has approved exemption from this requirement because of scientific justification.

Hazardous agents are not stored in the room while animals are housed here.

Incubator Requirements

Will the animals be kept in an incubator or chamber of any sort?

Yes No

If yes, the following incubator requirements are observed:

- A **thermometer/hygrometer** that stores maximums and minimums is located inside each incubator.
- A **study area log** is posted on the front of each incubator.
- A **census sheet** is posted on the front of each incubator.
- An **Animal Incubator or Recording Chamber Inspection Log** is posted on the front of each incubator.

Procedures

Feeding (check one)

Standard diet: Food levels are checked daily and replenished as needed. Food is provided for ad libitum consumption. Food will be acquired from the VMU and will be properly stored.

Special diet: Food levels are checked daily and replenished as needed. The animals are on a special dietary regimen (special food, restricted calories, etc.) which is provided by the PI and his/her staff.

Some subjects will get a standard diet and some subjects will get a special diet.

Describe the special dietary regimen and its storage location here:

Water (check one):

- ◯ Standard water regimen: Water levels are checked daily, bottles are refilled as needed, and fresh bottles from the VMU are replaced each week. Water is provided for ad libitum consumption. Used bottles are returned to the VMU for cleaning each week.
- ◯ Special water regimen: The animals are on a special water regimen (medicated water, liquid diet, etc.) which is provided by the PI and his/her staff. Water levels are checked daily and a special water regimen is followed as described below.
- ◯ Some subjects will get a standard water regimen and some subjects will get a special water regimen.

Describe the special water regimen here:

Cages (check one):

- ◯ Standard cages: Cages are exchanged on a weekly basis. Fresh cages and bedding are acquired from the VMU, and used cages are returned to the VMU*.
- ◯ Special cages: Cages are checked daily to make sure sanitary housing conditions are maintained. The PI and his/her staff uses custom cages and will clean them each week with Betadine scrub.
- ◯ Some subjects will get standard cages and some subjects will get special cages.

Describe the custom cages here:

***Allergy Note**: Mask, gloves, and lab coat should be worn at all times when working with open cages. Research has shown that handling rat litter can release a large amount of allergen into the air, particularly smaller particles that can remain airborne for 15 to 35 minutes1. (The major sources of rat and mouse allergen appear to be urine and saliva). When moving the animals to new cages, they should be quickly transferred from the dirty cage to the clean one and the cages stacked up and immediately covered for transfer back to the VMU. If possible, minimize your allergen exposure by doing this in a fume hood on top of a clean hospital underpad that is folded up and discarded afterward. DO NOT empty dirty bedding into a trash can or other receptacle as this will release allergens into the air– just leave it in the cage.

1) V. McLeod, Lab Manager 8(10) pp 48-53, November 2013

Health Checks:
Animals are checked daily (including weekends and holidays) for signs of pain, distress, and illness. When an emergency health case is found, the VMO or VMU designee must be informed immediately (see contact information below). When non-emergency health problems are identified, a Health Check card is placed on the animal cage. A Health Check Request form is then completed and placed in a designated area of the VMU.

	West LA #	Sepulveda #	Cell phone	
[redacted], Veterinary Medical Officer	[redacted]	[redacted]	[redacted]	[redacted]

[redacted], Clinical Veterinarian	[redacted]	[redacted]	[redacted]	[redacted]

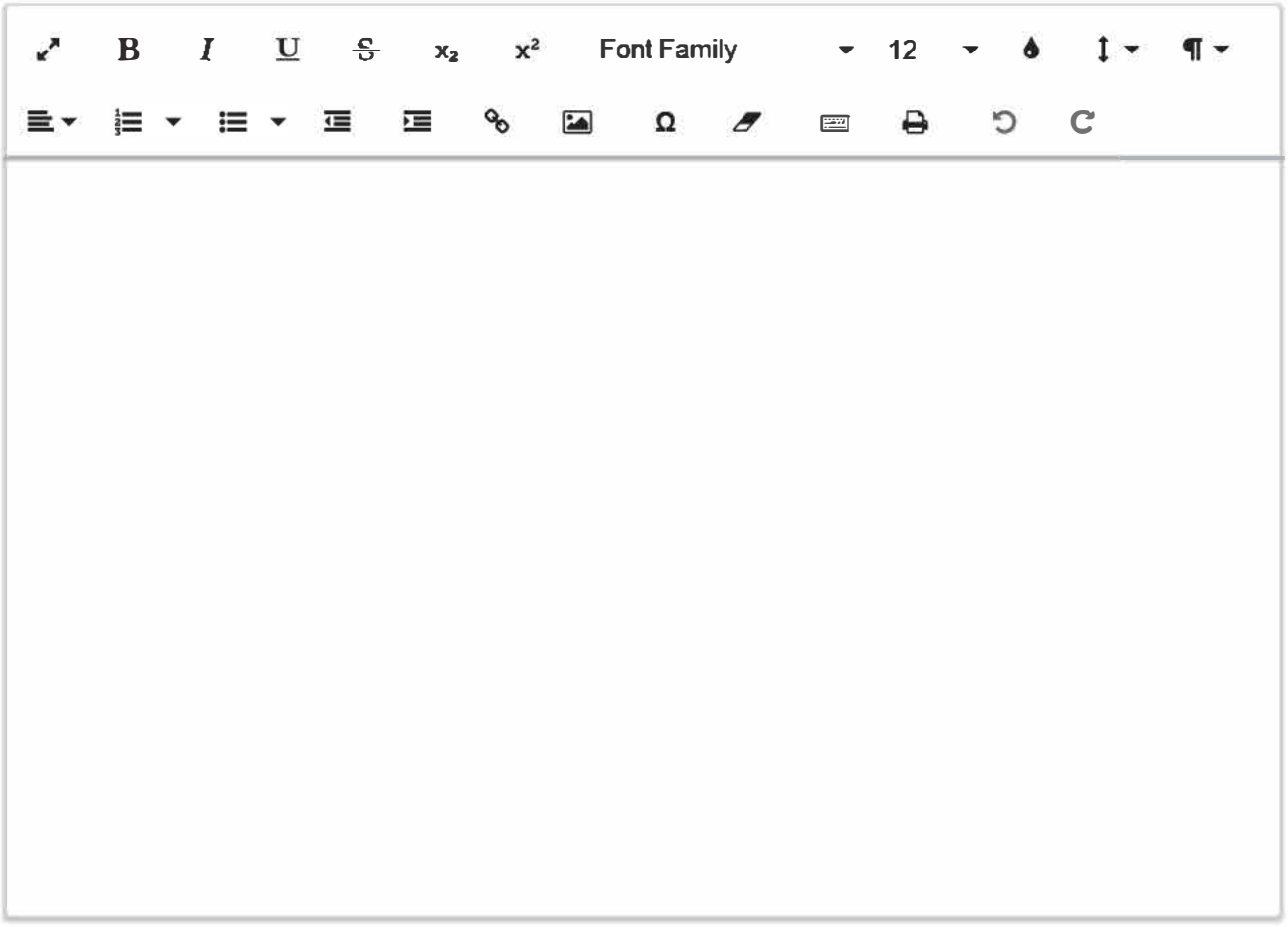
Study Area Logs:
Animals are checked daily (including weekends and holidays) and a study area log is completed each day. The logs must be located in plain sight within the housing room.

Temperature:
The thermometer/hygrometer is re-zeroed daily (including weekends and holidays). If the temperature is recorded above or below the excepted range, Engineering must be contacted immediately (see phone numbers below) to have the temperature corrected, and this will be indicated on the study area log. [The appropriate temperature range for rodents is 68-79° F (20-26° C) and the appropriate temperature range for cats is 64-84° F (18-29° C).]

Engineering phone numbers (to call if temperatures are out-of-range):
[redacted] Business hours call [redacted]; afterhours call [redacted]. [redacted] Business hours call [redacted]; afterhours call [redacted] or ext. [redacted] or page [redacted]

Transportation:
Animals are transferred from the VMU to the room listed above in either sanitizable transport cages or rodent housing cages. Cages may be transported in the following ways:
-On a cart covered with drapes.
-Hand-carried, provided they are covered with drapes.
-Transported in the VMU van.
-Transported in a private car, provided the Animal Transport SOP is observed.

Other provisions not covered above (if applicable):



ACORP (Appendix 11)
Breeding

Fill out the following table for each strain you plan to breed.

Instructions: The purpose of this appendix is to account for animals used as part of a breeding colony. Follow the instructions carefully.

Species and Strain designation	Mutation, transgene, or other genotypic manipulation	Source of breeders (commercial supplier, institution, etc.)	Microbial status (e.g. unknown, SPF, known infections)
No records have been added			

Describe the breeding scheme for each strain that will be bred. Indicate how many females per male will be housed, and the mating system planned (brother-sister mating, back-cross, etc). Trio breeding groups are best suited for the propagation of inbred, transgenic, or other strains of mice which generate small numbers of pups or are difficult to breed. Outbred crosses, hybrid crosses, intra-specific crosses or any other crosses that produce larger litters are best propagated by a monogamous (defined as one male and one female) breeding strategy. If you are using Trio Breeding, you must justify the need for Trio Breeding and explain how you will ensure adequacy of cage space.

Who will wean the mice and choose the next generation of breeders?

At what age will breeders be started and retired?

At what age the mice will be weaned?

Describe the characteristics of each particular strain that result from the genotype, including any detrimental impact on the immune system or other clinical problems or anomalies.

Font Family 12

Will sterile housing be needed?

Yes No

Will color coat changes in the offspring be expected (will coat color continue to segregate)?

Yes No

Will tail snips or other genetic testing be required to maintain the colony?

Yes No

If Yes, describe all tissue collection procedures, including the use of local or general anesthesia used prior to tissue collection.

Font Family 12

Complete the following table, using your best estimates of yearly needs. Average the figures over the next three years.

NOTE: Breeders and weanlings that will not experience any potentially painful tissue collections for genotyping such as tail snips and will not be used in any experiments should be placed in USDA pain/distress category B in item I on the main body of the ACORP. Breeders and weanlings that will experience potentially painful tissue collections should be placed in USDA pain/distress category D in item I. Mice in the last column should be placed in the USDA pain/distress category appropriate for them based upon experimental procedures and any potentially painful tissue collections for genotyping.

Strain	Number of breeders needed per year	Number of weanlings that will be euthanized because of improper genotype or gender per year	Number of breeding cages needed per year	Number of weanlings that will be used in experiments per year
No records have been added				

Describe how the number of breeding animals needed for the study was determined.

SAFETY (PSP) - GENERAL SAFETY SURVEY

Does the protocol involve "wet-labs" work (working with chemicals, cells tissues, or animals) in a VA research laboratory and/or is it a VA-funded animal protocol?
Note: Work done in clinical areas, clinical laboratories, or the clinical research center does not count here.

○ Yes ○ No

What is the BSL level?

○ N/A
○ BSL-1
○ BSL-2
○ BSL-2+
○ other (see below)

Does the protocol involve any animal work-including just housing animals in the VMU (veterinary medical unit)?

○ Yes ○ No

What is the animal BSL (ABSL) level?

○ N/A
○ ABSL-1
○ ABSL-2
○ ABSL-2+

Will the protocol involve a BSL-3 or BSL-4 biohazard? Here is a link to some commonly studied organisms and their biosafety levels:

- **https://ehs.stanford.edu/reference/biosafety-levels-biological-agents**

○ Yes ○ No

All BSL-3 and BSL-4 work has to be done outside of VA-GLA. You must pre-review this work with the ACOS, the SRS Chair, and the RBSO before filling out this form.

What are the biohazard(s) please specify:

Does the protocol use Select Agents? (These are pathogens that could be used in germ warfare, and also certain toxins derived from living organisms such as ricin, tetrodotoxin, and botulinum neurotoxins.) Here is a link to the Select Agents list:

- **https://www.selectagents.gov/SelectAgentsandToxinsList.html**

○ Yes ○ No

Specify the Select Agent(s):

There are "permissible toxin amounts" for some Select Agents. Will the lab need to have any Select Agent in amounts over the permissible levels? See https://www.selectagents.gov/PermissibleToxinAmounts.html for the permissible levels.

○ Yes ○ No

All work with quantities of Select Agents that are over the "permissible toxin amounts" has to be done outside of VA-GLA. You must pre-review this work with the ACOS, the SRS Chair, and the RBSO before filling out this form.

Are any of the items used in this protocol known to be chemical warfare-type agents? (Diisopropyl Fluorophosphates, Sarin, etc.)

○ Yes ○ No

Specify the Chemical Warfare Type Agent(s)

[Certain agents can only be used outside of VA-GLA and will require additional review]

Are certifications for all fume hoods and biosafety cabinets in the lab current?

○ Yes
○ No
○ N/A

List which laboratory techniques will be used (tissue culture, molecular biology, histology, etc.)?

☐ Tissue Culture
☐ Molecular biology (DNA and RNA extraction, PCR, sequencing, etc.)
☐ Histology
☐ Work with infectious organisms (bacteria, fungi, viruses)
☐ Work with animals
☐ Other (please list):

Choose all campuses where the work will take place.

- [ ] [redacted]
- [ ] [redacted]
- [ ] [redacted]
- [ ] [redacted]
- [ ] [redacted]
- [ ] Other

If other, please explain:

List all buildings and rooms at the VA-GLA that will be used for this protocol in the table below.

Campus	Building Number & Room Number (one room per entry)	Hazards associated with this protocol only (check all that apply)	Engineering Safety Controls
No records have been added			

SAFETY (PSP) - STUDY ELEMENTS

Microbiological Agents (defined as pathogens, bacteria, viruses, fungi).

○ Yes No

Biological agents (including plants and animals) that produce toxins such as botulinum, ricin, tetrodotoxin, etc.

○ Yes No

Animals?

○ Yes No

Animal and/or Human cells or tissue samples (e.g., cultures, tissues, blood, other bodily fluids, cell lines, etc.)

Yes No

Recombinant Nucleic Acids (e.g., rDNA, siRNA, miRNA, genetic materials, human gene transfer, etc.) including DREADDs or Optogenetic Viral Vectors?

Yes No

Chemicals (including any fixatives such as formalin, formaldehyde, alcohol, etc.)

Yes No

Controlled substances (e.g., Ketamine, Sodium pentobarbital, Buprenophine, etc.) See https://www.deadiversion.usdoj.gov/schedules/orangebook/c_cs_alpha.pdf for a searcheable PDF listing all controlled substances.

Yes No

Radioactive materials and radiation-producing equipment

Yes No

Research activities-related physical hazards in this protocol (such as UV light, excessive noise, lasers, confocal microscope lasers, needles, centrifuges, extreme temperatures, etc.)

Yes No

Does the protocol require BSL-2 or 2+, or ABSL-2 or 2+ items (including tissue samples or animals) to be moved or shipped into or out of the laboratory?

Yes No

Will samples will be shipped from the lab by air to outside locations?

Yes No

People packaging the samples for air shipment from the lab to outside locations must have ATA certification. Attach the certificate(s) as part of this submission.

- **The protocol team will need to follow the Medical Center "Transportation of Infectious Substances SOP." Click the help button to the right to see the SOP.**

Describe what precautions will be taken in packaging the transport:

SAFETY (PSP) - MICROBIOLOGICAL AGENTS

Which microbiological agent(s) are involved in this protocol?

(select all that apply)

- [ ] Bacteria
- [ ] Viruses
- [ ] Fungi
- [ ] Select Agents or Toxins
- [ ] Viral Vectors (including optogenetic and DREADDS)
- [ ] Other

If Other, please describe below:

List in the table below:

- **All microbiological agents, and their biosafety levels (BSL), that will be used in this protocol (defined as bacteria, fungi, viruses, viral vectors).**
- **Also list any biological agents (including plants and animals) that produce toxins such as botulinum, ricin, saxitoxin, etc.**
- **Also list each Select Agent and/or Toxin**

Microbiological Agent, Biological Agent, Select Agent and/or Toxin	BSL Level	Select Agent Yes/No?	Indicate the largest volume and/or concentration of this Select Agent and/or Toxin to be used on this protocol
No records have been added			

Have all personnel who will work with, or be potentially exposed to, these items been provided appropriate SOPs and trained in the special hazards posed by each of the biological hazards listed above, and is this training documented?

***NOTE*: Please attach the SOPs and documentation that the laboratory staff have been trained on them as part of this submission.**

○ Yes ○ No

Describe the proposed methods to be employed in monitoring the health and safety of personnel, and detecting signs of exposure for personnel working on this protocol who may be exposed to these agents.

Use of Cells and Tissue Samples

Special instructions:

- For human tumor cells, just put down generic terms such as "human lung tumor lines" or "primary human prostate cancer cells." There is no need to list the name of the individual cell lines.
- However, if the cells are known to be infected with a pathogen, include the cell line name and specify the pathogen.
- SOP is required for the safe and proper handling of BSL2 agents (including humans and non-human primates cell lines and tissues) please attach the SOP to the Initial Review Submission Packet
- Even if cells and tissues are simply being kept in storage, this section needs to be filled out.

Species	Materials	Source	Specify (i.e. Urine, heart, multiple myeloma cell line)
No records have been added			

Identify the precautions for potential biohazards of exposure to blood borne pathogens and/or to microbiological pathogens for lab personnel:

(*check all that apply*)
* *Are required precautions to protect personel working in the laboratory.*

- ☐ 1) *Standard Precautions will be adhered to in accordance with VA-GLA Infection Control Guidelines for Standard Precautions and Exposure Control Plan; and staff are trained by the PI on the proper usage of Personal Protective Equipment (PPE) and on protocol-specific safe work practices. Click the help link to see the VA-GLA Infection Control Guidelines.
- ☐ 2) *All laboratory staff are required to complete the annual biosafety refresher training on the CITI program site.
- ☐ 3) *In addition, staff are trained in laboratory safe work methods and practices by PI as it pertains to this protocol.
- ☐ Other (describe)

Please describe the other precautions:

Will Isoflurane be used on this protocol?

○Yes ○No

Please list all personnel who will be working with isoflurane on this protocol

Personnel exposed to isoflurane
No records have been added

SAFETY (PSP) - RECOMBINANT or SYNTHETIC NUCLEIC ACID MOLECULES and VECTORS

Are recombinant DNA/RNA procedures used in this protocol limited to the following (check all that apply):

- ☐ PCR amplification of DNA segments
- ☐ Genotyping
- ☐ DREADDs or optogenetic viral vectors.
- ☐ Injection of other replication incompetent viral vectors acquired from a commercial source or another research institution
- ☐ Treating cell cultures with other replication incompetent viral vectors acquired from a commercial source or another research institution
- ☐ Other techniques with NO subsequent cloning of amplified DNA (specific below:)

Specify what the *Other* techniques are:

Will there be any cloning of amplified DNA?

○ Yes ○ No

If yes, the NIH Guidelines for this kind of work must be followed. See https://osp.od.nih.gov/biotechnology/nih-guidelines/

Please specify which procedures will be used:

Will DREADDS and/or optogenetic viral vectors be used?

○ Yes ○ No

Will other viral vectors, plasmids, or other recombinant viruses or bacteria be used?

○ Yes ○ No

Here is a link to organisms and their biosafety levels.
https://www-envirinfo.llnl.gov/content/enviroRecent/livermoreSite/BSL-3_EA_Appendix_A_Final_R1_Revised_25Jan08.pdf

Entry 1

Name of the gene to be cloned or expressed

BSL level

○ BSL-1
○ BSL-2
○ BSL-2+

DNA source (species)

Function of the insert or gene

Is it known to be an oncogene?
○ Yes ○ No

Does it encode molecules known to be toxic to vertebrates at concentration less than 1 mg/ml or < 100 ng/kg body weight?
○ Yes ○ No

Will the protocol involve the use of antibiotic selection markers? If yes, list the markers and microbial agents used (e.g. neomycin resistance marker in E. coli)
○ Yes ○ No

Will there be transfer of a drug resistance trait to microorganisms that are not known to acquire it naturally and could this compromise the ability of the drug to control disease? (Example: Placing a gene for Ampicillin resistance in E. coli K12 would not meet this criteria, but placing an gene for Ampicillin resistance in Listeria monoctyogenes would).
○ Yes ○ No

Does the DNA to be cloned or expressed represent more than two-thirds of the genome of an organism? If yes, what organism?
○ Yes ○ No

Name and type of rDNA Vector (provide name and company or person providing it). Provide link if available.

Has the source of the vector confirmed that it is replication incompetent (include link or attach reference).
○ Yes
○ No
○ N/A

BSL level of the vector plus insert
○ BSL-1
○ BSL-2
○ BSL-2+
○ N/A

Can your vector infect a human cell?
○ Yes ○ No

Is it a lentiviral vector? If yes, what generation of lentiviral vector is it?
○ Yes ○ No

What will the vector be infecting (the host)?

BSL level of the host
○ BSL-1
○ BSL-2
○ BSL-2+

Does the vector represent two-thirds or more of the viral genome?
○ Yes ○ No

Will more than 10 liters of culture be produced?
○ Yes ○ No

Describe the hazardous potential including hosts, modes of

transmission to humans and animals, and pathogenicity. (If using defective lentiviral or retroviral vectors the risks also include insertional mutagenesis, which can lead to activation of oncogenes, inactivation of tumor suppressor genes, and gene disruption).

Describe the containment conditions that will be implemented.

What are the treatment options and suggested medical follow-ups if someone gets exposed?

SAFETY (PSP) - USE OF CHEMICALS

This protocol involves which of the following chemicals

- [ ] Flammable and Combustibles (Acetaldehyde, Acetone, Acetonitrile, Ethanol, Benzene, Ether, Hydrazine, etc.)
- [ ] Corrosive chemicals (Hydrochloric acid, Hydrofluoric acid, Ammonium Hydroxide, Phenol, etc.)
- [ ] Irritants (Formaldehyde, Glutaraldehyde, Sodium dodecyl sulfate, Dichloromethane,etc.)
- [ ] Sensitizers (Ammonium Persulfate, Potassium Persulfate, Glutaraldehyde, Complete Freund's Adjuvant, etc.)
- [ ] Carcinogenic, mutagenic, or teratogenic chemicals (Acrylamide, Benzene, Ethidium Bromide, Formaldehyde, etc.)
- [ ] Compressed Gases (Carbon Dioxide, Oxygen, Nitrogen, any of the Hydrogen gases, etc.)
- [ ] Isoflurane
- [ ] Cryogens (Liquid Nitrogen, Dry Ice, Liquid Oxygen, etc.)
- [ ] Reactive, Explosive, or Unstable Substances (Picric Acid (dry or solution), Ether (Ethyl Ether, Diethyl Ether), Hydrogen Peroxide, Perchloric Acid, etc.)
- [ ] Biologically Derived Toxins (Botulinum Toxin, Tetrodotoxin, Pertussis Toxin, Lipopolysaccharides, Conotoxin, Select Agents, etc.)
- [ ] Acetylcholinesterase Inhibitors or Neurotoxins (6-OHDA, Diisopropyl Fluorophosphates (DFP), Capsaicin, Tetrodotoxin, N-methyl-D-aspartate (NMDA), etc.)
- [ ] Nanoparticles, nanotubes, etc.
- [ ] Hazardous Chemicals not in the above categories (Including heavy metals): Arsenic, Potassium Cyanide, Hydrazine, Hexane, Cyanide, Mercury, Benzene, Lead, etc.
- [ ] Other (please explain below)

Please explain other:

Please list the hazardous chemicals used on this protocol from the chemical types selected above:

Hazardous Chemicals and Drugs
No records have been added

List all personnel that will be working with the above listed drugs and chemicals

Personnel working with drugs and/or chemicals
No records have been added

Does this protocol use any hazardous drugs or chemicals found on the NIOSH list? See help link for a complete list.

○Yes ○No

List all personnel that will be working with the NIOSH drugs and chemicals

Personnel that will be working with the NIOSH drugs and chemicals
No records have been added

Are all of these hazardous chemicals on the laboratory chemical inventory?

○ Yes
○ No

If No, please upload the chemical inventory modification form to the submission after completing this application.

Have all personnel in the lab who will work with, or be potentially exposed to these items been provided appropriate SOPs and trained in the safe handling and the special hazards posed by each of the chemical types listed above, and is this training documented?

○Yes ○No

Describe the proposed methods to be employed in monitoring the health and safety of personnel, and detecting signs of exposure for personnel working on this protocol who may be exposed to hazardous chemicals.

Do any of the items used in this protocol need a chemical license? Click the help button to the right for a list of chemicals that need a license.

○ Yes ○ No

- **Please upload copies of the chemical licenses to the submission after completing this application.**

In the below table, list any chemicals you will use that need a license:

Chemicals Needing a Chemical License
No records have been added

Who is the PI for the chemical inventory for this lab?

SAFETY (PSP) - CONTROLLED SUBSTANCES

List any controlled substances used in this protocol such as ketamine, buprenorphine, or pentobarbital. NOTE: carprofen, xylazine, and isoflurane are not controlled substances. See https://www.deadiversion.usdoj.gov/schedules/orangebook/c_cs_alpha.pdf for a complete list.

- ☐ Ketamine
- ☐ Buprenorphine
- ☐ Pentobarbital
- ☐ Other:

Are all schedule I, II and III drugs stored in a double-locked arrangement?

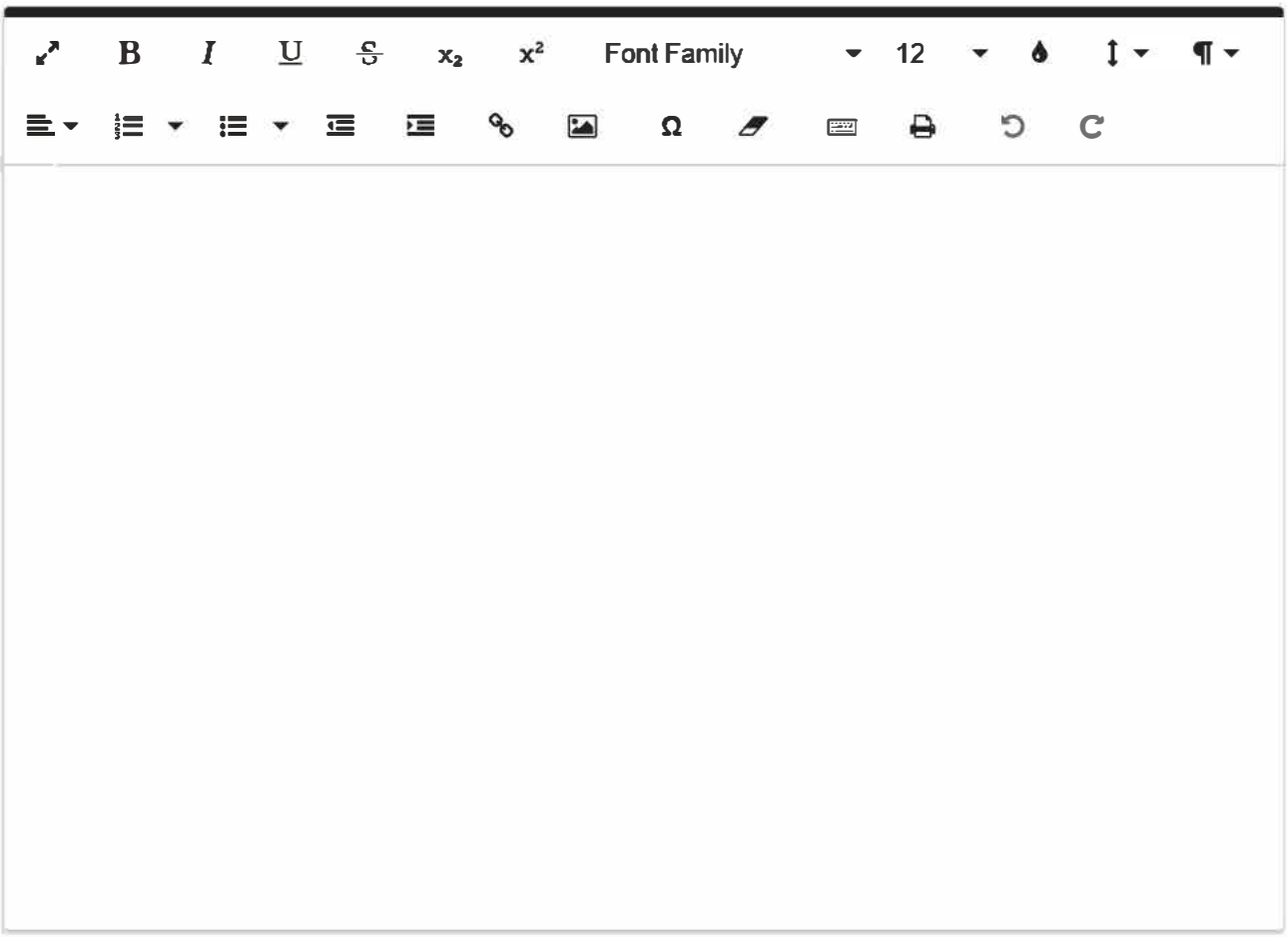
For example, a locked drawer or cabinet inside a locked room. [Buprenorphine, ketamine, and pentobarbital are all schedule II and III]
NOTE: Storing drugs in a lockbox inside an unlocked refrigerator, drawer, or cabinet does not qualify.

- ○ Yes
- ○ No
- ○ N/A

Are any schedule I controlled substances used in this protocol?

○ Yes ○ No

You will need to have a DEA license for schedule I controlled substances to order these – the VA pharmacy does not have a DEA schedule I license and cannot order them for you.



SAFETY (PSP) - RADIOACTIVE MATERIALS and RADIATION-PRODUCING EQUIPMENT

Does this protocol involve the use of radioactive materials?

○ Yes ○ No

Does this protocol involve the use of radiation-producing equipment?

○ Yes ○ No

Please attach the Radiation Non-Human Use Appendix C as part of the submission.

SAFETY (PSP) - PHYSICAL HAZARDS

What physical hazards will personnel working on this protocol be exposed to?

Are these physical hazards addressed in the laboratory safety plan?

○ Yes ○ No

Do these employees receive annual training addressing these physical hazards?

○ Yes ○ No

If this protocol involves physical hazards (such as UV light, excessive noise, lasers, confocal microscope lasers, needles, centrifuges, samples handling, extreme temperatures, etc.) has the appropriate personal protective equipment (PPE) been provided to protocol personnel?

○ Yes ○ No

Appendix 10: IACUC/OB Periodic Program Review and Facility Inspection Report

Please attached a copy of the latest facilities (including laboratory inspections) and program assessment report conducted by the IACUC/OB.

These are attached as PDFs.
Please see **App 10 parts 1A, 1B, 2, and 3**.

►Name of VA Facility: VA Greater Los Angeles Healthcare System Version 02/28/13
►Station Number: 691
►City, State: Los Angeles, California
►Date of Semiannual Evaluation: 12/4/2019

VA SEMIANNUAL EVALUATION
of the
INSTITUTIONAL ANIMAL CARE AND USE PROGRAM AND FACILITIES
Part 1 – Checklist
Section A. Review of the Program

The Review of the Program is largely an administrative evaluation of all of the policies, plans, standard procedures, and systems under which the institution fulfills its responsibilities to ensure humane animal care and use. Some of the programmatic items may appear similar to items included in Section B (Inspection of the Facilities), but the focus here (Review of the Program) is on what is intended or expected, while Section B focuses on observed implementation.

NOTE: The checklist is designed to prompt review according to regulatory requirements and focuses on the minimum standards that must be met. The wording in the checklist is not to be interpreted as altering the regulatory requirements in any way but represents guidance from the office of the CVMO. For specifics about the regulatory requirements and recommended best practices, the references provided in square brackets must be consulted:

"1200.01" refers to the "VHA Handbook 1200.01, Research and Development (R&D) Committee",
"1200.07" refers to the "VHA Handbook 1200.07, Use of Animals in Research",
"PHS" refers to the "PHS Policy on Humane Care and Use of Laboratory Animals",
"9 CFR" refers to the "USDA Animal Welfare Act Regulations and Standards, Code of Federal Regulations, Title 9",
"US Govt Principle" refers to the "US Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training", and
"Guide" refers to the National Research Council's "Guide for the Care and Use of Laboratory Animals", 8th edition, 2011

Instructions:

1) Enter identifying information in the header above:
   Double click in the header area.
   Then enter text after each ":"
   (Note: Federal regulations require that a new Review of the Program be completed every 6 months *[PHS (IV.B.1); 9 CFR (2.31(c)(1))]*, and a new Inspection of the Facilities *[PHS (IV.B.2); 9 CFR (2.31(c)(2))]* be completed every 6 months. The "Date of Semiannual Evaluation" is the date on which the last of the components of the semiannual evaluation was completed.)
   Double click in the document area to return to the main body of the form.

2) Enter the information requested below. The "►" symbols indicate **required** information:

►Date(s) of the most recent previous Review of the Program: 8/27/2019
►Date(s) on which this Review of the Program was conducted: 12/4/2019

Names of voting IACUC members who participated in the Program Review:
(The Program Review team must include a minimum of two voting members of the IACUC [9 CFR (2.31(c)(3))]. Any non-members who also participate, at the discretion of the IACUC, may be listed in the second table.)

►Name of VA Facility: VA Greater Los Angeles Healthcare System Version 02/28/13
►Station Number: 691
►City, State: Los Angeles, California
►Date of Semiannual Evaluation: 12/4/2019

Name	Specific Role on IACUC (if any)	Date(s) of Participation
[redacted], DVM, MA, DACLAM	Veterinary Medical Officer	12/4/19
[redacted], PhD	Scientist, Chair	12/4/19
[redacted] PhD	Scientist, Vice-Chair	12/4/19
[redacted], PhD	Scientist, Vice-Chair	12/4/19
[redacted], MD	Scientist	12/4/19
[redacted]	Community Representative	12/4/19
[redacted], PhD	Scientist	12/4/19
[redacted], MD	Scientist	12/4/19
[redacted]	Community Representative	12/4/19
[redacted], PhD	Scientist	12/4/19
[redacted], PhD	Scientist	12/4/19
[redacted], PhD	Scientist	12/4/19
[redacted] PhD	Scientist	12/4/19
[redacted], PhD	Scientist	12/4/19

Non-IACUC members who participated in the Program Review:

Name	Title	Date(s) of Participation
[redacted] PhD	IACUC Coordinator	12/4/19
[redacted]	Research Biosafety Officer	12/4/19
[redacted], PhD	Animal Program Compliance Officer	12/4/19
[redacted]	VMU Facilities Manager	12/4/19
[redacted]	Research Compliance Officer	12/4/19
[redacted], PhD	Research Biosafety Officer	12/4/19

3) For each item in the checklist, type "X" in the column that applies (shaded cells should not be used):

Not Applicable
Acceptable
Approved Departure (Approved by the IACUC)
Minor Deficiency
Significant Deficiency

4) For each item marked as an Approved Departure, a Minor Deficiency, or a Significant Deficiency here (Part 1, Section A), provide details in Part 2 of this form.

5) Items that reflect changes in the 8th edition of the *Guide* are flagged as follows, and may require particular attention as the 8th edition is implemented.

‡ denotes a new "must" item
† denotes a new "should" item

►Name of VA Facility: VA Greater Los Angeles Healthcare System Version 02/28/13
►Station Number: 691
►City, State: Los Angeles, California
►Date of Semiannual Evaluation: 12/4/2019

I. Institutional Policies and Responsibilities

A. Shared Responsibilities						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
100†●	A formal written MOU, contract, or agreement is in place for any arrangement in which the VA shares responsibility for animal research with any other institution. This includes the use of an external IACUC and any collaborative arrangements for support, housing, or use of animals in research. *[1200.07 (8.b(1)); Guide, p. 15]* ►Name(s) of other institution(s) and the date(s) on which current formal written understanding(s) took effect: **UCLA, January 2,2018 University of Southern California, November 1, 2014 WebSciences, May 1, 2013**		A			
B. General IACUC Function						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
150●	The official appointment of each member of the IACUC by the CEO *[PHS (IV.A.3a); 9 CFR (2.31(a))]* is documented and specifies the duration of the appointment and any specific role to which the member is appointed. *[1200.07 (8.a)]*		A			
151	The IACUC has at least five members, including at least one member qualified for and appointed to each of the required roles. *[PHS (IV.A.3); Guide (p. 24)]*		A			
152‡	The IACUC meets as necessary to fulfill responsibilities. *[Guide (p.25)]*		A			
153	The IACUC has adequate authority, administrative support, and other resources to fulfill its responsibilities. *[Guide (p. 14-15)]*		A			
154†	The IO has authority to allocate needed resources. *[Guide (p.13)]*		A			
155	The IACUC communicates regularly with the R&D Committee, by providing the R&D Committee with a set of final, signed, IACUC minutes, and all other notifications required by the R&D Committee, and through an individual who regularly attends meetings of both the IACUC and the R&D Committee. *[1200.07 (8.h (2)); 1200.01 (11.f)]*		A			
156†	Program needs are regularly communicated to the IO by the AV and/or the IACUC. *[Guide (p. 13)]*		A			
157	The IACUC communicates effectively as needed with the SRS and/or the IBC. *[1200.07 (Appendix C-.8.a)]*		A			
158	All minority opinions that are submitted are included in the final document that results from any action of the IACUC (e.g., meeting minutes, report of semiannual evaluation, and reports to oversight entities). *[PHS (IV.B.); 9 CFR (2.31(c)(3))]*		A			

159	The research office provides packets to IACUC members no later than 3 business days before the IACUC meeting. This packet must include an agenda with all business items listed, including reviewer assignments for all new protocols. *[1200.07(8.f(2)(d))]*		A			
160	A written draft of the minutes of the latest IACUC meeting is provided to all IACUC members at least 1 week before the next meeting.		A			
161	Review and approval by the IACUC is required before any work related to the use of animal subjects in VA research begins or is changed significantly. *[1200.07(8f(2));PHS (IV.B.6-7); 9CFR (2.31(c)(6-7)); Guide (p. 26)]*		A			
162	All protocol forms used comply with PHS Policy and USDA AWAR. *[PHS(IV.C);9 CFR (2.31(d)]*		A			
163	The current version of the VA ACORP (or an alternate form that has been approved by the CVMO) is used for any protocol involving work to be supported with VA funding. *[1200.07 (8.f(2)(e))]*		A			
164‡	Consultation with a qualified laboratory animal veterinarian is required before a protocol may be submitted for review by the IACUC. Veterinarian provides consultation when pain and distress exceeds anticipated level in protocol.*[1200.07 (Appendix D - 1.k(2)); 9 CFR (2.31(d)(1)(iv)(B);, Guide (p,5)]*		A			
165‡	No IACUC member participates in the review or approval of any protocol in which that member has a real or apparent conflict of interest (financial or otherwise). *[Guide (p. 26)]*		A			
166	The IACUC does not approve any protocol that involves use of hazardous agents until the Biosafety Official and/or the Radiation Safety Official, as applicable, has signed in Item Z to confirm that the hazardous agents are properly documented in the ACORP. *[1200.07 (Appendix C-.8.c(1)); Guide (p. 21)]*		A			
167	Use of any patient care area for VA-funded animal research is prohibited unless the IACUC and appropriate local clinical and administrative officials first grant approval and the IACUC has reviewed and approved a completed ACORP Appendix 7 that justifies no reasonable alternative to the use of human clinical areas or equipment exists. *[1200.07 (7.k(1))]*		A			
168†	A system of post-approval monitoring is in place to ensure that all work with research animals is performed according to IACUC approved protocols. *[Guide (p. 33)]*		A			
169	The IACUC conducts continuing reviews of all protocols annually. *[9 CFR (2.31(d)(5)]*		A			
170	IACUC approval of each protocol expires on or before the third anniversary of its initial approval. *De novo* review and approval of a complete updated protocol by the IACUC before the date of expiration is required for work on the protocol to continue beyond three years without interruption. *[PHS (IV.C.5)]*		A			
171	Humane endpoints are established for studies in which pain and/or distress is anticipated (i.e., tumors, infectious disease, vaccine challenges, trauma, etc.) *[Guide (p.27)]*		A			

172	The IACUC has established oversight procedures for pilot and field/wildlife studies; studies involving genetically modified animals, food/fluid restriction, and the use of pharmaceutical versus non-pharmaceutical grade chemicals receive special consideration by the IACUC. *[Guide (p. 27-33)]*		A			
173	Surgical procedures are determined to be major or minor, multiple surgical procedures on a single animal are justified and the outcome evaluated, and multiple survival procedures regardless of species conform to regulated species standards. *[Guide (p.30)]*		A			
174‡	Requests for exemptions from major survival procedure restrictions are made to the USDA/APHIS through the IO. *[Guide (p. 30)]*	N/A				
175	Toe-clipping is approved by the IACUC only when no other individual identification method is feasible; the procedure is performed aseptically and with pain relief. *[Guide (p.75)]*	N/A				
176‡	The use of restraint devices is justified in the animal use protocols. IACUC approval is given when the purpose and duration of the restraint are justified. The justification addresses: the lack of feasible alternatives to physical restraint, provisions for the removal of maladaptive animals, training of animals, and appropriate observation of restrained animals. Veterinary care is provided if lesions or illness associated with restraint occur. *[Guide (p 29-30]*		A			
C. Semiannual Evaluations of the Animal Care and Use Program						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
200	Program Review -- At least every six months, the IACUC reviews the animal care and use program. For VA animals used at an affiliate institution, this is done according to the MOU in place between the VA facility and the affiliate. *[1200.07 (8.f(1)); PHS (IV.B.1); 9CFR (2.31(c)(1))]*		A			
201	Facilities Inspection -- At least every six months, the IACUC inspects all facilities in which animals in the VA animal research program are used. For VA animals used at an affiliate institution, this is done according to the MOU in place between the VA facility and the affiliate. *[1200.07 (8.f(1)); PHS (IV.B); 9CFR (2.31(c)(2))]*		A			
202	Under no circumstances is the report of any semiannual evaluation altered after it has been signed by the IACUC. *[1200.07 (8.f (1)(f))]*		A			
203	The report of each semiannual evaluation of the animal care and use program, signed by the IACUC, is discussed personally with the Director of the VA facility in a meeting with at least one representative voting member of the IACUC. *[1200.07 (8.f(1)(e)); PHS (IV.B); 9 CFR (2.31(c)(5); Guide (p. 25)]*		A			
204	Within 60 days of approval by the IACUC, the report of each semiannual evaluation, signed by the facility Director, is submitted to the CVMO (ORD), or the CVMO's office is notified of the reason for delay and the expected date of submission. *[1200.07(8.k(3))]*		A			
D. Standard Operating Procedures (SOPs)						

		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
250	At least annually, the IACUC oversees a review of the complete set of all local SOPs by the Attending Veterinarian with the VMU supervisor and other qualified personnel. *[1200.07 (7.c)]* ►Date of latest review: **10/3/2018**		A			
E. Addressing Concerns about Animal Welfare						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
300‡	The responsibility for animal well-being is assumed by all members of the program; therefore, procedures are in place for the IACUC to receive, review, investigate, and address internal or external concerns or allegations about animal care and use. *[PHS (IV.B); 9 CFR (2.31(c)(4)); Guide (p. 1;23-24)]*		A			
301	Procedures are in place to protect "Whistle-blowers" from discrimination or reprisal for reporting potential regulatory violations within the animal care and use program. *[9CFR (2.32(c)(4)); Guide (p. 24)]*		A			
302	Any animal activity may be suspended by the IACUC (by a majority vote of a quorum), or immediately and unilaterally by the facility Director or any other official designated by the facility Director. *[1200.07 (8.); 9 CFR (2.31(c)(8) and 2.31(d)(6))]*		A			
303	The IACUC notifies local administrators (facility Director, RCO, ACOS/R&D) and external oversight entities (CVMO, ORO, OLAW, and AAALAC) immediately when an investigation is undertaken. *[1200.07 (8.i)]*		A			
304	Within 5 business days of determining that a reportable deficiency has occurred, the IACUC submits an initial report to the facility Director and the IO, with copies to the ACOS/R&D and other relevant research review subcommittees. *[1058.01(8.e); PHS (IV.F.3); 9 CFR (2.31(c)(3) and 2.31(d)(7))]*		A			
305	Within 5 business days (*ORO requirement)* of receiving a report of a reportable deficiency from the IACUC, the facility Director and IO submit the report to the CVMO, ORO, OLAW, AAALAC, the Animal Care Section of USDA APHIS, and any other non-VA funding sources, as applicable, with copies to the IACUCs of any affiliate institutions with shared responsibility. *[1058.01(8.e); PHS (IV.F.3); 9 CFR (2.31(c)(3) and 2.31(d)(7))]*		A			
306	The corrective action plan, the timetable for its implementation, and interim and final reports on the correction of each reported deficiency are submitted to the facility Director and IO, and through them to the CVMO, ORO, OLAW, AAALAC, the Animal Care Section of USDA APHIS, and any other non-VA funding sources, as applicable, with copies to the IACUCs of any affiliate institutions with shared responsibility. *[1200.07 (8.i)]*		A			
F. Reporting to Oversight Entities						

		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
350	The USDA Annual Report of Research Facility was completed and submitted by December 1 within the past year, as required by USDA, and a copy is on file locally. *[9CFR (2.36)]* ►Date of most recent submission: **11/4/2019**		A			
351	The VA facility is covered by a PHS Assurance, approved by OLAW, and revised as needed to reflect any significant changes in the animal care and use program. *[PHS (IV.A)]* ►Name of the Institution that holds the PHS Assurance: **VA-GLA** ►Effective date of most recent approved Assurance: **9/28/2017**		A			
352	The annual report to OLAW was submitted within the past year by the end of the month immediately following the end of the last reporting period, and a copy is on file locally. *[PHS (IV.F.1-2)]* ►Date of most recent submission:**1/31/19**		A			
353	The VA facility is fully accredited by AAALAC, and a copy of the triennial comprehensive AAALAC Program Description is on file locally. *[1200.07 (7.e)]* ►Name of the Institution that holds the accreditation: **VA-GLA**		A			
354	The AAALAC Annual Report was submitted within the past year as required by AAALAC, and a copy is on file locally. *[1200.07 (8.l(2)(b))]* ►Date of most recent submission: **3/28/19**		A			
355	The VA Veterinary Medical Unit (VMU) annual report, which includes mice and rats, was submitted online by the specified deadline (usually January 15) within the past year. *[1200.07 (8.l(4))]*		A			
356	All other correspondence with oversight entities (USDA, OLAW, AAALAC, and ORO) relevant to the animal research program (except for routine notifications and reminders) is copied to the CVMO within 15 days of receipt or submission. *[1200.07 (9)]*		A			
357	All documents relevant to the animal care and use program are maintained on file for at least three years, or according to the latest VA requirements (current VA policy requires all records to be kept indefinitely), whichever is longer. This includes acquisition/disposition records, IACUC meeting minutes, semiannual reports, and all reports to, and correspondence with, oversight entities. *[1200.07 (Appendix E-2. c); 9CFR2.35(f); PHS (IV.E)]*		A			
358	All documents relevant to individual studies are maintained for at least the duration of the study and for three additional years after the completion of the study, or according to the latest VA requirements (current VA policy requires all records to be kept indefinitely), whichever is longer. *[1200.07 (8.f(1)(h));9CFR2.35(f); PHS (IV.E)]*		A			
G. Personnel Qualifications and Training						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency

400‡	The IACUC does not approve any protocol until each individual listed on the protocol has documented completion of required VA training at the prescribed intervals. *[1200.07 (8.m(1)).; PHS (IV.A.1.g); 9 CFR (2.32); Guide (p. 15); US Government Principle VIII)]*		A			
401‡	The IACUC confirms that each individual is appropriately trained before approving that individual to perform the procedure without supervision. This includes non-surgical and surgical procedures, anesthesia monitoring, and euthanasia. *[PHS (IV.C.1.f); 9 CFR (2.31(d)(1)(viii); Guide (p. 15 & 115)]*		A			
402‡	All personnel are documented as being appropriately trained for their positions, and participating in formal and/or on-the-job continuing education at the prescribed intervals. *[1200.07 (8.m); PHS (IV.A.1.g); 9 CFR (2.32); Guide (p. 16-17)]*		A			
403†	IACUC members receive training in all aspects of humane animal care and use through the documented completion of VA training at the required intervals. *[PHS (IV.A.1.g); 9 CFR (2.32); 1200.07 (8.m); Guide (p.17)]*		A			
H. Occupational Health and Safety						
		Not Applicable	**Acceptable**	**Approved Departure**	**Minor Deficiency**	**Significant Deficiency**
Occupational Health and Safety Program (OHSP)						
450‡	An OHSP has been established and is maintained by the VA facility to protect personnel involved in animal research (laboratory or field setting) from associated risks including but not limited to direct animal contact, exposure to unfixed tissues or fluids, hazardous agents used in the research, etc. *[PHS (IV.A.1.f); Guide (p.17; 32); 1200.07 (10)]*		A			
451	All personnel at risk of exposure have the opportunity to participate in the OHSP. This includes personnel whose duties include work with animals (e.g., VMU staff, investigators, research technicians), regardless of whether they are paid employees, without compensation (WOC) personnel, students, or trainees, as well as , personnel that do not have contact but are exposed to animals (e.g., maintenance and engineering staff assigned to the VMU, other service personnel, etc.). *[1200.07 (10.a); Guide (p. 18)]*		A			
452	**Hazard Identification and Risk Assessment** – The IACUC, the local veterinarians, the SRS, and the Safety Officer work together effectively to identify potential hazards that exist in the animal research program, to assess the consequent risks to personnel, and to determine appropriate strategies to manage the risks. *[Guide (p. 18-19)]*		A			
453	**OHSP Training** – Training is provided to all personnel covered by the OHSP, with regard to personal hygiene practices, use of safety equipment, and SOPs appropriate to each individual's duties and risks of exposure. *[Guide (p. 20)]*		A			
The OHSP – Facilities and Procedures						

454	**Ergonomic efficiency** – Procedures and policies are in place to reduce the risks of ergonomic injuries to personnel (e.g. facility design, SOPs, and the use of equipment such as ramps, carts, and hydraulic lifts). *[Guide (p.19-20)]*		A			
455	**Control of exposure** – Personal exposure to hazardous agents is limited through the design of the facility, establishment of SOPs (e.g. separation of animals treated with hazardous agents from untreated animals), selection/maintenance/certification of safety equipment (e.g., showers, eyewash stations, fume hoods, etc.), and careful monitoring of agents to ensure that they remain within permissible ranges. *[Guide (p. 19-20)]*		A			
456	**Policies and Procedures associated with nonhuman primates (NHPs)** – have been established and include training with regard to the risks of exposure to *Macacine herpesvirus 1* (formerly *C. herpesvirus* or Herpes B virus); tuberculosis screening for exposed personnel; training on and the handling of bites, scratches, or other injuries; medical evaluation and treatment of injuries; and provision of appropriate PPE. *[Guide (p. 23)]*	N/A				
The OSHP – Personal Hygiene						
457	The OHSP includes guidelines on appropriate personal hygiene practices, including hand washing and showering, use of protective clothing, and restricting consumption of food and beverages to designated break areas. *[Guide (p. 20-21)]*		A			
458	The VA facility provides uniforms, laundry service, and all other necessary personal protective equipment (e.g., gloves, ear protection, protective eyewear, steel-toed footwear, respirators, with appropriate fit testing and training, and other special equipment), as appropriate to the duties of the personnel. *[Guide (p. 20-22)]*		A			
The OHSP – Medical Evaluation and Preventive Medicine for Personnel						
459	A pre-employment medical evaluation is performed on each prospective new employee. *[1200.07 (Appendix C-4(2)(a))]*		A			
460	A follow-up medical evaluation is performed at routine intervals (usually annually) on each OHSP participant. *[1200.07 (Appendix C-4(2)(b))]*		A			
461	Enrollment in OHSP is prerequisite to approval for access to the VMU and for beginning work with animals. *[1200.07 (Appendix C-4(2)(c))]*		A			
462	Personnel are not permitted to decline immunizations or tests required by the VA facility that are necessary to protect the health of the animals or personnel. *[1200.07 (10.b)]*		A			
463	All vaccines (e.g., tetanus, rabies) are provided to personnel as currently recommended by CDC, free of charge. *[1200.07 (10.f(2)); Guide (p. 23)]*		A			
464	Personnel are required to report and be treated for all injuries and illnesses potentially related to working in the VMU or other animal research areas, or otherwise in connection with work with animals. *[1200.07 (Appendix C-4.b; Guide (p. 23)]*		A			
465‡	The program considers confidentiality and other legal factors as required by federal, state and local regulations. *[Guide (p. 22)]*		A			

466‡	If serum samples are collected, the purpose is consistent with federal and state laws. *[Guide (p. 22)]*	N/A				

II. Physical Plant

A. General						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
500	The physical plant infrastructure (includes HVAC, plumbing, lighting, power, control systems, etc.) is adequate to support the needs and performance standards of the animal care and use program, and is compliant with and meets all applicable building codes. *[Guide (p. 133-136)]*		A			
501	Policies and procedures are in place to ensure that facilities and equipment are properly maintained and functional. *[Guide (p. 133-136)]*		A			

III. Operations Related to Animal Environment, Housing, and Management

A. Physical Environment						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
Temperature, Humidity, and Ventilation						
550	The response of facilities management (FM) personnel to elevations in temperature in animal rooms is tested and reported to the IACUC at least annually, and the response by FM personnel is satisfactory. *[1200.07 (7.a(2)(c))]*. ►**Date of latest test: WLA 4/12/ 2019 SEP 4/18/2019**		A			
551	HVAC reheat units serving animal rooms are designed so as to fail in the "off" position, preventing over-heating of animals. *[1200.07 (7.a(2)(a))]*		A			
Noise						
522	Policies are in place to minimize exposure of the animals and personnel to excessive vibration, unnecessary sounds, and any sounds louder than 85dB. *[Guide (p.49-50)]*		A			
B. Husbandry						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
General						

600‡	Oversight of daily husbandry and other animal care duties has been assigned to a single individual (usually, the VMU Supervisor) when a full-time veterinarian is not available on site. *[Guide (p. 14)]*		A			
Population Management						
601	Methods of animal identification have been established, which provide the protocol number and other pertinent information. Where applicable, genotype information is provided using accurate, consistent, and unambiguous genotype nomenclature. *[Guide (p. 75-77)]*		A			
Behavioral Management						
602	**Activity** – Each animal must have opportunities to engage in activity (motor, cognitive, and social) appropriate to its species. *[Guide (p. 60;63)]*		A			
603	**Social Environment** – Animals must be housed in appropriate compatible social groups or when single housing of social species is required (by an approved protocol or because of veterinary concerns) have contact with compatible conspecifics and/or enrichment. *[Guide (p.51, 63-65)]*		A			
604	**Environmental Enrichment** – The program to enrich the structural environment of each animal (structural additions, exercise, manipulative activities, and cognitive challenges) to accommodate the expression of species-typical postures and behavior is reviewed regularly by the IACUC, researchers, and veterinarians. *[Guide (p. 52-54)]*		A			
C. Animal Procurement and Transportation						
		Not Applicable	**Acceptable**	**Approved Departure**	**Minor Deficiency**	**Significant Deficiency**
650‡	Only animals that are obtained lawfully may be used in VA research. *[1200.07(7.b(1)); Guide (p.106)]*		A			
651	Animal procurement is approved and initiated only after confirmation that: (1) the source of animals is appropriate; (2) appropriate housing and care for the animals upon arrival is coordinated with animal care staff; and (3) the animals are designated for use on an IACUC approved protocol. *[Guide (p. 106-109)]*		A			
652‡	Transportation (including intra-institutional, inter-institutional, interstate, international, and from commercial or non-commercial sources) complies with federal and international regulations, as applicable, and is arranged to protect the health and safety of the animals and humans (passersby as well as personnel involved in the work with the animals), to minimize stress on the animals, and to ensure animal biosecurity. *[Guide (p. 107); 9 CFR (Part 3, Standards)]*		A			
D. Preventive Medicine						
		Not Applicable	**Acceptable**	**Approved Departure**	**Minor Deficiency**	**Significant Deficiency**

700	The institutional animal care and use program strives to maintain research animal populations that are as free of infectious agents as possible. *[1200.07 (7d(1))]*		A			
701	A program of veterinary care, overseen by a VMO or VMC, is in place for the surveillance, diagnosis, treatment, and control of non-protocol diseases or conditions (especially those with zoonotic potential, such as Q-fever, LCMV, parasites, etc.), and for the management of diseases or conditions induced by experimental requirements. *[Guide (p. 112-114)]*		A			
702	Quarantine and stabilization of newly received animals, as well as, separation of animals by species, source, health status, and intended use, as appropriate, are used to prevent spread of pathogens. *[Guide (p. 109-112)]*		A			
E. Waste Disposal						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
750	Procedures are in place for sanitation of waste containers, as well as procedures for safe removal and disposal of conventional, biological, and hazardous wastes (including soiled bedding). All waste disposal procedures comply with facility, municipal and federal policies and regulations. *[Guide (p. 73-74)]*		A			
F. Pest Control						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
800	A regularly scheduled and documented program of monitoring for and controlling pests has been implemented, which includes measures to prevent vermin entry and harborage. *[Guide (p. 74)]*		A			
801	Animal and human health concerns encourage the use of non-toxic methods of pest control instead of chemical pesticides whenever possible. If chemical pesticides are to be used, the investigators whose animals may be exposed are consulted to ensure that scientific objectives are not unnecessarily compromised. *[Guide (p.74)]*		A			
G. Medical Supplies						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
850	All controlled substances needed for animal research on VA property are ordered and received by the local VA pharmacy, and dispensed to research personnel as needed. *[1200.07 (7.m)]*		A			
851	Use of non-pharmaceutical grade compounds, expired drugs or medical supplies (e.g., sutures, antiseptics, etc.) in animals is limited to protocols in which such use has been documented not to jeopardize animal welfare or compromise the validity of the study. *[PHS (FAQ F4); Guide (p.31)]*		A			

H. Emergency, After Hours, Weekend, and Holiday Animal Care						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
900	Qualified personnel are assigned to provide routine care for the animals on weekends and holidays. *[Guide ((p. 74); 9 CFR (2.33(b))]*		A			
901	Veterinary care is available as needed after regular work hours on weekends, and on holidays; procedures are in place for timely notification of a veterinarian in case emergency care is needed. *[Guide (p. 74); 9 CFR (2.33(b))]*		A			
902‡	A disaster plan that addresses the needs of both personnel and animals is in place including animal euthanasia if necessary; the plan is approved by the IACUC. *[Guide (p. 35;75)]*		A			
903†	The disaster plan addresses triage procedures, emergency/life support services; preservation of irreplaceable animals, essential personnel, and disaster response training. The animal facility plan is approved by institution, is a component of the overall disaster plan, and is provided to first responders. *[Guide (p. 35; 75)]*		A			
904	Key animal facility personnel (e.g., the Attending Veterinarian and the VMU supervisor) are included among the official responders to be contacted in emergencies that involve animals. *[Guide (p.75)]*		A			

IV. Veterinary Medical Care

A. Role of the Veterinarians						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
950 ‡	A high quality veterinary care program consistent with ethical standards has been established. *[Guide (p. 105)]*		A			
951 ‡	Each VMO and VMC has training and/or experience in lab animal medicine and with the species used. *[Guide (p. 15); 9 CFR (2.33)]*		A			
952†	The VMOs and VMCs provide guidance to research personnel with regard to the humane care and use of the animals in the context of the scientific and regulatory requirements (including appropriate handling of animals, sedation, anesthesia, surgery and peri-operative care, analgesia, and euthanasia). *[Guide pg. 105-106, 113-114; 9 CFR (2.31(d)(1)(iv)(B) and 2.33(b)(4-5))]*		A			
953	When veterinary care services are provided by a part-time or consulting veterinarian, the veterinarian's visits are of sufficient frequency to meet programmatic needs. A written program of veterinary care for USDA regulated species is in place if a full-time attending veterinarian is not on-site. *[Guide (p. 14);USDA-APHIS Policy #3]*	NA				

954 ‡	Veterinary care is available as needed and effective procedures are established for timely reporting of animal injury, illness, or disease and for veterinary assessment, treatment, or euthanasia. The veterinarian is authorized to treat, relieve pain, and/or euthanize. *[Guide (p. 106, 113, 114, 120, and 122-123); 9 CFR (2.33(b))]*		A			
955 ‡	The Attending Veterinarian has the authority and resources needed, and uses them appropriately to manage all aspects of animal care and use in the animal research program. *[Guide (p. 14); 9 CFR 2.33(a)(2)]*				M	
956 ‡	Veterinary access to all animals is provided. *[Guide (p. 14)]*		A			
B. Surgery						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
1000	Aseptic technique is required for all survival surgery; is appropriate to the species; and includes preparation of the patient, surgeon, sterile materials, and supplies, as well as appropriate operative technique to reduce the risk of infection. *[9CFR (2.31(d)(1)(ix); Guide (p.118-119)]*		A			
1001	Procedures are in place to ensure that appropriate surgical anesthesia and analgesia are provided. Postoperative monitoring and care are provided by trained personnel and documented. *[Guide (p. 119-120)*		A			
1002	Major surgical procedures in non-rodents may be performed only in dedicated surgical facilities. *[9CFR (2.31(d)(1)(ix))]*		A			
1003	A system of ongoing and thorough assessment of surgical outcomes is in place to ensure that appropriate procedures are followed and appropriate corrective changes are implemented in a timely manner. *[Guide (p. 115)]*		A			
1004	Presurgical planning includes veterinary input and addresses location, supplies, anesthetic and analgesic use, peri-operative care, recordkeeping, etc. *[Guide (p.116)]*		A			
1005	For nonsurvival surgery, the surgical site is clipped, gloves are worn, and the surgical area and instruments are clean. *[Guide (p.118)]*		A			
C. Pain, Analgesia, and Anesthesia						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
1050	Guidelines for the assessment and management of pain, distress, and animal wellbeing have been established, and include monitoring for effectiveness of pain control, consideration of non-pharmacologic pain control methods, and guidance regarding the selection and use of anesthetics and analgesics. *[Guide (p. 121-122)]*		A			
1051 ‡	Procedures are in place to assure anti-nociception before surgery begins. *[Guide, p 122)]*		A			

1052	Special precautions for the use of paralytics are in place to ensure adequate anesthesia. *[Guide (p 123)]*	N/A				
1053 ‡	The drug storage and control program complies with federal regulations for human and veterinary drugs; procedures have been established to ensure that analgesics and anesthetics are used prior to their expiration date. *[Guide (p.115)]*		A			
1054 †	Anesthetics and analgesics are acquired, stored, and disposed of in a legal and safe manner; drug records and storage procedures are reviewed during facility inspections. *[Guide, p. 115 & 122)]*		A			
D. Euthanasia						
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency
1100	The methods of euthanasia approved by the IACUC are consistent with the AVMA recommendations for the species involved. *[Guide (p. 123); PHS (IV.C.1.g); 9 CFR (2.31(d)(1)(xi))]*		A			
1101	Personnel receive training on euthanasia methods appropriate for the species and age of the animal to minimize the potential for pain and distress. *[Guide (p. 123-124)]*		A			
1102 ‡	Procedures and training are in place to ensure that death is confirmed. *[Guide (p. 124])*		A			

V. Animal Care and Use Program Work Orders

Instructions: Enter work order data as prompted for Tables 1 and 2. All work orders related to the animal care and use program should be entered, whether or not they resulted from a semiannual evaluation. Use Table 3 to summarize the work orders in Tables 1 and 2.

Table 1: Work Orders Completed - include all work orders completed since the previous semiannual program evaluation (►Date(s) of previous evaluation: 9/4/19).

#	Related to IACUC Program Review (Y/N)?	Work Order #	Summary of Work Requested	Campus	Building	Room	Date Submitted	Date Completed	Days Elapsed
1	Y	ERW181129-034	Flush tanks don't work	[redacted]	[redacted]	[redacted]	11/29/2018	11/1/2019	337

2	Y	ERW181217-003	Ceiling hatches need to be closed	[redacted]	[redacted]	[redacted]	12/17/2018	12/19/2018	2
3	Y	ERW181218-042	Water coming up from drain. This problem last about 30 minutes but didn't cause any flood issues.	[redacted]	[redacted]	[redacted]	12/18/2018	1/4/2019	17
4	N	ERW190128-033	Faucet handles need to be replaced.	[redacted]	[redacted]	[redacted]	1/28/2019	1/31/2019	3
5	N	ERW190205-005	Washer drain clogged	[redacted]	[redacted]	[redacted]	2/5/2019	2/11/2019	6
6	N	ERW190205-007	1.Bent door knob, 2. broken lock	[redacted]	[redacted]	[redacted]	2/5/2019	2/12/2019	7
7	N	ERW190212-015	damaged and missing ceiling tiles	[redacted]	[redacted]	[redacted]	2/12/2019	2/22/2019	10
8	N	ERW190301-012	Light timer needs to be installed	[redacted]	[redacted]	[redacted]	3/1/2019	3/5/2019	4
9	N	ERW190301-014	Faucet Leaking	[redacted]	[redacted]	[redacted]	3/1/2019	3/12/2019	11
10	N	ERW190301-014	Faucet Dripping	[redacted]	[redacted]	[redacted]	3/1/2019	3/12/2019	11
11	N	ERW190304-004	Washer drain clogged	[redacted]	[redacted]	[redacted]	3/4/2019	3/4/2019	0
12	N	ERW190304-005	Outlet covers need to be installed	[redacted]	[redacted]	[redacted]	3/4/2019	3/5/2019	1
13	N	ERW190306-018	lock broken	[redacted]	[redacted]	[redacted]	3/6/2019	3/20/2019	14
14	N	ERW190319-032	Wall Guard	[redacted]	[redacted]	[redacted]	3/19/2019	3/22/2019	3
15	Y	ERW190404-071	Door stop broken	[redacted]	[redacted]	[redacted]	4/4/2019	4/8/2019	4
16	N	ERW190410-031	Need light bulbs	[redacted]	[redacted]	[redacted]	4/10/2019	4/17/2019	7
17	N	ERW190410-031	Lights out	[redacted]	[redacted]	[redacted]	4/10/2019	4/24/2019	14
18	Y	ERW190424-026	ceiling water damage	[redacted]	[redacted]	[redacted]	4/24/2019	5/8/2019	14

19	Y	ERW190528-072	Light timer failure	[redacted]	[redacted]	[redacted]	5/28/2019	5/30/2019	2
20	Y	ERW190719-005	Door Swollen	[redacted]	[redacted]	[redacted]	7/19/2019	7/22/2019	3
21	Y	ERW190719-003	paint	[redacted]	[redacted]	[redacted]	7/19/2019	10/16/2019	89
22	Y	ERW190724-059	Lights out	[redacted]	[redacted]	[redacted]	7/24/2019	7/31/2019	7
23	Y	ERW190730-003	Need door sweep	[redacted]	[redacted]	[redacted]	7/30/2019	7/31/2019	1
24	N	ERW190730-001	Lock Cylinder fracture	[redacted]	[redacted]	[redacted]	7/31/2019	7/31/2019	0
25	Y	ERW190903-037	replace ceiling tiles	[redacted]	[redacted]	[redacted]	9/3/2019	9/4/2019	1
26	N	ERW190923-027	pipe leaking	[redacted]	[redacted]	NA	9/23/2019	9/24/2019	1
27	Y	ERW191003-043	LIGHT SOCKET	[redacted]	[redacted]	[redacted]	10/3/2019	10/17/2019	14
28	N	ERW191009-048	Lights out	[redacted]	[redacted]	[redacted]	10/9/2019	10/16/2019	7
29	N	ERW191009-049	Door not closing	[redacted]	[redacted]	[redacted]	10/9/2019	10/10/2019	1
30	Y	ERW191015-022	Alarm on	[redacted]	[redacted]	[redacted]	10/15/2019	10/15/2019	0

Table 2: Work Orders Not Yet Completed - include all open work orders generated by previous semi-annual evaluations and other sources. Work orders placed as a result of the current semi-annual review are also entered below.

#	Related to IACUC Program Review (Y/N)?	Work Order #	Summary of Work Requested	Campus	Building	Room	Date Submitted	Days elapsed as of 9/3/2019
1	N	ERW180713-005	DOOR CLOSURE NOT SECURE	[redacted]	[redacted]	[redacted]	7/11/2018	419
2	Y	ERW180711-008	DOOR SWEEP	[redacted]	[redacted]	[redacted]	7/11/2018	419

3	N	ERW180912-040	FAUCET LEAKING RMS [redacted]	[redacted]	[redacted]	[redacted]	9/12/2018	356
4	N	ERW181129-034	Flush tanks don't work	[redacted]	[redacted]	[redacted]	11/29/2018	278
5	N	ERW190211-005	Ceiling leaks	[redacted]	[redacted]	[redacted]	2/11/2019	204
6	N	ERW190327-063	Faucet drips	[redacted]	[redacted]	[redacted]	3/27/2019	160
7	N	ERW190719-003	Patch and paint	[redacted]	[redacted]	[redacted]	7/19/2019	46

Table 3: Summary

Table #	Number of work orders entered	Average days elapsed	Median days elapsed
1	30	19.7	5
2	7	269	278

Comments (provide any additional information relevant to the numbers of days required for completion of the work orders submitted):

Our Facilities department is seriously understaffed and do the best they can under the circumstances, which is why certain work orders are taking a long time.

4►Name of Medical Center: VA Greater Los Angeles Healthcare System Version 02/28/13
►Station Number: 691
►City, State: Los Angles, California
►Date of Semiannual Evaluation: 12/4/2019

VA SEMIANNUAL EVALUATION
of the
INSTITUTIONAL ANIMAL CARE AND USE PROGRAM AND FACILITIES
Part 1 – Checklist
Section B. Inspection of the Facilities

The Inspection of the Facilities focuses on a physical and visual evaluation of buildings, equipment, and the environment in which animals are maintained and utilized. Some of the items here appear similar to items included in Section A (Review of the Program), but the focus here (Inspection of the Facilities) is on what is actually observed in the animal facilities, while Section A focuses on what is intended or designed.

NOTE: The checklist is designed to prompt review according to regulatory requirements, and focuses on the minimum standards that must be met. The wording in the checklist is not to be interpreted as altering the regulatory requirements in any way, but represents guidance from the office of the CVMO. For specifics about the regulatory requirements and recommended best practices, the references provided in square brackets must be consulted:

"1200.01" refers to the "VHA Handbook 1200.01, Research and Development (R&D) Committee",
"1200.07" refers to the "VA Handbook 1200.07, Use of Animals in Research",
"PHS" refers to the "PHS Policy on Humane Care and Use of Laboratory Animals",
"9 CFR" refers to the "USDA Animal Welfare Act Regulations and Standards, Code of Federal Regulations, Title 9",
"US Govt Principle" refers to the "US Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training", and
"Guide" refers to the National Research Council's "Guide for the Care and Use of Laboratory Animals", 8th edition, 2011

Instructions:

1) Enter identifying information in the header above:
   Double click in the header area.
   Then enter text after each ":"
   (Note: Federal regulations require that a new Review of the Program be completed every 6 months *[PHS (IV.B.1); 9 CFR (2.31(c)(1))]*, and a new Inspection of the Facilities be completed every 6 months *[PHS (IV.B.2); 9 CFR (2.31(c)(2))]*. The "Date of Semiannual Evaluation" is the date on which the last of the components of the semiannual evaluation was completed.)
   Double click in the document area to return to the main body of the form.

2) Enter the information requested below. The "►" symbols indicate required information:

►Date(s) of the most recent previous Inspection of the Facilities: 5/9/19; 5/15/19; 5/16/19; 5/21/19; 5/23/19; 5/24/19; 5/30/19; 6/6/19; 6/20/19; 6/27/19; 7/24/19; 8/21/19

►Date(s) on which this Inspection of the Facilities was conducted: 9/10/19, 9/17/19, 9/19/19, 9/24/19, 10/23/19, 10/24/19, 11/18/19, 11/19/19, 11/20/19, 11/21/19, 11/26/19

4►Name of Medical Center: VA Greater Los Angeles Healthcare System Version 02/28/13
►Station Number: 691
►City, State: Los Angles, California
►Date of Semiannual Evaluation: 12/4/2019

Names of voting IACUC members who participated in the Facility Inspection:
(The Facility Inspection team must include a minimum of two voting members of the IACUC [9 CFR (2.31(c)(3))]. Any non-members who also participate, at the discretion of the IACUC, may be listed in the second table.)

Name	Specific Role on IACUC (if any)	Date(s) of Participation
[redacted]	Chair, Scientist	9/24/19, 11/18/19, 11/26/19
[redacted]	Vice-Chair, Scientist	10/24/19
[redacted]	Vice-Chair, Scientist	All the inspection dates except 11/19/19
[redacted]	Veterinarian	11/19/19
[redacted]	Unaffiliated member (Community Representative)	11/19/19
[redacted]	Scientist	11/19/19
[redacted]	Scientist	9/17/19
[redacted]	Scientist	9/19/19
[redacted]	Scientist	11/18/19, 11/21/19
[redacted]	Scientist	11/20/19
[redacted]	Scientist	9/10/19
[redacted]	Scientist	10/23/19

Non-IACUC members who participated in the Facility Inspection:

Name	Title	Date(s) of Participation
[redacted]	Animal Program Compliance Officer	9/17/19, 9/19/19, 9/24/19, 11/18/19, 11/19/19, 11/20/19

3) The IACUC must inspect semiannually all units of the animal care and use program, including the following:
all areas within the VA animal facilities;
all spaces outside the VA animal facilities where animals are housed for > 12 hours;
any areas where any procedure is performed on animals.

Identify each unit subject to inspection (press Tab in bottom right cell to add rows to the table):

Site	Bldg	Rm	Species	Space	Procedures	Name	Role
[redacted]	[redacted]	[redacted]	Mouse	Lab	Behavior	[redacted]	PI

[redacted]	[redacted]	[redacted]	Mouse	Lab	Overnight housing/sleep research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Behavior	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat, Mouse	Lab	Epilepsy studies	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat, Mouse	Lab	Perfusions	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Surgery	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	VMU	Animal housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse	Core facility	ABSL-2 surgery	Various	PIs
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	VMU	Animal housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse	Lab	Optogenetics	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat, Mouse	Core facility	Food storage	Various	PIs
[redacted]	[redacted]	[redacted]	Rat, Mouse	Lab	Surgery	[redacted]	PI
[redacted]	[redacted]	[redacted]	N/A	Lab	Drug storage	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat, Cat	Lab	Overnight housing/sleep research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Cat	Lab	Overnight housing/sleep research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing/sleep research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Overnight housing/sleep research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Overnight housing/sleep research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing/sleep research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing/sleep research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing/sleep research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing/sleep research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Euthanasia	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Tumor growth	[redacted]	PI
[redacted]	[redacted]	[redacted]	N/A	Lab	Document storage	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse, Rabbit	Lab	Tissue analysis	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Euthanasia	[redacted]	PI
[redacted]	[redacted]	[redacted]	N/A	Lab	Document storage	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat, mouse	Lab	X-ray; PET scan	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	Hamster	Lab	Disease research	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	Mouse	Lab	Disease research	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	Mouse	Lab	Surgery	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	Gerbil	Lab	Euthanasia	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	Mouse	Lab	Overnight housing	[redacted]	[redacted]

[redacted]			N/A	Lab	Document storage	[redacted]	PI
[redacted]			Mouse	Lab	Cancer research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat, Mouse	Lab	Alzheimer's research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat, Mouse	Lab	Alzheimer's research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat, Mouse	Lab	Alzheimer's research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Overnight housing/epilepsy	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing/epilepsy	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Epilepsy	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Document storage	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Metabolism	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Behavior	[redacted]	PI
[redacted]	[redacted]	[redacted]	Cat	Lab	Behavior/sleep	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Behavior	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Euthanasia	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat, Mouse	Lab	Surgery	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Overnight housing	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Surgery	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Euthanasia	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Surgery	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Surgery	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	GI studies	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Overnight housing	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Surgery	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	GI function tests	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Euthanasia	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse/ rat	Lab	Euthanasia	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Euthanasia	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Behavior	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Retina studies	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Sleep EEG/surgery	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	GI studies	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	GI studies	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat	Lab	Overnight housing	[redacted]	PI
[redacted]	[redacted]	[redacted]	Rat, Mouse	Lab	Pancreatic research	[redacted]	PI
[redacted]	[redacted]	[redacted]	N/A	Lab	Pancreatic research	[redacted]	PI
[redacted]	[redacted]	[redacted]	Mouse	Lab	Tumor studies	[redacted]	PI
[redacted]	[redacted]	[redacted]	N/A	Lab	Document storage	[redacted]	PI
[redacted]	[redacted]	[redacted]	N/A	VMU	Empty	[redacted]	VMO
[redacted]	[redacted]	[redacted]	N/A	VMU	Empty	[redacted]	VMO
[redacted]	[redacted]	[redacted]	N/A	VMU	Empty	[redacted]	VMO
[redacted]	[redacted]	[redacted]	N/A	VMU	Empty	[redacted]	VMO
[redacted]	[redacted]	[redacted]	N/A	VMU	Empty	[redacted]	VMO
[redacted]	[redacted]	[redacted]	N/A	VMU	Empty	[redacted]	VMO
[redacted]	[redacted]	[redacted]	N/A	VMU	Empty	[redacted]	VMO

[redacted]	[redacted]	[redacted]	N/A	VMU	Empty	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse	VMU	Surgery prep	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse	VMU	Surgery	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse	VMU	Surgery prep	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse	VMU	Animal housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse	VMU	Animal housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse	VMU	Animal housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Mouse	VMU	Animal housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat	VMU	Animal housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat	VMU	Animal housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Gerbil	VMU	ABSL-2 housing	[redacted]	VMO
[redacted]	[redacted]	OR 1	Rat, Mouse, Rabbit, Cat	VMU	Surgery	[redacted]	VMO
[redacted]	[redacted]	OR2	Rat, Mouse, Rabbit, Cat	VMU	Surgery	[redacted]	VMO
[redacted]	[redacted]	OR prep room	N/A	VMU	Surgery prep	[redacted]	VMO
[redacted]	[redacted]	131	Rat, Mouse, Rabbit, Cat	VMU	Pre-op	[redacted]	VMO
[redacted]	[redacted]	Pharmacy storage	N/A	VMU	Drug storage	[redacted]	VMO
[redacted]	[redacted]	Treatment room	Rat, Mouse, Rabbit, Cat	VMU	Treatment room	[redacted]	VMO
[redacted]	[redacted]	Necropsy	Rat, Mouse, Rabbit, Cat	VMU	Necropsy	[redacted]	VMO
[redacted]	[redacted]	138	N/A	VMU	Food storage	[redacted]	VMO
[redacted]	[redacted]	Small autoclave room	N/A	VMU	Document storage	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse, Hamster	VMU	ABSL-2 housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse, Hamster	VMU	ABSL-2 procedures	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat, Mouse, Hamster	VMU	ABSL-2 housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	Rat	VMU	Animal housing	[redacted]	VMO
[redacted]	[redacted]	[redacted]	N/A	VMU	Cage washer	[redacted]	VMO
[redacted]	[redacted]	Clean cage room	N/A	VMU	Clean cage storage	[redacted]	VMO

[redacted]	N/A	VMU	Food prep	[redacted]		VMO
	Mouse	VMU	Animal housing			VMO
	Mouse	VMU	ABSL-2 procedures			VMO
	Mouse	VMU	ABSL-2 housing			VMO
	Rabbit	VMU	Animal housing			VMO
	All species	VMU	Carcass storage			VMO
	All species	VMU	Transport			VMO
	Rat	VMU	Animal housing			VMO
	N/A	VMU	Empty			VMO
	N/A	VMU	Empty			VMO
	N/A	VMU	Cage rack storage			VMO
	N/A	VMU	Empty			VMO
	N/A	VMU	Empty			VMO
	N/A	VMU	Empty			VMO
	Rat, mouse	Affiliate	Liver and pancreas function			PI
	Rat, Mouse	Affiliate	Various	Various		PIs

4) For each item in the checklist, type "X" in the column that applies (shaded cells should not be used):

Not Applicable
Acceptable
Approved Departure (approved by the IACUC)
Minor Deficiency
Significant Deficiency
Could Not Evaluate (during this inspection)

The last line of each section of the checklist is designated "Other Observations", for documentation of relevant observations that are not directly addressed by the checklist items.

5) For each item marked as an Approved Departure, a Minor Deficiency, or a Significant Deficiency here (Part 1, Section B), provide details in Part 2 of this form.

6) Items that reflect changes in the 8th edition of the *Guide* are flagged as follows, and may require particular attention as the 8th edition is implemented.

‡ **denotes a new "must" item**
† **denotes a new "should" item**

I. Implementation of Institutional Policies

A. Performance of Work According to Protocol								
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
1150	Current versions of IACUC approved protocols are readily available to animal care staff as well as research staff.				M		

1151	Animal research procedures (observed by the IACUC inspection team includes but is not limited to conduct of surgery, behavioral testing, training, exercise, administration of anesthetics and analgesics, etc.) are being performed according to the protocols approved by the IACUC. *[PHS (IV.C.1); Guide (p. 33-34)]*						X
1152	Individuals observed working with animals are identified on the corresponding protocols approved by the IACUC.						X
1153	Routine husbandry tasks observed are being performed according to documented SOPs.		A				
B. Addressing Concerns about Animal Welfare							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
1200	Contact information for responsible local and VA Central Office personnel are posted prominently in the animal facility for reporting of animal welfare concerns. *[1200.07 (8.k(2)); Guide (p. 24)]*		A				
C. Occupational Health and Safety							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
1250	Appropriate hazard signs and relevant safety protocols are posted in plain view, and the MSDSs are readily available, where specific hazardous agents are in use. *[1200.07 (Appendix C-8.h(1)-(2))]*		A				
1251	Wherever gas anesthetics are used, waste anesthetic gas is removed via a scavenging system or by another approved method. *[Guide (p. 21; 145)]*		A				
1252	Labels on safety equipment (e.g. eye wash, emergency shower, fume hoods, etc.) indicate that maintenance and certification are current. *[Guide (p. 20)]*		A				
1253	Good safety practices are evident as indicated by proper glass and sharps disposal, gas cylinders appropriately secured, proper separation of chemicals and wastes, etc. *[Guide (p.74)]*		A				
1254	Supplies are readily available for treatment of bites, scratches, and puncture wounds according to current CDC recommendations. *[Guide (p. 23)]*		A				
1255	Adequate supplies of appropriate attire and clean protective clothing, including disposable PPE (e.g. gloves masks, shoe covers, etc.) are readily available; soiled items are disposed of, laundered, or decontaminated according to approved facility procedures. *[1200.07(Appendix E-2.e) ;Guide (p. 20-22)]*				M		
1256	The IACUC inspection team determined that with regard to the use of hazardous agents, appropriate procedures, containment equipment, and personal protective equipment are used to safeguard personnel and animal health and are consistent (where applicable) with APHIS, USDA, and CDC Select Agent Regulations and other federal, state, and local regulations including security measures. *[1200.07 (Appendix E-2(l)); Guide (p. 20-22; 148-149)]*		A				
D. Other observations							

		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
1300					M		

II. Physical Plant

A. General							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
1350	Corridors are sufficiently wide and clear of obstacles so that personnel and equipment can move easily without impediment. *[Guide (p. 136)]*		A				
1351	Floor surfaces are moisture-resistant, nonabsorbent, and impact-resistant; floors are in good condition, without cracks, evidence of delamination or deterioration, of appropriate texture, and are clean and sanitized. *[Guide (p. 137-138); 9 CFR (Part 3, Standards)]*		A				
1352	Floors slope appropriately to drains; drains are filled with liquid, and those not in use for long periods are capped/covered. *[Guide (p. 138)]*		A				
1353	Wall and ceiling surfaces are smooth, moisture-resistant, nonabsorbent, impact-resistant, washable, and free of unsealed penetrations. These surfaces were found to be clean, sanitized according schedule, free of defects and evidence of water damage. *[Guide (p. 138-139); 9 CFR (Part 3, Standards)]*				M		
1354	Doors are adequately sized, fit tightly within their frames, are sealed to prevent vermin entry, and are in good repair; preferred features include self-closing mechanism, sweeps, recessed handles, and protective hardware. *[Guide (p. 137)]* Note: With the exception of doors with viewing windows that are needed for safety and other reasons, windows in animal facilities should generally be avoided.) *[Guide (p. 137)]*				M		
Heating, Ventilation, and Air-Conditioning (HVAC) System							
1355	Maintenance of temperature, humidity, and air pressure differentials within recommended ranges throughout the facility is documented. *[Guide (p. 43-47)]* ►List the document(s) reviewed: **Room temperature records; Engineering reports**		A				
1356	HVAC reheat units serving animal rooms fail in the "off" position, as designed, to prevent over-heating of animals. *[1200.07 (7.a(2)(a))]*		A				
1357	Effective back-up mechanisms are in place to maintain temperatures and humidity within acceptable ranges in the event of an electrical outage or failure of the HVAC system in the animal research facility. *[Guide (p. 141)]*		A				
Power & Lighting							

1358	Moisture-resistant switches and outlets, and ground-fault interrupters, have been installed in wet areas (e.g. cage processing, aquatic holding areas, etc.) *[Guide (p. 141)]*		A				
1359	Light fixtures, timers, switches, and outlets are properly sealed to prevent vermin from being harbored in them. *[Guide (p. 141)]*				M		
1360	Protective covers are in place over light bulbs and light fixtures. *[Guide (p. 141)]*				M		
1361	In the event of a power failure, alternative or emergency power supply is available to maintain critical services. *[Guide (p. 141)]*		A				
Noise Control							
1362	Noise reduction practices are utilized. *[Guide (p. 49-50; 142)]* For example: • Entry doors from corridors to animal housing areas are closed when not in use. • Carts, racks, and other equipment are equipped with casters. • Noisy animals are grouped in one section of the animal • facility. • Sound-generating equipment is selected and located to minimize disturbance to animals		A				
1363	Vibration dampening procedures are practiced where applicable. *[Guide (p. 142)]*	N/A					
Environmental Monitoring							
1364	Environmental conditions in animal holding spaces and other sensitive areas are monitored and verified by one or more mechanism or systems. *[Guide (p. 143)]*		A				
B. Facilities for Sanitization							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
1400	A dedicated cage and equipment processing area of appropriate size and design (including safety features, traffic flow, utilities, egress, HVAC capacity, clean storage, etc.) is available and meets program needs. *[Guide (p. 143)]*		A				
1401	Appropriate safety precautions and equipment are in place and in use; including but not limited to protective clothing and equipment, posting of standard operating procedures and warning signage, eyewash/shower stations, and functioning safety devices to prevent trapping of personnel inside of walk-in equipment (e.g., cage/rack washers, bulk sterilizers). *[Guide (p. 143)]*		A				
1402	Cage wash temperatures and sterilizer effectiveness are monitored and appropriate records are maintained. *[Guide (p. 72-73)]*		A				
C. Storage Areas							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
1450	Food and bedding, toxic or hazardous agents, and wastes are stored in separate designated areas. *[Guide (p. 141)]*		A				

1451	Food and bedding is stored in a vermin-free area and is protected from contamination. Temperature and humidity conditions are appropriate in food storage areas. *[Guide (p. 141)]*		A				
1452	Food stuffs/diets are obtained from reputable vendors and are managed to maintain quality*[Guide (p. 65-67)]*: • Feed bag stocks are rotated and used prior to expiration date or discarded. • Open bags of feed are stored in sealed, vermin-proof containers. • The storage area is clean and orderly; feed bags are stored off the floor on pallets, racks, or by other methods with adequate clearance from the wall to ensure good sanitation.				M		
1453	Bedding bags are stored off the floor on pallets, racks, or by other methods with adequate clearance from the wall to ensure good sanitation. Autoclaved bedding has been allowed to dry before use or storage. *[Guide (p. 69)]*		A				
1454	Refrigerated storage for animal carcasses and tissue waste is at <7°C (44.6 °F). *[Guide (p. 142)]*		A				
	D. Facilities for Aseptic Surgery						
		Not Applicable	**Acceptable**	**Approved Departure**	**Minor Deficiency**	**Significant Deficiency**	**Could Not Evaluate**
1500	Are located and designed to minimize traffic and/or contamination; the facilities include areas for surgical support, animal preparation, surgeon scrub, operating room and postoperative recovery that separate the related non-surgical activities from the operating room. Equipment and services needed to support the use of the surgery facility are available. *[Guide (p. 144-145)]*		A				
1501	Procedures are in place and have been implemented to assure effective sanitation of the operating room, surgical instruments and equipment, appropriate management and use of stored sterile supplies, scavenging of anesthetic gases, monitoring of drug inventory, and recordkeeping for anesthesia and postoperative care. *[Guide (p. 115; 122; 144-145)]*		A				
1502	Equipment needed to support aseptic surgery (e.g., autoclaves, anesthetic vaporizers, etc.) are in good repair and certifications are current. *[Guide (p. 20)*		A				
	E. Special Facilities ***(include barrier, aquatics laboratory study areas, procedure areas, imaging, core service facilities ,etc.)***						
		Not Applicable	**Acceptable**	**Approved Departure**	**Minor Deficiency**	**Significant Deficiency**	**Could Not Evaluate**
1550	Where applicable, the facility/room has appropriate drug storage/monitoring, sharps disposal, anesthetic monitoring and scavenging, safety equipment/procedures (safety signage, eyewash stations, secured gas cylinders, etc.) and carcass disposal. *[Guide (p.19-21;73-74;115;120;122;134)]*		A				

1551	Specialized facilities have procedures and equipment in place to minimize contamination risk. *[Guide (p. 147-150)]*		A				
1552‡	Appropriate sensors and ventilation are provided for areas where cryogen gases are used or stored. *[Guide (p 147)]*	N/A					
1553	Aquatic housing areas feature water impervious surfaces, slip resistant floors, ground-faulted electrical receptacles or circuits, and HVAC capacity to maintain appropriate temperature and humidity control. *[Guide (p 150-151)]*	N/A					
F. Ancillary Areas							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
16●●	Showers, sinks, toilets, locker rooms, and break areas are available for personnel and are separate from animal holding or support areas. [*Guide (p. 19; 136)]*		A				
16●1	Space for administrative and supervisory personnel, including space for staff training and education are available and separate from animal holding or animal support areas. [*Guide (p 136)]*		A				
G. Security							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
165●	Perimeter doors are closed and locked. *[1200.07 (7.i)]*		A				
1651	Security measures are in practice and mechanisms for controlling entry into the facility function appropriately. *[1200.07 (7.i); 1200.01.9.c; Guide (p. 23;151)]*		A				
H. Other Observations							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
17●●					M		

III. Animal Environment, Housing, and Management

A. Physical Environment							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
Temperature, Humidity, and Ventilation							
175●	Temperature and humidity in animal rooms are within acceptable ranges. *Guide (p. 43)]*				M		
1751	Odors, ammonia levels, and drafts are all within acceptable limits; ventilation and air quality are adequate. *[Guide (p. 45)]*				M		

1752	The supply air to animal holding is 100 % outside air treated with appropriate filtration. Note: Exhaust air recycled into HVAC systems serving multiple rooms is a cross contamination risk and generally should be avoided. Exhaust air should be treated with at least 85-95% ASHRAE efficient filters prior to recycling. *[Guide (p. 45-47; 140)]*		A				
Illumination							
1753	Lighting in animal rooms is on appropriate diurnal cycles. *[Guide (p. 47)]*		A				
1754	The intensity, quality, distribution, and rates of change of intensity of the light are appropriate to the species in each room. *[Guide (p. 47-48)]*		A				
Noise							
1755	Radios and other equipment that produce unnecessary sound audible to the animals are not in use in animal rooms, except as required by approved protocols for research or enrichment. Vibration is minimized where possible. *[Guide (p. 49-50)]*		A				
B. Husbandry							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
General							
1800	Animals are appropriately separated by species and disease status. *[Guide (p.111)]*		A				
1801	Animal handling (observed by the IACUC inspection team) is appropriate to the species.		A				
1802	Room logs confirm that daily observation of each animal, as well as cage cleaning, feeding, and watering are performed at appropriate intervals. *[1200.07(7.c)]*		A				
1803	Special procedures (e.g., diet or water scheduling/restriction, prolonged restraint, etc.) are conducted as described in the IACUC approved protocols based on IACUC inspection team observations. *[1200.07 (Appendix D-1.u); PHS (IV.C.1); Guide (p. 27-33)]*		A				
Housing – Primary Enclosures							

1804†	Primary enclosures, cages, and shelters are appropriate (in terms of size, construction, floor space, height, etc.) for the species housed. *[9 CFR (Part 3, Standards); Guide (p. 51-57 and 55-63; the Ag Guide]* Note: • The recommended minimum rabbit cage height is16 inches; rabbit cages that are less than 16 inches in height may be used if the IACUC has determined through performance assessments that the cage is sufficient to meet the behavioral, physical, and physiological needs of the animal. *[Guide(p.58-59)]* • The recommended minimum floor space for a female mouse + litter is 51 in^2 ; trio breeding may be appropriate in a cage providing 75-82 in^2 of floor space; the IACUC should make this determination based on the outcome of performance based standards. *[Guide (p.56-58)]*		A				
1805‡	The primary enclosure allows the animal to express natural postures, turn around, access food and water, and rest away from urine and feces. *[Guide (p.56)]*		A				
1806	The primary enclosures (cages, tanks, pens, stalls, etc.) and accessories are clean, in good condition, and are free of rust and sharp edges; the enclosure provides safe species appropriate housing. *[Guide (p. 51)]*				M		
1807‡	Outdoor housing provides protection from extreme weather, conditions, the opportunity to retreat, and is adequately ventilated. *[Guide (p. 54-55)]*		A				
1808	Procedural laboratories that house animals for more than 12 hours meet the minimum standards for housing. *[1200.07 (Appendix E-3.b)]*		A				
Population Management							
1809	Animal records (e.g., cage cards) include the following information, as appropriate *[Guide (p. 75-76); 9 CFR (2.35)]*: • Source of animals • Strain or stock (including genotype using standard nomenclature where applicable) • Name and contact information for PI • Protocol number • Pertinent dates (e.g., acquisition by facility, birth) • Number of individuals per group, when identified in groups • Age or weight • Gender • Individually identifiable features (e.g., markings, tattoos, ear • tags, neck chains, implanted microchips, etc.)		A				
1810	The IACUC inspection team determined that animal records are readily available, appropriately detailed, properly maintained, and accompany animals when transferred to another institution. *[Guide (p. 75-77)]*		A				
Behavioral Management							

1811	The IACUC inspection team determined that the environmental enrichment program is appropriate to the species, ages, and number of animals housed and is beneficial to and safe for the animals. *[Guide (p. 52-54)]*		A				
1812	Animals are housed in compatible social groups as appropriate; socially housed animals are able to escape or hide from aggressive animals, and have ready access to food and water. *[Guide (p. 51-60;63-65)]*		A				
1813	The IACUC inspection team reviewed the records of singly housed animals; *Guide* recommendations for singly housed animals are being followed. *[Guide (p. 64)]*		A				
1814	Based on the behavior observed by the IACUC inspection team, the animals are appropriately habituated to routine husbandry and experimental procedures. *[Guide (p. 64-65)]*		A				
Food							
1815	Each animal is fed uncontaminated, palatable, high quality food using a feed schedule and methods (that considers caloric management, delivery, and sanitation) appropriate to the species. *[Guide (pg. 65-67)]*		A				
Water							
1816	Each terrestrial animal has ready access to potable drinking water (quality based on periodic assessment) and the water distribution system is clean and appropriate to the species. *[Guide (p. 67-68)]*				M		
1817	For aquatic animals, the water quality is appropriate for the species. *[Guide (p. 78-79, 85)]*	N/A					
1818‡	In aquatic systems, chlorine, chloramines, chemical, and reactive bioproducts are removed or neutralized prior to use. *[Guide (p. 78, 86)]*	N/A					
1819‡	The biofilter of the aquatic life support system is of adequate size to process the bioload. *[Guide (p 80)]*	N/A					
Bedding							
1820	The bedding present in primary enclosures (where appropriate) is consistent with the species, facilitates good health, and meets scientific requirements. *[Guide (p. 68-69)]*		A				
Sanitation							
1821	Cleaning implements are designated for specific rooms or for areas at similar risk of contamination and are in good repair. *[Guide (p. 72)]*		A				
1822	Primary enclosures (including substrates and cage components), animal holding rooms, support spaces, etc. are cleaned and disinfected on a regular schedule consistent with the use of the area and nature of contamination. *[Guide (p 70 - 72)]*		A				
1823	The effectiveness of sanitation methods/procedures are assessed and documented. *[Guide (p. 73)]*		A				
C. Animal Procurement and Transportation							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate

1850	Animals being transported are appropriately restrained, secured, and covered, to protect the health and safety of the animals and humans (passersby as well as personnel involved in the work with the animals), to minimize stress on the animals, and to ensure animal biosecurity. *[1200.07(Appendix E-3.a (15)); Guide (p. 107-109); 9 CFR (Part 3, Standards)]*		A				
1851	Promptly on receipt, animals are inspected by qualified personnel and moved to housing appropriate to the protocols for which they have been ordered. *[1200.07 (7b(3)); Guide (p. 107-109)]*		A				
1852	The condition of animals on arrival indicates that transportation was consistent with USDA regulations and humane practices. *[Guide (p.107)]*		A				
D. Preventive Medicine							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
1900	Based on the observations of the facility inspection team, animals are separated by species, source, health status, intended use (as appropriate) and after receipt, the animals are allowed a stabilization period. *[Guide (p. 109-112)]*		A				
E. Waste Disposal							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
1950	Conventional, biological, and hazardous wastes are regularly collected, stored and disposed of through the use of safe handling and processing practices. *[Guide (p. 73-74)]*		A				
1951	Waste receptacles are leak-proof, labeled, cleaned regularly, and have tight-fitting covers. *[Guide (p. 73)]*		A				
1952✣	Hazardous wastes are rendered safe before removal from facility. *[Guide (p. 73-74)]*		A				
1953	Appropriate containers for sharps disposal are readily available in locations in which sharps are used, and are no more than 2/3 to 3/4 full. *[Guide (p. 74)]*		A				
F. Pest Control							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
2000	A humane, effective, and documented pest prevention and control program (that includes rodents and insects) is in place; there is no evidence of pests in the facility. *[Guide (p. 74)]*		A				
2001	When it is necessary to use pesticides in animal holding areas, investigators are consulted in advance of pesticide use. *[Guide (p. 74)]*		A				
G. Medical Supplies							

		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
2050	Non-pharmaceutical grade compounds identified during the inspection were confirmed to be associated with an IACUC approved protocol. *[PHS (FAQ F.4); Guide (31)]*		A				
H. 2150							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
2100	The review of log sheets confirm that animals are cared for by qualified personnel on weekends and holidays, as well as on regular weekdays. *[Guide ((p. 74); 9 CFR (2.33(b))]*		A				
2101‡	Posted contact information for veterinary staff and veterinary care entries in logs confirm that emergency veterinary care is available and provided as needed after hours, on weekends and holidays, as well as on regular weekdays. [*Guide ((p. 74;114); 9 CFR (2.33(b))]*		A				
2102	Telephone numbers of key personnel are readily accessible to police and fire agencies at all times. *[Guide (p. 74)]*		A				
I. Other Observations							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
2150					M		

IV. Veterinary Medical Care

A. General							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
2200	Animals are observed at least daily for signs of illness, injury or abnormal behavior by trained personnel. *[Guide (p. 112)]*		A				
2201	Visits by part-time veterinarians are documented in a log showing the date and time of each visit. *[1200.07 (Appendix E-2.f (9))]*	N/A					
B. Surgery							
		Not Applicable	Acceptable	Approved Departure	Minor Deficiency	Significant Deficiency	Could Not Evaluate
2250	The IACUC inspection team determined that the recommendations of the *Guide* are followed for non-survival surgery (the surgical site is clipped, the surgeon wears gloves, the instruments and the surrounding area are clean). *[Guide (p. 118)]*						X

2251	The IACUC inspection team determined that aseptic technique is used for all survival surgical procedures, and includes appropriate preparation of the animal (shaving and disinfection of the surgical site), preparation of the surgeon (scrubbing, use of sterile glove, gowns, etc.), and use of aseptic operative techniques; the aseptic technique procedures are appropriate for the species used. *[Guide (p. 118-119)]*						X
2252	The IACUC inspection team determined that all surgical instruments and implants used in survival surgery are sterilized by steam, gas, or approved chemicals. Note: Alcohol is not a sterilant or a high-level disinfectant. *[Guide (p. 119)]*		A				
2254	The IACUC inspection team observed that for multiple consecutive rodent surgeries, personnel using hot bead sterilizers or liquid chemical sterilants for instrument sterilization take appropriate precautions to prevent thermal or chemical burns. *[Guide (p. 119)]*						X
2255	The IACUC inspection team confirmed that the operating area is cleaned and disinfected prior to major survival surgery. *[Guide (p. 117)]*						X
2256	The IACUC inspection team confirmed that appropriate intraoperative monitoring of anesthetic depth and physiological parameters is performed and documented by personnel. *[Guide (p. 119)]*		A				
2257	The IACUC inspection team confirmed that postoperative monitoring and care of appropriate intensity and frequency (includes anesthesia recovery, pain management, management of physiologic needs, assessment of overall well-being, wound healing, suture removal, etc.) was provided and documented by trained personnel. *[Guide (p. 119-120)]*		A				
C. Pain, Distress, Analgesia and Anesthesia							
		Not Applicable	**Acceptable**	**Approved Departure**	**Minor Deficiency**	**Significant Deficiency**	**Could Not Evaluate**
2300‡	Drug storage and control practices comply with federal regulations for human and veterinary drugs *[Guide (p. 115)]*				M		
2301‡	Analgesics and anesthetics (as well as other drugs) are used within their expiration date. *[Guide (p. 122)]*					S	
2302	Procedures for acquiring, using and storing anesthetics and analgesics are compliant with legal and safety standards. *[Guide (p. 115; 122)]*		A				
2303‡	Observation and/or record review indicates that before surgery begins, personnel ensured a surgical plane of anesthesia is attained. *[Guide (p. 122)]*		A				
2304	The IACUC inspection team determined that neuromuscular blocking agents are used in a humane and appropriate manner in accordance with the IACUC approved protocol. (*[Guide (p. 122-123)]*	N/A					
D. Euthanasia							
		Not Applicable	**Acceptable**	**Approved Departure**	**Minor Deficiency**	**Significant Deficiency**	**Could Not Evaluate**

2350	Personnel are competent in performing euthanasia methods that are appropriate to the animal's age and species and are consistent with AVMA Guidelines. Alternate methods of euthanasia, if used, are approved by the IACUC. *[Guide (p. 124); 9 CFR (2.31(d)(1)(xi))]*		**A**				
2351‡	Personnel confirm animal death after the euthanasia procedure. *[Guide (p.124)]*		**A**				
E. Other Observations							
		Not Applicable	**Acceptable**	**Approved Departure**	**Minor Deficiency**	**Significant Deficiency**	**Could Not Evaluate**
2400					**M**		

►Name of Medical Center: VA Greater Los Angeles Version 02/28/13
►Station Number: 691
►City, State: Los Angeles, CA
►Date of Semiannual Evaluation:12/4/2019

VA SEMIANNUAL EVALUATION of the INSTITUTIONAL ANIMAL CARE AND USE PROGRAM AND FACILITIES

Part 2 -- Table of Deficiencies and Departures

This form is for documenting the details about the observations noted in the checklists (Part 1, Sections A and B). Each deficiency, minor or significant, must be entered according to Instructions 2 and 3, below. Each "approved departure", as defined by OLAW, must be entered according to Instruction 4, below. The IACUC may also document on this form, at its discretion, other observations that are not deficiencies, and details about "deviations" that are not "departures", as defined by OLAW – these may be useful in addressing concerns raised by accreditation or regulatory agencies, or for monitoring purposes.

Instructions:

1) Enter identifying information in the header above:
   Double click in the header area.
   Then enter text after each ":"
      (Note: The "Date of Last Semiannual Evaluation" is considered to be the date by which both the Review of the Program and the Inspection of the Facilities were last completed. Federal regulations require that a new evaluation be completed no later than 6 months after the last evaluation.)
   Double click in the document area to return to the main body of Form 1.

2) Enter deficiencies with corrections that were still pending on the last report. Copy onto this form each item that was reported on Form 2 of the last semiannual evaluation, for which the correction was not yet completed when the last report was signed:
   Enter the date the deficiency was first noted in a semiannual evaluation.
   If the IACUC determines that a change in the scheduled date of correction is appropriate, ~~strike out the previously approved date and~~ add the new date below it.
   Enter the actual date when the correction of the deficiency was completed. If the work is not yet complete, leave the "Actual date of completion" blank, but include in the description any relevant information about progress to date.

Note: USDA requires the IACUC to report any failure to adhere to the plan and schedule for correction that results in a significant deficiency remaining uncorrected beyond the correction date set by the IACUC. The report must be submitted in writing within 15 business days of missing the correction date set by the IACUC, through the IO, to the Animal and Plant Health Inspection Service (APHIS) and any Federal agency funding the activity involved. Therefore, for the IACUC to change the correction date of a significant deficiency, it must review the justification for the change and approve a new correction date at a convened committee meeting prior to the original correction date.

3) Enter each new deficiency noted on Form 1 (Checklist), Parts A and B, of this report:

The date the deficiency was first noted.
The Part (A or B) and Item # on Form 1 to which it applies.
When applicable, indicate the location where the deficiency was noted.
A description of the specific deficiency -- Include sufficient detail for an outside observer to recognize when it has been corrected), a description of any underlying programmatic or systemic conditions that may have led to the deficiency, and a description of the plans both for correcting the deficiency and for addressing underlying factors so as to prevent recurrence. *[PHS (IV.B.3)]* Be sure to include the name of the individual who will be responsible for overseeing progress on the corrective action, on behalf of the IACUC. (The table will expand to accommodate the text entered.)
The severity of the deficiency (Minor [M] or Significant [S]), as indicated on Form 1.
The scheduled date of correction – enter the date by which the IACUC has determined that the correction should be completed.
The actual date when the correction of the deficiency was completed (leave blank if the work is not yet complete.)

4) Enter each "departure" from PHS Policy, including the provisions of the *Guide*, that has been approved by the IACUC. *[PHS (IV.B.3)]*

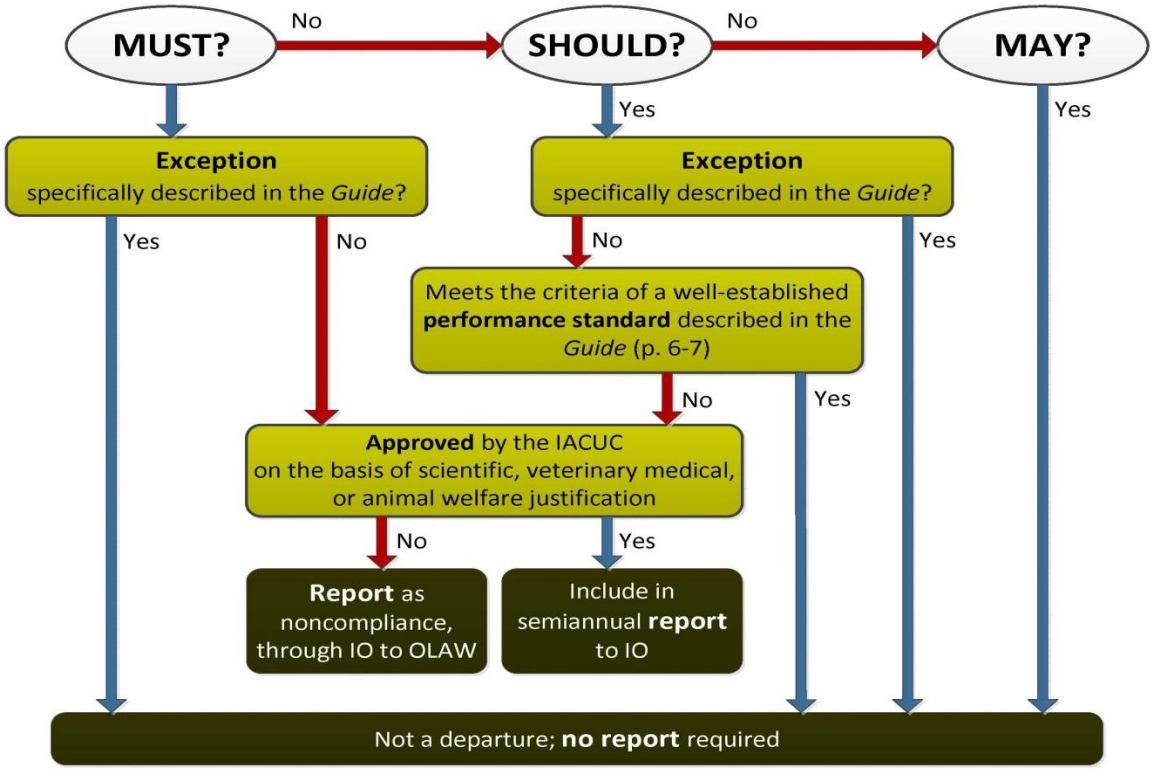
For any deviation from a general standard described in the *Guide*, the following series of test questions may be applied to determine whether the deviation is considered a "departure" by OLAW:

1. Does the Guide describe the general standard as a "May" standard? If so, this deviation from the general standard is NOT a "departure". Otherwise, for any "Should" or "Must" standard, proceed to the next question.

2. Does the Guide include an explicitly stated exception that allows for the deviation? If so, this deviation from the general standard is NOT a "departure. Otherwise, proceed to the next question.

3. Does the deviation meet a well-established performance standard for a "Should" standard, according to locally-defined and continuously monitored performance measures? If so, this deviation from the general standard is NOT a "departure". Otherwise, it IS a "departure", and may be approved by the IACUC only if justified on scientific, veterinary medical, or animal welfare grounds.

The test questions above are summarized in the following flow chart:



For approved departures that are documented in Appendix 9 of an IACUC-approved ACORP, simply attach a copy of Appendix 9. (The Official Date of Approval in the header must be included, but be sure to redact the name of the PI and the protocol number assigned by the IACUC.) Enter below the table here the total number of Appendix 9 pages attached.

For approved departures that are not documented in an Appendix 9, enter the information into this form as follows:
For "Original Date Noted", enter the date of the IACUC meeting at which the departure was reviewed and approved..
[1200.07 (8.f(1)(d)2-3); PHS (IV.B.3) 9 CFR (2.31 (c)(3)); and Guide (p. 9]
If the departure relates to a specific item on Form 1, enter the Part (A or B) and Item # to which it applies.
If applicable, indicate the location to which the departure applies.
A description of the departure – include a summary of the grounds for granting approval for the departure.
Mark the "D" category, to indicate that the item details a departure.
Enter "N/A" in the columns for the "Scheduled Date of Correction" and the "Actual Date of Correction".

5) Press "Tab" in bottom right cell to add rows to the table.

Part A or B	Item #	Bldg	Room	Descriptive details	Person responsible for overseeing corrections (VMO or PI protocol#)	Facilities issue?	Minor	Significant	Departure	Scheduled date of correction	Date correction confirmed
B	1150	[redacted]	[redacted]	Can't find ACORP for project 2. Please acquire a copy.	03007-17	no	x			12/15/2019	
B	1150	[redacted]	[redacted]	Current copy of ACORP not available.	08021-11	no	x			12/15/2019	
B	1150	[redacted]	[redacted]	Project#13 Current ACORP not available to review	05022-05	no	x			12/15/2019	12/2/2019
B	1150	[redacted]	[redacted]	Current copy of ACORP not available	04005-15	no	x			12/15/2019	

B	1150	[redacted]	[redacted]	Current copy of ACORP not available, project #001	06018-07	no	x			12/15/2019	
B	1150	[redacted]	[redacted]	Current copy of ACORP not available project #0011	01002-09	no	x			12/15/2019	
B	1255	[redacted]	[redacted]	There is not enough PPE available	VMO	no	x			11/21/2019	11/21/2019
B	1353	[redacted]	[redacted]	Crack in ceiling. ERW18180330-028	VMO	Yes	x			12/15/2019	11/26/2019
B	1353	[redacted]	OR suite	Door frames needs re-painting. ERW180330-33	VMO	Yes	x			12/15/2019	11/26/2019
B	1353	[redacted]	[redacted]	Mold in the ceiling of the morgue. Contact Made to Industrial Hygiene for Decontamination.	VMO	yes	x			12/15/2019	
B	1353	[redacted]	[redacted]	The moveable panels in the room cannot be sanitized - replace them.	0109-013	no	x			12/15/2019	
B	1353	[redacted]	[redacted]	Due to earlier water leak-ceiling tiles are missing and floor is dirty	06018-07	yes	x			12/15/2019	
B	1354	[redacted]	[redacted]	The door for sterile room does not shut by itself. ERW180403-11	VMO	yes	x			12/15/2019	
B	1354	[redacted]	[redacted]	The door does not shut on its own. ERW180330-035	VMO	yes	x			12/15/2019	
B	1354	[redacted]	[redacted]	The door does not shut on its own. ERW180403-11	VMO	yes	x			12/15/2019	
B	1354	[redacted]	[redacted]	Door doesn't close by itself	VMO	yes	x			12/15/2019	
B	1354	[redacted]	[redacted]	Two doors don't close by themselves	VMO	yes	x			12/15/2019	
B	1354	[redacted]	[redacted]	Door doesn't close by itself. Work Order C-190522-022 Submitted	VMO	yes	x			12/15/2019	
B	1354	[redacted]	[redacted]	Door doesn't close by itself	03008-17	yes	x			12/15/2019	

B	1354	[redacted]	[redacted]	Broken/damaged wall need to get it repaired	04010-19	yes	x			12/15/2019	
B	1354	[redacted]	hallway	Damaged/broken wall in the hallway	VMO	yes	x			date not assigned as of 12/3/19	
B	1354	[redacted]	[redacted]	Door doesn't close by itself. Work Order **ERW190604017** Submitted	06010-16	yes	x			12/15/2019	
B	1354	[redacted]	[redacted]	Door doesn't close by itself	VMO	yes	x				
B	1354	[redacted]	[redacted]	Door to outside needs a door sweep to prevent outside dust from getting in.	VMO	yes	x				
B	1354	[redacted]	[redacted]	Door to outside needs a door sweep to prevent outside dust from getting in.	VMO	yes	x				
B	1354	[redacted]	Clinic	Water leak from old water heater-under the sink	VMO	yes	x				
B	1354	[redacted]	[redacted]	Water dripping from the faucet	VMO	yes	x				
B	1354	[redacted]	[redacted]	Water dripping from the faucet	VMO	yes	x				
B	1359	[redacted]	[redacted]	Insects/cockroach in the lab/room - need to get it treated.	04010-19	yes	x			12/15/2019	
B	1359	[redacted]	[redacted]	Dead insect inside the light cover	08011-19	no	x			12/15/2019	
B	1359	[redacted]	[redacted]-OR	Dead insect/spider inside the room- corrected immediately	VMO	no	x			11/21/2019	11/21/2019
B	1360	[redacted]	[redacted]	Light cover falling off.ERW190828-042	VMO	yes	x			12/15/2019	11/26/2019
B	1360	[redacted]	[redacted]	Light cover is loose.**ERW190828-042**	VMU	yes	x			12/15/2019	11/26/2019

B	1360	[redacted]	[redacted]	Light cover is loose. **ERW190828-042**	VMU	yes	x			12/15/2019	11/26/2019
B	1452	[redacted]	[redacted]	Food with no label/ no expiration date -removed immediately	08016-17	no	x			9/17/2019	9/17/2019
B	1452	[redacted]	[redacted]	Food with no label/ no expiration date -removed immediately	07009-14	no	x			9/17/2019	9/17/2019
B	1452	[redacted]	[redacted]	Incorrect food labeling	08015-16	no	x			12/15/2019	9/30/2019
B	1700	[redacted]	[redacted]	Leaking faucet.	VMO	yes	x			12/15/2019	11/26/2019
B	1700	[redacted]	[redacted]	Oxygen Cylinder should not be in a cart	08021-11	no	x			12/15/2019	
B	1700	[redacted]	[redacted]	Euthanasia box needs to be a clear box	12023-13	no	x			12/15/2019	
B	1700	[redacted]	[redacted]	Chains securing oxygen cylinders is not installed correctly	09017-14	yes	x			date not assigned as of 12/3/19	
B	1700	[redacted]	in front- [redacted]	Euthanasia area not clean- corrected immediately	VMO	no	x			11/26/2019	11/26/2019
B	1700	[redacted]	[redacted]	One of the chains securing the oxygen cylinder was not connected	07009-15	no	x			10/24/2019	10/24/2019
B	1750	[redacted]	[redacted]	Temperature drops as low as 58 degrees Fahrenheit. Work Order **ERW 190604-023** Submitted	0109-013	yes	x			12/15/2019	
B	1751	[redacted]	[redacted]	Room is not at negative pressure, get this checked/corrected. (Building has not been used for housing in over a year) ERW180716-012	VMO	yes	x			12/15/2019	
B	1751	[redacted]	[redacted]	Fume hood certification is not current	01002-17	yes	x			12/15/2019	
B	1751	[redacted]	[redacted]	Sterile room- currently negative air flow, it should be positive air flow.	VMO	yes	x			12/15/2019	

B	1751	[redacted]	[redacted]	Positive air flow, it should be negative	VMO	yes	x			12/15/2019	
B	1751	[redacted]	[redacted]	Research staff using fume hood without turning it on- corrected immediately.	05022-05	no	x			11/21/2019	11/21/2019
B	1751	[redacted]	cage wash	Bedding disposable station- failed the airflow test – has failed sticker on it.	VMO	no	x				
B	1751	[redacted]	[redacted]	Fume hood testing is not current	VMO	yes	x				
B	1806	[redacted]	[redacted]	Animal water bottle left open/not covered	03008-17	no	x			10/23/2019	10/23/2019
B	1816	[redacted]	[redacted]	One of the animal cages had wet bedding - corrected immediately	VMO	no	x			9/24/2019	9/24/2019
B	2150	[redacted]	[redacted]	Animal census sheet is not current	11030-11		x			date not assigned as of 12/3/19	
B	2300	[redacted]	[redacted]	Need label for diluted Buprenorphine for labs to use.	IACUC admin.	no	x			12/15/2019	
B	2301	[redacted]	[redacted]	Poorly labeled drug in control drug cabinet. (C-topical with no expiration date).	02004-13	no	x			12/15/2019	9/10/2019
B	2301	[redacted]	[redacted]	Expired xylazine -removed	05022-05	No	x			9/17/2019	9/17/2019
B	2301	[redacted]	[redacted]	Expired Clidox -removed	VMO	no	x			11/26/2019	11/26/2019

►Total number of Appendix 9 pages attached: None (there have been none since the last semi-annual review) None.

►Name of Medical Center: VA Greater Los Angeles Healthcare System Version 02/28/13
►Station Number: 691
►City, State: Los Angeles, California
►Date of Semiannual Evaluation: 12/4/2019

VA SEMIANNUAL EVALUATION
of the
INSTITUTIONAL ANIMAL CARE AND USE
PROGRAM AND FACILITIES

Part 3 – Post-Review Documentation

Instructions (The "►" symbols indicate required information):

1) Enter identifying information in the header above:
Double click in the header area.
Then enter text after each ":"
(Note: The "Date of Semiannual Evaluation" is considered to be the date by which both the Review of the Program and the Inspection of the Facilities are completed.)
Double click in the document area to return to the main body of Form 1.

2) ►Enter the date of the most recent previous Semiannual Evaluation: 4/3/2019

3) Enter the names of all voting members of the IACUC, and identify the member who fills each required role on the committee, in the table in Section D, below. If any alternate members have been appointed, enter the name of each alternate member in the square brackets (e.g., "[Alt: John Smith]") below the name of each primary member for whom the alternate may serve. Only one member, the primary or the designated alternate, should sign in any one row of the table. (Press "Tab" in bottom right cell to add rows to the table.)

4) Complete Sections A-F, below.

A. SUMMARY OF SEMIANNUAL EVALUATION. Summarize the results of this semiannual evaluation, including an analysis of the implications of the results for the animal research program as a whole. The summary should:

- Note the total number of "departures" from PHS policy, including the provisions of the *Guide*, that have been approved by the IACUC.

- Provide summary overviews of the programmatic and facility deficiencies.

Our main Facility Deficiency with is facilities maintenance, especially with painting/patching in the VMU.

▶Name of Medical Center: VA Greater Los Angeles Healthcare System Version 02/28/13
▶Station Number: 691
▶City, State: Los Angeles, California
▶Date of Semiannual Evaluation: 12/4/2019

B. DOCUMENTATION of MINORITY OPINION(S). *Any participant in the semiannual evaluation who wishes to provide a minority opinion MUST be allowed to do so [1200.07 (8.f(1)(d)4); PHS (IV.E.1.d); 9 CFR (2.31(c)(3))].* Did any participant submit a minority opinion?

_____ Yes ____X____ No If "yes", fill out section E below.

C. Statement of AAALAC Accreditation *[PHS (IV.B.3)].* Are all VA animals housed or used only in facilities that are part of an AAALAC accredited program?

_X_ Yes. If yes, describe the accreditation as indicated below.

Identify the AAALAC accredited program: **VA Greater Los Angeles Healthcare System**

Give the date of the most recent achievement of Full Accreditation: 4/3/2019

___ No. If no, describe the components that are not Fully Accredited, as indicated below.

If VA animals are housed or used at an affiliate institution that is not AAALAC accredited,

Identify the affiliate:

Give the date on which the CVMO approved this arrangement:

___ If VA animals are housed or used at an institution where the AAALAC accreditation status is other than Full Accreditation,

Identify the institution:

Give the current accreditation status:

Describe briefly the current status of the institution in the process of regaining full accreditation:

D. DOCUMENTATION of REVIEW and APPROVAL by IACUC MEMBERS. *A majority of all voting members (not merely a majority of a quorum) must approve and sign the report [1200.07 (8.f(1)(e)); 9 CFR (2.31(c)(3))]. The report must be completed within one month of the date of the semiannual evaluation to facilitate timely progress on any corrective actions required.*

The undersigned verify that we
1) have reviewed and approved Forms 1 (Checklist, Parts A and B) and 2 (Table of Deficiencies and Departures),
2) have read any minority opinions appearing in item E of this report, and

3) hereby authorize IACUC representatives to review this report with the Medical Center Director:

TYPED NAME	ROLE ON IACUC	SIGNATURE	DATE
[redacted]	Chair, Scientist	[redacted]	12/04/19
[redacted]	Vice-Chair, Scientist	[redacted]	12/4/19
[redacted]	Vice-Chair, Scientist	[redacted]	12/4/19
[redacted]	Veterinarian	[redacted]	12/4/19
[redacted]	Unaffiliated member (Community Representative)	[redacted]	12/4/19
[redacted]	Unaffiliated member (Community Representative)	[redacted]	12/4/19
[redacted]	Non-Scientist member	[redacted]	
[redacted]	Scientist	[redacted]	12/4/19
[redacted]	Scientist		
[redacted]	Scientist	[redacted]	12/4/19
[redacted]	Scientist	[redacted]	12-4-19
[redacted]	Scientist	[redacted]	12-4-19
[redacted]	Scientist	[redacted]	12-4-19
[redacted]	Scientist	[redacted]	12-4-19
[redacted]	Scientist	[redacted]	12/4/2019
[redacted]	Scientist	[redacted]	12/4/18

E. MINORITY OPINION(S). If part B is checked "yes", provide the typed minority opinion(s) here:

▶ Name of Medical Center: VA Greater Los Angeles Healthcare System Version 02/28/13
▶ Station Number: 691
▶ City, State: Los Angeles, California
▶ Date of Semiannual Evaluation: 12/4/2019

F. COMMUNICATION WITH DIRECTOR OF THE FACILITY. After a majority of all voting IACUC members approve the report and indicate their approval (in Section D, above) by signatures next to their typed names and roles on the committee, *the report must be discussed personally with the facility Director by at least one voting member of the IACUC, representing the committee. It is recommended that the Attending Veterinarian and the IACUC Chair meet with the Director (any voting member of the IACUC who wishes to participate must be allowed to do so). It is a best practice for the ACOS for R&D and/or the AO for R&D to attend as well. After the meeting, the Director must sign the reporting indicating that he/she has reviewed it.* [1200.7(8.f(1)(e))]. **Note: the Director's signature only indicates awareness of the contents of the report, and does not imply agreement with the report or satisfaction with the corrective measures proposed. The report may not be altered after it has been signed by a majority of the voting IACUC membership, but any disputed items may be discussed in a cover memo.**

Certification: By my signature, I acknowledge receipt of this report, and verify that I have personally discussed its contents with the representatives of the IACUC.

Typed Name of Director	Signature	Date
Steven E. Braverman, M.D. **Medical Center Director**		3/16/2020

G. FINAL PROCESSING

A signed copy of the complete report (including Parts 1, 2, and 3) must be sent through the ACOS/R&D and Medical Center Director to the CVMO within 60 days of the date of approval and signature by a majority of the voting IACUC members. The R&D Committee should review the approved report as an item of business, but R&D approval is not required before submission of the final document to the CVMO. Send a copy including all signatures as a hard copy to [redacted] or as an email attachment to [redacted] The original must be retained for at least three years.

Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

Summarize the heating, ventilation and air conditioning (HVAC) systems for each animal facility, ***including all satellite facilities***. Include ***all animal holding rooms*** (including satellite holding rooms), surgical facilities, procedure rooms, and support spaces integral to animal facilities (e.g., cage wash, cage and feed storage areas, necropsy, treatment).

Bldg	room	Specific use	Temperature Set-Point	Electronic / Emergency Monitoring of Temperatures (Y/N)	Alert/Alarm Temperature Ranges	Humidity Control (Y/N)	Relative Pressure (NEG or POS)	Air Exchange Rate (per hour)	Date Verified / Measured
[redacted]	[redacted]	VMU rodent housing	73 F	N	N/A	N	NEG	15.4	6/2/2020
[redacted]	[redacted]	Rodent epilepsy	73 F	N	N/A	N	NEG	15.2	6/2/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	15	6/2/2020
[redacted]	[redacted]	VMU rodent housing	73 F	N	N/A	N	NEG	15	6/2/2020
[redacted]	[redacted]	Optogenetics	73 F	N	N/A	N	NEG	15.9	6/2/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	15	6/2/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	15	6/2/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	18.5	6/2/2020

Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

Bldg	room	Specific use	Temperature Set-Point	Electronic / Emergency Monitoring of Temperatures (Y/N)	Alert/Alarm Temperature Ranges	Humidity Control (Y/N)	Relative Pressure (NEG or POS)	Air Exchange Rate (per hour)	Date Verified / Measured
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	15.6	6/2/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	14	7/22/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	15.2	6/2/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	15	6/2/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	17.2	6/2/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	16.2	6/2/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	16.5	6/2/2020
[redacted]	[redacted]	Lab rodent housing	73 F	N	N/A	N	NEG	15	6/2/2020
[redacted]	[redacted]	VMU rodent housing	73 F	Y	60/82-85	N	NEG	15.8	6/3/2020
[redacted]	[redacted]	VMU rodent housing	73 F	y	60/82-85	N	NEG	15.3	6/3/2020
[redacted]	[redacted]	VMU rodent housing	73 F	y	60/82-85	N	NEG	15.2	6/3/2020
[redacted]	[redacted]	VMU rodent housing	73 F	y	60/82-85	N	NEG	15.4	6/3/2020
[redacted]	[redacted]	VMU rabbit housing	73 F	y	59/70-71	N	NEG	15	6/3/2020

Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

Bldg	room	Specific use	Temperature Set-Point	Electronic / Emergency Monitoring of Temperatures (Y/N)	Alert/Alarm Temperature Ranges	Humidity Control (Y/N)	Relative Pressure (NEG or POS)	Air Exchange Rate (per hour)	Date Verified / Measured
[redacted]	[redacted]	Surgeon scrub	73 F	N/A	N/A	N	NEG	15.4	6/3/2020
[redacted]	[redacted]	Operating room	73 F	N/A	N/A	N	NEG	41.5	6/3/2020
[redacted]	[redacted]	OR prep room	73 F	N/A	N/A	N	NEG	15	6/3/2020
[redacted]	[redacted]	Feed Storage	68 F	y	32/71	N	NEG	14.3	6/3/2020
[redacted]	[redacted]	procedure room	73 F	y	60/82	N	NEG	14.5	6/3/2020
[redacted]	[redacted]	Storage	73 F	y	60/82	N	NEG	17.1	6/3/2020
[redacted]	[redacted]	VMU rodent housing	73 F	y	60/82	N	NEG	15	6/3/2020
[redacted]	[redacted]	VMU rodent housing	73 F	y	60/82	N	NEG	15.01	6/3/2020
[redacted]	[redacted]	VMU rodent housing	73 F	y	60/82	N	NEG	15.2	6/3/2020
[redacted]	[redacted]	Procedure room	73 F	y	60/82	N	N/A	N/A	N/A
[redacted]	[redacted]	Storage	73 F	y	60/82	N	NEG	13.6	6/3/2020
[redacted]	[redacted]	Hallway	73 F	N/A	N/A	N	NEG	21.7	6/3/2020
[redacted]	[redacted]	Sterilizer/cage wash	73 F	y	60/82	N	N/A	N/A	N/A
[redacted]	[redacted]	Sterilizer/cage wash	73 F	y	60/82	N	N/A	N/A	N/A
[redacted]	[redacted]	Clean cage storage	73 F	Y	N/A	N	NEG	29.6	12/30/2019

Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

Bldg	room	Specific use	Temperature Set-Point	Electronic / Emergency Monitoring of Temperatures (Y/N)	Alert/Alarm Temperature Ranges	Humidity Control (Y/N)	Relative Pressure (NEG or POS)	Air Exchange Rate (per hour)	Date Verified / Measured
[redacted]	[redacted]	VMU cat housing	73 F	Y	60-88 (alert) 58-90 (critical alarm)	N	NEG	20.4	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	60-82 (alert) 62-85 (critical alarm)	N	NEG	23.3	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	14.1	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	14.3	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	23	12/30/2019
[redacted]	[redacted]	ABSL-2 rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	18.7	12/30/2019

Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

Bldg	room	Specific use	Temperature Set-Point	Electronic / Emergency Monitoring of Temperatures (Y/N)	Alert/Alarm Temperature Ranges	Humidity Control (Y/N)	Relative Pressure (NEG or POS)	Air Exchange Rate (per hour)	Date Verified / Measured
[redacted]	[redacted]	ABSL-2 rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	11.3	12/30/2019
[redacted]	[redacted]	ABSL-2 rodent procedure room	73 F	Y	N/A	N	NEG	20.6	12/30/2019
[redacted]	[redacted]	ABSL-2 rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	11.5	12/30/2019
[redacted]	[redacted]	Procedure room	73 F	N	N/A	N	NEG	11.5	12/30/2019
[redacted]	[redacted]	ABSL-2 rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	13.8	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	10	12/30/2019
[redacted]	[redacted]	Procedure room	73 F	N		N	NEG	25.4	12/30/2019
[redacted]	[redacted]	necropsy	73 F	N	N/A	N	NEG	16.5	12/30/2019

Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

Bldg	room	Specific use	Temperature Set-Point	Electronic / Emergency Monitoring of Temperatures (Y/N)	Alert/Alarm Temperature Ranges	Humidity Control (Y/N)	Relative Pressure (NEG or POS)	Air Exchange Rate (per hour)	Date Verified / Measured
[redacted]	[redacted]	post-op	73 F	N	60-88 (alert) 58-90 (critical alarm)	N	POS	24	12/30/2019
[redacted]	[redacted]	pre-op/radiology	73 F	N	N/A	N	POS	14.9	12/30/2019
[redacted]	[redacted]	OR	73 F	N	N/A	N	POS	21.5	12/30/2019
[redacted]	[redacted]	OR	73 F	N	N/A	N	POS	22.5	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	12	12/30/2019
[redacted]	[redacted]	immunodeficient procedure room	73 F	N	N/A	N	POS	22.6	12/30/2019
[redacted]	[redacted]	immunodeficient mouse housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	POS	13.1	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	12	12/30/2019
[redacted]	[redacted]	satellite housing rat or mouse	72 F	Y	19.1 C - 26.9 C (alert)	N	NEG	9.5	12/30/2019

Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

[redacted]	[redacted]	satellite housing rat	72 F	Y	19.1 C - 26.9 C (alert)	N	NEG	19.8	7/31/2020
[redacted]	[redacted]	satellite housing mouse	72 F	Y	N/A	N	NEG	25.3	12/30/2019
[redacted]	[redacted]	satellite housing rat	72 F	Y	N/A	N	NEG	15.8	12/30/2019
[redacted]	[redacted]	satellite housing rat	72 F	Y	19.1 C - 26.9 C (alert)	N	NEG	15.1	12/30/2019
[redacted]	[redacted]	satellite housing mouse	72 F	Y	19.1 C - 26.9 C (alert)	N	NEG	19.3	12/30/2019
[redacted]	[redacted]	satellite housing rat	72 F	Y	19.1 C - 26.9 C (alert)	N	NEG	12.5	12/30/2019
[redacted]	[redacted]	satellite housing rat	72 F	Y	19.1 C - 26.9 C (alert)	N	NEG	14.6	12/30/2019
[redacted]	[redacted]	satellite housing mouse	72 F	Y	19.1 C - 26.9 C (alert)	N	NEG	12.7	12/30/2019
[redacted]	[redacted]	satellite housing rat	72 F	Y	19.1 C - 26.9 C (alert)	N	NEG	11.9	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	y	68-82 (alert) 62-85 (critical alarm)	N	NEG	12	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	NEG	16.4	12/30/2019
[redacted]	[redacted]	procedure room	73 F	N	N/A	N	NEG	12.4	12/30/2019

Appendix 11: Heating, Ventilation and Air Conditioning (HVAC) System Summary

[redacted]	[redacted]	procedure room	73 F	N	N/A	N	NEG	15.8	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	POS	15	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	POS	15.5	12/30/2019
[redacted]	[redacted]	VMU rodent housing	73 F	Y	68-82 (alert) 62-85 (critical alarm)	N	POS	15.4	12/30/2019
[redacted]	[redacted]	procedure room	73 F	Y	N/A	N	NEG	23.4	12/30/2019

Appendix 12: Aquatic Systems Summary – Part II

Please summarize water management and monitoring information programs for each animal facility, including all satellite facilities, rooms, cephalopod housing systems, and enclosures.

We have no aquatic species at VA-GLA

Appendix 13: Primary Enclosures and Animal Space Provisions

Please complete the Table below considering performance criteria and guiding documents (e.g., *Guide*, Ag *Guide*, ETS 123 and/or other applicable standards) used by the IACUC/OB to establish adequacy of space provided for all research animals including traditional laboratory species, agricultural animals, aquatic species, and wildlife when reviewing biomedical, field, and agricultural research studies. Refer to AAALAC International's Position Statement "Cage or Pen Space" for additional guidance.

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 12.5" Lg x 11.0" W(front) x 3.5" W (rear) x 5.06" H	4 5	*Guide for the Care and Use Of Laboratory Animals, Eighth ed.*	Polycarbonate or Polypropylene Shoebox Cages with stainless steel wire bar lids with filter tops situated on stainless steel rolling racks. Cages may also be passively or actively ventilated Optimice® or Tecniplast® caging with HEPA filters and solid covers.
Rats	16 x 8 x 8 23" x 16" x 8"H 12.8"(325 mm) L x 18.5"(470 mm) W (front) x 6.5"(165 mm) W (rear) x 8.1"(20.5 cm) H.	2 4 2	*Guide for the Care and Use Of Laboratory Animals, Eighth ed*	Polycarbonate or Polypropylene Shoebox Cages with stainless steel wire bar lids with filter tops situated on stainless steel rolling racks. Cages may also be passively or actively ventilated Optimice® or Tecniplast® caging with HEPA filters and solid covers. Water is provided in water bottles.

Appendix 13: Primary Enclosures and Animal Space Provisions

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**
Cats	49 x 28 x 63	3	*Guide for the Care and Use Of Laboratory Animals, Eighth ed*	Rolling Mesh Steel Gang Cages with a ramp for access to suspended resting board levels. Plastic litter boxes. Feed and water are
Rabbits	27" W x 27W" x 18H"	1	*Guide for the Care and Use Of Laboratory Animals, Eighth ed.*	All rabbit cages are slat bottom, stainless steel, standard cages. All front-opening multiple-cage moveable racks
Guinea Pigs	23"x 16" x 8"H	2	*Guide for the Care and Use Of Laboratory Animals, Eighth ed.*	Polycarbonate or Polypropylene Shoebox Cages with stainless steel wire bar lids situated on stainless steel rolling racks.
Hamsters	14"x12.5" x 7"H	3	*Guide for the Care and Use Of Laboratory Animals, Eighth ed.*	Polycarbonate or Polypropylene Shoebox Cages with stainless steel wire bar lids situated on stainless steel rolling racks.
Gerbils	16" x 8" x 8"H 23"x 16" x 8"H	6	*Guide for the Care and Use Of Laboratory Animals, Eighth ed.*	Polycarbonate or Polypropylene Shoebox Cages with stainless steel wire bar lids situated on stainless steel rolling racks.

*For aquatic species, provide tank volume.
**Include descriptors such as open-topped, static microisolator, individually-ventilated cage systems (IVCS).

Appendix 14: Cleaning and Disinfection of the Micro- and Macro-Environment

Please describe the cleaning and disinfection methods in the Table below. Note the washing/sanitizing frequency and method for each of the following:

Area	Washing/Sanitizing Method (mechanical washer, hand washing, high-pressure sprayers, etc.)	Washing/ Sanitizing Frequency	Chemical(s) Used*	Other Comments (e.g., autoclaved)
Micro-environment				
Solid-bottom cages (static)	Mechanical washer	At least once weekly	Alkaline Detergent (Clout®)	
Solid-bottom cages (IVC)	Mechanical washer	At least once weekly	" "	
Suspended wire-bottom or slotted floor cages	Mechanical washer	Every other week	" "	
Cage lids	Mechanical washer	Every other week	" "	
Filter tops	Mechanical washer	Every other week	" "	
Cage racks and shelves	Mechanical washer	Every other week	" "	
Cage pans under suspended cages	Absorbent pads are exchanged for clean pads Mechanical washer	Three times a week (rabbit) Every other week	" " Pharmacal: Clout Alkaline and Urid Acid.	
Feeders	Mechanical washer	Every other week	Alkaline Detergent (Clout®)	
Watering devices	Mechanical washer	Once weekly	Alkaline Detergent (Clout®)	

Appendix 14: Cleaning and Disinfection of the Micro- and Macro-Environment

Area	Washing/Sanitizing Method (mechanical washer, hand washing, high-pressure sprayers, etc.)	Washing/ Sanitizing Frequency	Chemical(s) Used*	Other Comments (e.g., autoclaved)
Exercise devices and manipulanda used in environmental enrichment programs, etc.	Mechanical washer	Every other week	Alkaline Detergent (Clout®)	
Transport cages	Mechanical washer Hand Wash	Weekly or after every use (cats)	Alkaline Detergent (Clout®) Chlorine Dioxide Sterilant	Washed after transport
Operant conditioning & recording chambers, mechanical restraint devices (chairs, slings, etc.)	NA			
Euthanasia chambers	Hand washing after each use	As used	Chlorine Dioxide Sterilant	
Macro-Environment				
Animal Housing Rooms:				
Floors	Swept	Daily each business day		
Floors	Mopped	Weekly or as needed	All Purpose Cleaner Chlorine Dioxide Sterilant or Quartemary Ammonium Chloride	

Appendix 14: Cleaning and Disinfection of the Micro- and Macro-Environment

Area	Washing/Sanitizing Method (mechanical washer, hand washing, high-pressure sprayers, etc.)	Washing/ Sanitizing Frequency	Chemical(s) Used*	Other Comments (e.g., autoclaved)
Walls	Mopping	Once a month	Chlorine Dioxide Sterilant or Quarternary Ammonium Chloride	
Ceilings	Wiping	Once a month	Chlorine Dioxide Sterilant or Quarternary Ammonium Chloride	
Ducts/Pipes	Wiping	Once a month	Chlorine Dioxide Sterilant or Quarternary Ammonium Chloride	
Fixtures	Wiping	Once a month	Chlorine Dioxide Sterilant or Quarternary Ammonium Chloride	
Corridors:				
Floors	Swept and Mopped	Weekly or as needed	Chlorine Dioxide Sterilant or Quarternary Ammonium Chloride	
Walls	Mopping	Monthly	Chlorine Dioxide Sterilant or Quarternary Ammonium Chloride	
Ceilings	N/A	N/A		

Appendix 14: Cleaning and Disinfection of the Micro- and Macro-Environment

Area	Washing/Sanitizing Method (mechanical washer, hand washing, high-pressure sprayers, etc.)	Washing/ Sanitizing Frequency	Chemical(s) Used*	Other Comments (e.g., autoclaved)
Ducts/Pipes	Wiping	As needed and accessible	Chlorine Dioxide Sterilant or Quarternary Ammonium Chloride	
Fixtures	Wiping	As needed and accessible	Chlorine Dioxide Sterilant or Quarternary Ammonium Chloride	
Support Areas (e.g., surgery, procedure rooms, etc.); complete for each area:				
Floors	Sweeping and Mopping	Procedure rooms daily Surgery rooms weekly and after each use	Chlorine Dioxide Sterilant or Quarternary Ammonium Chloride	
Walls	Mopping	Once a month	Chlorine Dioxide Sterilant	
Ceilings	Mopping	Once a month	Chlorine Dioxide Sterilant	
Ducts/Pipes	Wiping	Once a month	Chlorine Dioxide Sterilant	
Fixtures	Wiping	Once a month	Chlorine Dioxide Sterilant	
Implements (note whether or not shared):				
Mops	Mechanical washer	Once a month	Alkaline Detergent (Clout®)	Changed out once a month or as needed

Appendix 14: Cleaning and Disinfection of the Micro- and Macro-Environment

Area	Washing/Sanitizing Method (mechanical washer, hand washing, high-pressure sprayers, etc.)	Washing/ Sanitizing Frequency	Chemical(s) Used*	Other Comments (e.g., autoclaved)
Mop buckets	mechanical washer, hand washing	As needed	Alkaline Detergent (Clout®) or All purpose cleaner	
Aquaria nets	N/A			
Other	N/A			
Other:				
Vehicle(s)	Transport Vans: mechanical washer, hand washing	Weekly	Chlorine Dioxide Sterilant	Inside after every use
Other transport equipment (large truck)	mechanical washer, hand washing	As needed	Chlorine Dioxide Sterilant	

*Please provide chemical, not trade name.

Appendix 15: Facilities and Equipment for Sanitizing Materials

In the Tables below, summarize the facilities and equipment used to sanitize animal related equipment (tunnel washer, bottle washer, rack washer, bulk autoclave, hand washing area, bedding dispensing unit, *etc.*). Note that some descriptions may be combined if all share identical features (e.g., all rack washers).

Building	Room No.	Equipment Type	Safety Feature(s)	Methods of Monitoring Effectiveness
[redacted]	N/A	Rack 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 daily ; ATP testing quarterly
[redacted]	N/A	Bulk autoclave	Abort cycle option; instructional signage	Guarantee 180-degree hot water rinse; temperature-sensitive tape used weekly;
[redacted]	N/A	Bulk autoclave	Abort cycle option; instructional signage	ATP-based luminescence swabs performed quarterly
[redacted]	N/A	Rack Washer	Abort cycle option	ATP-based luminescence swabs performed monthly
[redacted]	N/A	Small autoclave	Abort cycle option	N/A
[redacted]	[redacted]	Rack Washer	Emergency "off" button; labeled exit door, de-energizing cord on both sides, instructional signage	
[redacted]	[redacted]	Bulk Autoclave	Abort cycle option; instructional signage	

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: [redacted] campus

Room Type[a]	Light Intensity Range	Lighting Fixture Construction Features[b]	Photo-period (hrs)[c]	Photoperiod and Lighting Control	Override Mechanisms (if applicable)
Rodent Holding Rooms	280-495 Lux	Surface mounted, water resistant	12:12	Automatic via wall-mounted timer box	Mechanical on/off switch
Feline Holding Room	83-622 Lux	Surface mounted, water resistant	12:12	Automatic via wall-mounted timer box	Mechanical on/off switch
Treatment room	83-739 Lux	Surface mounted, water resistant	N/A	N/A	N/A
Cage Wash Room	42-679 Lux	Hanging light fixtures	N/A	N/A	N/A
Surgery	36-813Lux (average 400)	Recessed, water resistant	NA	N/A	N/A
Surgery Lights	8225-10784 Lux	arm-mounted, water resistant	NA	N/A	N/A
Post-Op room	160-942 Lux	Surface mounted, water resistant	N/A	N/A	N/A
Necropsy	97-366 Lux	Surface mounted, water resistant	NA	N/A	N/A

Appendix 17: Satellite Housing Facilities

This is actually a continuation of Appendix 16: Lighting summary. Satellite housing facilities start on the next page.

Location: [redacted] campus

Room Type[a]	Light Intensity Range	Lighting Fixture Construction Features[b]	Photo-period (hrs)[c]	Photoperiod and Lighting Control	Override Mechanisms (if applicable)
Rodent Holding Rooms	206-1020	Surface mounted, water resistant	12:12	Automatic via wall-mounted timer box	Mechanical on/off switch
Surgery	277-616 Lux (average 466)	Recessed, water resistant	NA	N/A	N/A
Surgery Light	1284 Lux	Arm-mounted, water resistant	NA	N/A	N/A
Sleep lab rodent rooms	3-947 Lux	Recessed, water resistant	Depends on the study	Automatic via wall-mounted timer box or inside sleep incubators.	Mechanical on/off switch

[a] A list of each room is not needed; group or cluster rooms by species or function
[b] Include such features as water resistance, red lighting, *etc.*
[c] Note if light cycle inverted/reversed.

Repeat Location and Table as necessary for each location, including satellite housing locations.

Appendix 17: Satellite Housing Facilities

Note: In the Program Description Section 2. IV. (Physical Plant), item C., describe the criteria used to determine a "Satellite Animal Holding Area." In the Table below, summarize these animal housing areas. Note that the total square footage for all each of these must also be included in the Summary of Animal Housing and Support Sites **(Appendix 2)**, and applicable information regarding these areas included in the Heating, Ventilation, and Air Conditioning (HVAC) Summary **(Appendix 11)** and Lighting Systems Summary **(Appendix 16)**.

Building	Room(s)	Person Responsible	Species Used	Approximate Area (ft^2 or m^2) Devoted to Housing	Maximum Period of Stay	Purpose / Rationale / Justification	Construction Features and Finishes
[redacted]	[redacted]	[redacted]	Rat/mouse epilepsy studies	100 sq ft.	10 days	Need 24hr EEG recording	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat sleep studies	375 sq ft	1 week	Animals in special sleep study incubators	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat sleep studies	295 sq ft	1 week	Animals in special sleep study incubators	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Mouse housing	156 sq ft	3 months	Animals with implants that need daily care.	Sanitizable ceiling and walls, linoleum floor
[redacted]			Mouse learning studies/ rat unit recording	158 sq ft	3 months	Animals in operant conditioning chambers	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat sleep studies	295 sq ft	3 months	Animals in special sleep study incubators	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat sleep studies	295 sq ft	3 months	Animals in special sleep study incubators	Sanitizable ceiling and walls, linoleum floor

Appendix 17: Satellite Housing Facilities

Building	Room(s)	Person Responsible	Species Used	Approximate Area (ft^2 or m^2) Devoted to Housing	Maximum Period of Stay	Purpose / Rationale / Justification	Construction Features and Finishes
[redacted]	[redacted]	[redacted]	Rat sleep studies	295 sq ft	3 months	Animals in special sleep study incubators	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat sleep studies	295 sq ft	3 months	Animals in special sleep study incubators	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat sleep studies	295 sq ft	3 months	Animals in special sleep study incubators	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat sleep studies/rat treadmill	295 sq ft	3 months	Animals in special sleep study incubators	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Mice	300 sq ft	3 months	BSL-2 cancer studies	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat/mouse epilepsy studies	375 sq ft	3 days	Continuous EEG recordings	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rats and mice	110 sq ft	24 hours	Radioactive decay after PET scans.	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat epilepsy	850 sq ft	3 weeks	Continuous EEG recordings	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	mice	45 sq ft	3 months	They do memory studies, and the animals have to be habituated to the lab for a few days before.	Sanitizable ceiling and walls, linoleum floor

Appendix 17: Satellite Housing Facilities

Building	Room(s)	Person Responsible	Species Used	Approximate Area (ft^2 or m^2) Devoted to Housing	Maximum Period of Stay	Purpose / Rationale / Justification	Construction Features and Finishes
[redacted]			rats	45 sq ft	3 months	They do memory studies, and the animals have to be habituated to the lab for a few days before.	Sanitizable ceiling and walls, linoleum floor
[redacted]			Rat – GI physiology	134 sq ft	3 weeks	They study the effects of stress, and need the animals to be habituated to the room for a few days before the testing.	Sanitizable ceiling and walls, linoleum floor
[redacted]			Mouse – GI physiology	121 sq ft	3 weeks	They study the effects of stress, and need the animals to be habituated to the room for a few days before the testing.	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat – spinal opiate function	230 sq ft	3 weeks	They do behavioral pain studies, and the animals have to be habituated to the lab and the equipment for a few days before.	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Rat – cholecystokinin physiology	300 sq ft	3 weeks	Animals in BioDAQ metabolic cage system.	Sanitizable ceiling and walls, linoleum floor
[redacted]	[redacted]	[redacted]	Mouse - metabolism	211 sq ft	3 weeks	Animals in Promethion metabolic cage system.	Sanitizable ceiling and walls, linoleum floor

Appendix 17: Satellite Housing Facilities

Building	Room(s)	Person Responsible	Species Used	Approximate Area (ft^2 or m^2) Devoted to Housing	Maximum Period of Stay	Purpose / Rationale / Justification	Construction Features and Finishes
[redacted]	[redacted]	[redacted]	Rat – GI physiology	209 sq ft	3 weeks	They study the effects of stress, and need the animals to be habituated to the room for a few days before the testing.	Sanitizable ceiling and walls, linoleum floor

Appendix 18: Cephalopod Oversight

Please describe below the oversight of cephalopods (for guidance, refer to AAALAC International's Frequently Asked Question, "Invertebrate animals" and AAALAC's Reference Resource, "Guidelines for the Care and Welfare of Cephalopods in Research-A consensus based on an initiative by CephRes, FELASA and the Boyd Group," (*Note AAALAC International's caveats regarding this resource*). In addition, the care and use of cephalopods may be described in the relevant sections (i.e., housing, husbandry, veterinary care, surgery and euthanasia, etc.) within the Program Description.

We have no cephalopods at VA-GLA