UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

SUBJECT: The Use of Animals in the Uniformed Services University of the Health Sciences

Instruction 3204

(VPR)

OCT 7 2010

ABSTRACT

This Instruction implements the Center for Laboratory Animal Medicine (LAM) and the Institutional Animal Care and Use Committee (IACUC) regulations governing the care and use of animals for research and training at the Uniformed Services University of the Health Sciences (USUHS). This Instruction incorporates information from the Department of Defense (DoD), the Code of Federal Regulations (CFR), and the National Institutes of Health (NIH) to provide guidance in carrying out these actions at the USUHS.

A. Reissuance and Purpose. This Instruction reissues USUHS Instruction 3204[a] to:

1. Incorporate substantive procedural and administrative changes.

2. Implement new guidelines from higher authorities and to incorporate documents such as the "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training"[b] and updated documents such as the "2007 AVMA Guidelines on Euthanasia[c]."

B. References. *See Enclosure 1.*

C. Applicability. This Instruction applies to all personnel (military and civilian), contract employees, temporary employees, and guest workers of the USUHS and its activities, as well as those individuals using animals in programs funded by the USUHS.

D. Definitions. *See Enclosure 2.*

E. Policy. It is the policy of the USUHS that the following guidelines and regulations will be followed in the care and use of animals at the USUHS:

1. Regulations.

a. "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training[b]."

b. "2007 AVMA Guidelines on Euthanasia[c]."

c. Joint Regulation[d].

d. Title 7, USC, Chapters 2131-2157[e].

e. Title 9, CFR, Parts 1-4[f].

f. "Guide for the Care and Use of Laboratory Animals[g]."

g. "PHS Policy on Humane Care and Use of Laboratory Animals[h]."

h. "DoD Policy for Compliance with Federal Regulations and DoD Directives for the Care and Use of Laboratory Animals in DoD Sponsored Programs[i]."

i. DoD Instruction 3216.01, "Use of Laboratory Animals in DoD Programs[j]."

j. USUHS Instruction 6402-M[k].

j. USUHS Instruction 6402-M[k].

2. Laboratory animals will be procured, maintained, and disposed of in compliance with this Instruction and the (LAM) Standard Operating Procedures (SOP).

3. All animals used within the USUHS will be housed in the USUHS Central Animal Facility or in specifically designated animal rooms. Animals will not be housed in laboratories or offices or held in laboratories for more than 12 hours. Exceptions to this policy must be approved by the Director, LAM, with the concurrence of the USUHS Institutional Animal Care and Use Committee (IACUC).

4. Animals may not be used or procured unless approved by the IACUC with concurrence of the Director, LAM.

5. All USUHS animal areas are designated "Restricted Areas" and are OFF LIMITS to unauthorized personnel. Tours of the Animal Facility must be approved, in advance, by the Director, LAM, the Vice President of Research (VPR), or the President, USUHS, or by their designated representatives.

6. Private pets are prohibited throughout the USUHS complex, except in unusual emergency situations or for exceptional educational training purposes. This does not apply to assistance animals used by the impaired. Exceptions will be determined by the Director, LAM.

7. The principal point of contact within the USUHS for all matters pertaining to laboratory animals is the Director, LAM.

8. The LAM is responsible for the development and issuance of SOPs to implement provisions of this Instruction.

9. Improper or deficient animal care and treatment should be reported by anyone observing or having knowledge of such actions. Any, or all, of the following individuals may appropriately be informed of perceived improprieties or deficiencies:

a. Supervisors within the involved administrative unit.

b. The Director, LAM.

c. The Chair or any member of the USUHS IACUC.

d. The IACUC Administrator.

e. The Vice President, Research.

f. The Dean, GSN.

g. The Dean, SOM.

h. The President, USUHS.

Persons receiving such information will assure the anonymity of the reporting individual to the greatest extent possible. Should public interest or concerns be raised, or a strong possibility of such, due to the perceived improprieties or deficiencies, the Vice President for External Affairs shall be immediately notified. In all cases, the USUHS will ensure the reporting individual freedom from reprisals of any type.

F. Responsibilities.

1. The Designated Institutional Official (IO) shall:

a. Be authorized to commit on behalf of USUHS that the requirements of Title 9, CFR, Parts 1, 2, and 3; the PHS Policy; and the *Guide for the Care and Use of Laboratory Animals,* will be met.

b. Review and approve the actions and recommendations of the IACUC.

c. Appoint members of the IACUC.

2. The Institutional Animal Care and Use Committee shall:

a. Review research and teaching protocols involving the use of laboratory animals.

b. Recommend approval/disapproval of protocols to the Institutional Official. The IACUC makes its determination in accordance with the following: "U.S. Government Principles for the Utilization and

Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training"[b]; Title 7, USC, Chapters 2131-2157[e]; Title 9, CFR, Parts 1-4[f]; the "Guide for the Care and Use of Laboratory Animals"[g]; and the "PHS Policy on Humane Care and Use of Laboratory Animals"[h]. IACUC disapproval of animal use protocols may not be overridden by other USUHS officials.

c. Conduct semiannual inspections of all animal study areas (i.e., animal holding areas, laboratories) and animal facilities, including review of all USUHS programs and practices relative to animal care and use.

d. Review and make recommendations regarding a program of instruction/ training in appropriate animal care and use for all investigators, research technicians, and other animal handlers.

e. Investigate all reports of improper or deficient animal care or treatment, incidents of unapproved research procedures being performed, and all reported violations of the United States Department of Agriculture (USDA) Regulations, in accordance with Title 7, USC, Chapters 2131-2157[e] and Title 9 CFR, Parts 1-4[f].

f. Suspend, if necessary, activities on any animal research protocol in which unapproved research procedures are being performed which violate humane animal treatment regulations and guidelines, or fail to meet current established veterinary medical care standards.

3. The Chair, Institutional Animal Care and Use Committee shall ensure that:

a. Regularly scheduled meetings of the IACUC occur with a frequency of no less than every six months.

b. Timely investigation and IACUC adjudication of reports of improper or deficient animal care or treatment occurs.

c. Timely submission of meeting minutes and reports to the Institutional Official (IO) takes place.

4. Department Chairs and Directors of Special Activities shall:

a. Review and approve research and teaching protocol proposals for scientific and academic merit, respectively, originating in their organization.

b. Coordinate all animal requirements of prospective staff members with the Director, LAM, prior to final recruitment action.

5. Principal Investigators shall:

a. Ensure the completion and IACUC approval of a DoD standardized animal research protocol format (USUHS Form 3206) prior to the purchase or use of experimental animals.

b. Ensure that animals are used and maintained in compliance with current regulations to specifically include consideration of non-animal alternatives, and the provision of documentation on the non-availability or non-applicability of such alternatives.

c. Ensure through his/her physical presence (or by a trained representative whose name is listed on the approved protocol) any painful animal procedure that must be conducted without the use of anesthetic, analgesic, or tranquilizer agents.

d. Care for and feed those laboratory animals requiring special handling or those involved in special studies with infectious, radioactive, or other known health hazard materials or make appropriate arrangements with the Director, LAM for the necessary support to include training of LAM personnel, if required.

e. Ensure that casual observation of procedures being accomplished on laboratory animals in research laboratories is not possible from adjacent public areas, such as corridors.

f. Ensure that animals and animal-associated materials, such as soiled cages, are covered appropriately to minimize aerosolization of animal allergens and are transported between research laboratories and

the Central Animal Facility via the most direct route and only via freight elevators.

g. Properly dispose of animals upon termination of a study, said disposition to include, but not be limited to, the following:

(1) Return animals to LAM for reuse when appropriate.

(2) Perform euthanasia in accordance with the "2007 AVMA Guidelines on Euthanasia."[c]

(3) Provide LAM with the animal's cage card and/or SF Form 600, delineating method, dose, route and name of agent used for euthanasia.

(4) Return for necropsy.

(5) Render harmless, by sterilization, chemical degradation, or other USUHS approved procedure, where potential pathogens, hazardous materials, or radiation are involved.

(6) Appropriately package, to include labeling and refrigeration, to minimize exposure to personnel responsible for further processing.

6. The Director of Laboratory Animal Medicine (LAM) shall:

a. Serve as the attending veterinarian for the USUHS and serve as a voting member of the IACUC.

b. Provide quality animals for teaching and research through proper management of animal procurement, quarantine, and preventive medicine programs.

c. Maintain a professional and technical staff to administer veterinary medical care and provide consultation with regard to experimental animals used at the USUHS.

d. Develop and implement instructional/training materials and programs to advise and instruct investigators, technicians, and other personnel on procedures involving the use, treatment, handling, restraint, and care of experimental animals in accordance with all current regulatory requirements.

e. Monitor procedures involving laboratory animals.

f. Maintain a staff of trained animal caretaker personnel to provide routine care of all animals held at the USUHS.

g. Provide and maintain all animal care equipment (i.e., racks, cages, auxiliary supplies) and diet materials to support the animal holding requirements of approved programs.

h. Determine the number and mix of animals that may be allowed within all areas of the USUHS.

i. Assist investigators in maintaining animals in chronic experiments, excluding extensive treatment or special care required by the protocol.

j. Notify investigators when abnormalities in experimental animals are noted.

k. Provide and maintain adequate surgical, clinical, laboratory, and necropsy facilities to accommodate protocol requirements and emergency needs.

l. Advise the USUHS administration on all matters of laboratory animal medicine and zoonotic disease control.

m. Assure compliance with all applicable regulations regarding the use of laboratory animals.

n. Provide or participate in training programs in the care and use of laboratory animals presented for USUHS personnel. Courses provided to medical or graduate students may be accomplished through an academic department.

G. Forms. *See Enclosure 3.*

H. Animal Use Approval. *See Enclosure 4.*

I. Animal Use Procedures. *See Enclosure 5.*

Charles L. Rice, M.D.
President

Enclosures:
1. References
2. Definitions
3. Forms
4. Animal Use Approval
5. Animal Use Procedures

REFERENCES

(a) USUHS Instruction 3204, The Use of Animals in the Uniformed Services University of the Health Sciences, dated 29 April 1998 (hereby cancelled).

(b) "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training," Public Health Service Policy on Humane Care and Use of Laboratory Animals, (reprinted October 2000).

(c) American Veterinary Medical Association (AVMA), "2007 AVMA Guidelines on Euthanasia," Journal of the American Veterinary Medical Association, USDA website, Animal Care, June 2007.

(d) Joint Regulation, AR 40-33, SECNAVINST 3900.38C, AFMAN 40-401(1), DARPAINST 18, USUHS Instruction 3203, "The Use of Animals in DoD Programs," dated 1 December 2003.

(e) Title 7, United States Code, Chapters 2131-2157, "Animal Welfare Act".

(f) Title 9 Code of Federal Regulations, parts 1-4, "Animal Welfare".

(g) "Guide for the Care and Use of Laboratory Animals," National Research Council, National Academy Press, 1996.

(h) "Public Health Service Policy on Humane Care and Use of Laboratory Animals," (reprinted October, 2000).

(i) "Department of Defense Policy for Compliance with Federal Regulations and DoD Directives for the Care and Use of Laboratory Animals in DoD-Sponsored Programs," dated 10 April, 1995.

(j) DoD Instruction 3216.01, "Use of Laboratory Animals In DoD Programs," dated 13 September 2010.

(k) USUHS Instruction 6402-M, "Radiation Safety Guide," dated 15 February 2006.

DEFINITION

Since each federal regulation has its own definition of animal, the DoD definition (approved by the Joint Technical Working Group) has been adopted for use in this Instruction and is as follows:

Laboratory animal is defined as a vertebrate animal other than human, regardless of species, used in support of biomedical research, testing, experimentation, exhibition, or teaching.

FORMS

The following forms can be found in the Laboratory Animal Medicine (LAM) office:

1. LAM Form 488, "LAM Support Request."

2. SF Form 600, "Chronological Record of Medical Care."

LAM forms can also be found at:

http://www.usuhs.mil/usuhs_only/lam/

Instructions and forms for submitting grant applications for both intramural and extramural funding sources can be found at:

http://www.usuhs.mil/research/ElectronicForms.html

USUHS Assurance forms can be found at:

http://www.usuhs.mil/research/EFAssuranceForms.html

IACUC forms, including the animal protocol form (USUHS Form 3206), can be found at:

http://www.usuhs.mil/iacucforms/iacforms.html

ANIMAL USE APPROVAL

A. INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)

1. All activities requiring the use of laboratory animals will be reviewed by the IACUC. At a minimum, the IACUC will be composed of not less than five members appointed by the Institutional Official (IO), and will include a Chair; the Director of LAM (or a veterinarian designated by whoever has direct delegated program responsibility for activities involving animals at USUHS); a graduate student; a non-scientist; a practicing scientist experienced in research involving animals; and at least two non-USUHS affiliated federal employees (primary and alternate) to represent general community interests. The graduate student will be nominated by his/her Department Chair and endorsed by the Associate Dean For Graduate Education (GEO) and will serve with the approval of the Chair, IACUC. The graduate student has the option to refuse this committee assignment without jeopardy.

2. Problems relative to the Animal Care and Use Program may be referred to the IACUC for review and adjudication. If the IACUC cannot work out solutions satisfactory to all parties, the problem, along with the IACUC's recommendations, will be referred to the IO.

3. LAM will not procure, house or issue laboratory animals to investigators/ instructors unless a protocol for use of the animals has been approved by the IACUC. Animals to be used for instructional purposes must be covered by a funded protocol.

4. The IACUC, as an agent of the USUHS, shall:

a. Review, at least once every six months, the USUHS program for humane care and use of animals, using Title 9, CFR, Parts 1-4[f] as a basis for evaluation.

b. Inspect, at least once every six months, all of the USUHS animal facilities, including animal study areas, using Title 9, CFR, Parts 1-4[f] as a basis for evaluation. Animal study areas include any location outside of the Central Animal Facility (CAF) where animals are held or housed for more than 12 hours, as approved by the Director, LAM. All laboratories where animals are used for experimental purposes will be inspected once every six months and any comments (findings) should be included in the IACUC minutes.

c. Prepare reports of the evaluations that were conducted and submit them to the IO and other appropriate agencies, as required (i.e., the Office of Laboratory Animal Welfare [OLAW], NIH, and USDA). The report will distinguish between significant and minor deficiencies and contain a reasonable and specific plan and schedule with dates for correcting each deficiency. Any significant deficiency identified in a report which remains uncorrected by the deadline stated in the report will be reported within 15 business days by the IACUC, through the IO, to the Office of the Assistant Secretary of Defense (Health Affairs) and all Federal Agencies funding animal activities at USUHS.

d. Review all protocols involving animals to determine that the proposed protocols are in accordance with all applicable laws and regulations. Ongoing reviews shall be conducted no less than annually. The protocols to be reviewed include all:

(1) New protocols.

(2) Existing protocols.

(3) Animal-related contract proposals submitted to the USUHS.

(4) Animal-related collaborative research efforts.

(5) Animal use training protocols.

e. Review and approve, require modifications in (to secure approval), or withhold approval of proposed animal protocols.

f. Suspend a protocol that has been previously approved, if it is determined that the protocol is not being conducted in accordance with the description of that protocol as approved by the IACUC. The IACUC may suspend an activity only after review of the matter at a convened meeting of a quorum of the IACUC and with the suspension vote of a majority of the quorum present.

g. If the IACUC suspends a protocol, the IO, in consultation with the IACUC, will review the reasons for the suspension, take appropriate corrective action, and report that action with a full explanation to the Office of the Assistant Secretary of Defense (Health Affairs) and all Federal Agencies funding animal activities at USUHS.

h. Ensure that all scientists, research technicians, animal caretakers, and other personnel involved in animal care, treatment, and use are qualified to perform their duties through the provision of training and instruction.

i. Maintain an official record of all IACUC meetings and reports that are signed by the IACUC Chair, IACUC Administrator, and appropriate members, and approved by the IO. These records will be maintained for at least three years. All records that relate directly to an activity will be maintained for the duration of the activity and for an additional three years after completion of the activity.

j. Investigate all reports of improper or deficient animal care or treatment, incidents of unapproved research procedures being performed, and all reported violations of applicable standards, regulations, or policies, according to the following procedures:

(1) Personnel discovering any of these violations will immediately notify, verbally or in writing, the Chair, IACUC, Director, LAM, Administrator, IACUC, or other USUHS officials. The anonymity of the reporting individual, if so desired, will be maintained. There will be no adverse action whatsoever taken or implied against the individual making the report.

(2) Individuals receiving a complaint are required to report the complaint to the IACUC Chair within 24 hours. The IACUC has delegated the authority to the Chair to either investigate the complaint personally or to appoint an appropriate committee member to conduct an investigation. The results of the investigation will be reported to the full IACUC. If it is found that there is a valid concern which is affecting the immediate health or safety of research animals, the Chair will call a full committee meeting as quickly as possible, but no longer than one week after being notified of a valid concern. The IACUC may suspend an animal use protocol as described in section A.4.f. and A.4.g. of this enclosure. The attending veterinarian has the authority to immediately stop any protocol infraction in progress which is, in his/her opinion, resulting in pain or distress to an animal, until such time that the IACUC can be convened as stated above.

(3) If the IACUC determines that the infraction is not serious enough to warrant suspension of the protocol, but does necessitate corrective action, the IACUC will forward to the IO the findings of the investigation and a recommendation for corrective action.

(4) If it is found that there is no

validity to the complaint, or if the infraction is of a nature that does not affect the health or safety of research animals, the complaint and finding can be discussed at the next regularly scheduled meeting. In the event that no validity is found regarding the complaint, the names of any individuals allegedly involved in the infraction will not be revealed during discussions by the IACUC or included in the minutes of the meeting.

B. PROTOCOL REQUIREMENTS

The DoD standardized protocol format (USUHS Form 3206) will be submitted for all projects using animals.

1. The protocol must contain detailed information on the proposed experiment, including USUHS Form 3206 and an annual listing of all species proposed for use during the period covered by the protocol. Additionally, a copy of the funded grant or contract should be submitted along with the protocol. For PHS (NIH) funded projects, the sections of the grant containing the study plan, and animal numbers, care and use should be submitted along with the protocol.

2. Protocols for teaching demonstrations and student laboratories will be prepared using USUHS Form 3206.

3. All animal use protocols will initially be pre-reviewed by a LAM veterinarian and then submitted to the IACUC Office. The IACUC Office will perform a pre-review of the protocol for completeness, including verification of a pre-review by a LAM veterinarian. If the IACUC Office makes pre-review comments, the PI must address them prior to the assignment of an Animal Protocol number. If no comments are made by the IACUC Office, an Animal Protocol number is assigned and the protocol is forwarded to all IACUC committee members for review and a determination of full committee review (FCR) or designated member review (DMR).

4. Protocol reviews must be done in accordance with the "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training"[b]; Joint Regulation[d]; Title 7, USC, Chapters 2131-2157[e]; Title 9, CFR, Parts 1-4[f]; the "Guide for the Care and Use of Laboratory Animals"[g]; the "PHS Policy on Humane Care and Use of Laboratory Animals"[h]; the "DoD Policy for Compliance with Federal Regulations and DoD Directives for the Care and Use of Laboratory Animals in DoD Sponsored Programs"[i]; and DoD Directive 3216.01 "Use of Laboratory Animals in DoD Programs."[j] The IACUC will consider, at a minimum, whether the following requirements are met:

a. The Principal Investigator (PI) has provided written assurance that the activities do not unnecessarily duplicate previous experiments.

b. The information sought by the use of animals is sufficiently important to warrant their use.

c. Identification of the species and the number of animals to be used are known.

d. A rationale for involving animals and for the appropriateness of the species and numbers of animals to be used is completed.

e. The design of the experiment, procedure, or demonstration is adequate to provide valid scientific data.

f. The maximum amount of information consistent with good scientific research practice is obtained.

g. A complete description of the proposed use of the animals is provided.

h. The minimum number of animals needed for scientific validity is used.

i. The animal model selected is the most suitable, based on consideration of the experimental design, potential alternatives,

and laboratory limits.

j. The use of drugs to minimize pain or discomfort is adequate.

k. Literature searches are performed when required to ensure that the research is not unnecessarily duplicative and that alternatives to painful or distressful procedures are evaluated.

l. The procedures involving animals will avoid or minimize discomfort, distress, and pain to the animals. If procedures cause more than momentary or slight pain or distress, they will:

(1) Be performed with appropriate sedatives, analgesics, or anesthetics, unless withholding such agents is scientifically justified in writing by the PI.

(2) Involve and consult with a LAM veterinarian.

(3) Not include use of paralytic agents without general anesthesia.

m. Animals that experience severe or chronic pain or distress that cannot be relieved will be euthanized at the end of the procedure or, if appropriate, during the procedure.

n. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures.

o. Major survival surgical procedures conducted on nonrodent and rodent animals will:

(1) Include appropriate provisions for preoperative and postoperative care of the animals in accordance with appropriate veterinary medical practices.

(2) Be performed using aseptic procedures, instruments, techniques, and equipment.

(3) Be conducted in facilities intended for this purpose, in the case of nonrodent animals. Surgeries performed on rodents typically require limited, contained work space, and therefore can be performed in a dedicated area of the investigator's laboratory using aseptic procedures and techniques.

(4) Will be limited to no more than one major survival surgical procedure from which it is allowed to recover unless:

(a) Scientifically justified in writing by the PI.

(b) Required as routine veterinary procedures or to protect the health or well-being of the animals as determined by a LAM veterinarian.

p. Methods of euthanasia used must be fully described and in accordance with applicable federal regulations.

q. Established policies on the care and use of animals are complied with.

r. The number of animals, use rate, and length of stay should be stated as accurately as possible to facilitate planning of animal space requirements by LAM. All animal use protocols will be pre-reviewed by the Director, LAM, or his/her designee.

5. Research protocols that do not meet the above cited requirements may be approved by the IACUC contingent upon specific changes being made as required by the IACUC, or approval may be withheld and the protocol returned to the responsible investigator stating deficiencies requiring correction before resubmission.

6. In all deliberations and review of protocols, the IACUC will consider the aspects of animal experimentation commonly referred to as the "Four R's":

a. Replacement of live animals with non-sentient material.

b. Reduction of the number of live animals used.

c. Refinement of techniques to minimize distress and/or pain in animals.

d. Responsibility of all personnel involved in the use and care of animals.

7. The IACUC will encourage, wherever possible, and in accordance with applicable animal welfare guidelines, re-use of animals independent of the initial investigation. Whenever animals are re-used, an evaluation will be performed by a LAM veterinarian to ensure that no animal is used in more than one procedure classified as unalleviated pain or distress.

8. The IACUC will provide written notification to investigators and Office of Sponsored Programs and/or Office of Program Development of its decision relative to approval, required modification, or withheld approval, of protocols involving animal use.

9. The decision to disapprove a protocol submitted to the IACUC will be handled in the following manner:

a. The written notification to the PI and the Department Chair will include a statement of the reasons for the IACUC's decision and provide the PI with an opportunity to respond in person or in writing.

b. The IACUC may reconsider its decision, with documentation in the IACUC minutes, in light of the information provided by the PI.

10. The decision to approve a protocol pending modification will be handled in the following manner:

a. Authority is granted by the IACUC to either the IACUC Chair or IACUC Administrator to approve administrative changes that do not impact the health, welfare, or safety of the animals.

b. The IACUC Chair may assign an individual IACUC member or an Ad Hoc (non-voting) consultant to review changes which may impact the health, welfare, or safety of the animals. This individual will have the necessary expertise to properly evaluate the response to the requested modifications and the designated authority to approve the protocol based on the response of the PI.

11. The IACUC will be responsible for approval of minor and major modifications to animal protocols that have been previously approved. A minor modification will be submitted in written or electronic format to the IACUC Administrator, IACUC. Temporary approval of the minor modification may be granted to the PI pending final approval by the IACUC at the next regularly scheduled meeting. Major modifications are submitted to the IACUC Office on USUHS Form 3206B and are reviewed in the same manner as a new protocol submission. A listing of minor/major Protocol Modifications is available on the IACUC web page as IACUC Policy Letter #11.

12. The PIs of all newly approved protocols are required to meet with the Chief of the Veterinary Medicine Division, or his/her designee, for pre-protocol implementation prior to any animal work being conducted under that protocol.

C. MANUSCRIPTS, ABSTRACTS, AND SPEECHES

Laboratory Animal Use Statement.

Manuscripts, abstracts, or speeches reporting investigations using laboratory animals will include a footnote stating, "The studies reported herein were approved by the USU Animal Care and Use Committee, and were conducted according to the principles set forth in the Guide for the Care and Use of Laboratory Animals, Institute of Laboratory Animal Resources, National Research Council, 1996." This statement will also be included as a paragraph in the cover letter (including those transmitting abstracts), when appropriate. Where there is

insufficient space within the text area on abstract forms, this statement will be put on the form in some manner, such as a footnote.

D. CURRENT IACUC POLICIES

Current IACUC policies may be found at http://www.usuhs.mil/usuhs_only/iacuc/iacpol.html.

ANIMAL USE PROCEDURES

A. PROCUREMENT, REQUISITION, AND ISSUE OF ANIMALS AND EQUIPMENT

1. Animals.

a. LAM will initiate procurement of all animals.

b. No animals will be brought into the USUHS facilities from any source (e.g., from another Washington area federal, state, or private laboratory, a staff member's previous place of employment, or others) without prior approval from Director, LAM.

c. All shipments of animals must be coordinated through LAM. LAM will ensure that animals are transported in accordance with applicable federal, state, and military regulations, and will provide any required health certificates and appropriate veterinary medical health examinations.

d. A stabilization period is necessary to allow physiologic and nutritional stabilization of animals following their arrival. The specific length of time for stabilization will depend on the type and duration of animal transportation, the species involved, and the intended use of the animals. A minimum of 24 hours, (preferably 3-4 days) must be provided when animals are to be used to collect scientific data. Non-stabilized animals may be used for acute (terminal) tissue collection, terminal teaching laboratories, or in cases where it is determined that immediate use is the least stressful to the animal and does not compromise scientific data. The immediate use of non-stabilized animals must be stated in the animal protocol and approved by the IACUC.

e. In-house breeding and production of animals will be kept to a minimum within the USUHS facilities. For this reason, requests for animals will be initiated as far in advance of need as possible.

f. Laboratory animals will be delivered to the requester in accordance with information entered into the computer ordering system with approval and purchase through LAM.

g. The procurement and issuance of laboratory animals will depend on the availability of adequate animal holding space, as determined by the Director, LAM.

h. Actual costs of animals (including transportation charges) will be billed directly to the protocol or cost code indicated on the purchase request. Investigators must have sufficient funds available in their cost center to completely cover the cost of the animals plus shipping before an animal order will be placed.

i. Payments for the purchase of animals will be made by either the USUHS or by the Henry M. Jackson Foundation (HJF) directly to the supplier. Transfer of funds will **not** be from any other source to the supplier.

j. Per diem fees will be charged for animals maintained at the USUHS. Copies of the current schedule may be obtained from LAM, or from the LAM website. Failure to pay for accrued per diem charges will result in the Director, LAM, the IACUC Office, the Office of Research, and the IO being notified of the delinquent account.

k. Charges associated with animal activities for unapproved IACUC protocols under PHS grants will follow the guidance at **http://grants.nih.gov/grants/guide/notice-files/NOT-OD-07-044.html.** Unless specific permission is granted by a PHS grants/program officer, no costs associated with animal activities, to include costs associated with animals placed in a holding protocol as well as salaries for personnel on the grant who are caring and/or using

animals, may be charged to a PHS grant during times when there is no IACUC approval (e.g., protocol suspension and/or expiration).

l. Laboratory animals are Government property and may not be converted to private use. Exceptions may be made by the Director, LAM with the oversight of the IACUC when other Government facilities cannot use the animals. An "Adoption Liability Release" form must be signed by the adopting individual.

2. Animal Blood or Tissue.

a. The Center for Laboratory Animal Medicine maintains an animal use protocol for the collection of biosamples, including blood. A memorandum outlining the biosample required, amount, frequency, and reasons why it is needed, will be submitted to the IACUC at least three business days in advance of the actual need. This memorandum will be reviewed and approved by the IACUC Administrator and attached to the biosamples protocol. LAM personnel will be responsible for collecting the biosample for the requestor.

b. Requests for commercially available animal blood, tissues, and preserved specimens need not be submitted through LAM. All biological materials coming into the University must have documentation to show they are free of zoonotic and animal pathogens, or be tested prior to their use.

3. Sponsored Animal Research **or** Production of Animal-Related Products.

All sponsored activities (via grant or contract mechanisms) with commercial companies which involve the conduct of animal research, teaching, or testing, or the use of animals to produce biological products, such as monoclonal or polyclonal antibodies, must be reported to the IACUC prior to initiation of any animal use. In general, sponsored research using live animals under a USUHS grant or contract will be reviewed in accordance with the Joint Regulation.[d] The IACUC must be provided the name of the company, the general procedures being performed, and whether or not the company is accredited by the Association for the Assessment and Accreditation of Laboratory Animal Care, International (AAALAC). If the company is not accredited by AAALAC, then a copy of the protocol approved by the company's IACUC must be provided to the USUHS IACUC for review. The IACUC may request additional information, require IACUC members make contact with animal care personnel at the company, or require an on-site evaluation of the company's animal care and use program and facilities by LAM personnel.

4. Caging and Maintenance Equipment and Supplies.

a. All animal caging will be procured by LAM. Requests for animal caging equipment will be submitted to LAM by memorandum. Requests for special cages should include detailed specifications and justifications. If requests for caging cannot be fulfilled with in-house resources, LAM will initiate steps to request the required caging from nearby institutes.

b. LAM will maintain and issue routine animal handling equipment and expendable supplies (e.g., animal feed and bedding). All purchase requests for ancillary animal related equipment submitted by investigators will be routed by the contracting directorate through the Director of LAM for approval prior to purchase.

B. CARE, USE, AND HOUSING OF ANIMALS

1. Feeding and Watering.

All laboratory animals will have

continuous access to potable water and will be fed daily on a regular schedule, according to their particular requirements, except as dictated by experimental design or veterinary therapy.

2. Caging and Housing.

a. Rooms in which animals are housed will be adequately illuminated and ventilated. The temperature and humidity will be maintained within acceptable limits for the respective species.

b. Animal rooms will not be crowded beyond the capabilities of the air conditioning or ventilation system. The use of laminar flow racks, Horsfal units, or other heat-generating equipment may limit the number of animals permitted per room.

c. The number of animals per room will be limited to permit effective sanitary maintenance and servicing.

d. Nonhuman primates will be maintained under conditions that promote their psychological well-being, in accordance with Title 9, CFR, Parts 1-4[f].

e. Dogs will be provided the opportunity for adequate exercise, as determined by the Director, LAM in accordance with Title 9, CFR, Parts 1-4[f].

f. Animal rooms will not be used as offices or laboratories unless approved by the Director of LAM and the Institutional Official. Research equipment and supplies will not be stored in rooms housing animals, unless approved by the Director, LAM.

g. Holding/restraining chairs and devices will be used only when the nature of the experiment requires such use. Restrained animals will be examined frequently throughout the experiment to ensure early detection of any problem arising from the restraints. Experiments may be suspended by the Director, LAM, if it is determined that restraint equipment is being used improperly; suspension will remain in effect until such time as the procedures are reviewed by the IACUC in accordance with section A.4.f. and g. of Enclosure 4 of this Instruction.

3. Animal Records and Identification.

Accurate records are critical to the efficient management of laboratory animal programs. Appropriate records will permit maximum utilization of available resources, accurate budgetary estimates, and compliance with various reporting requirements. The maintenance of detailed clinical and medical procedures for animal records and methods for identification are the responsibility of LAM. Records will be maintained three years after final disposition of the animal, or three years after completion of the research protocol to which that animal was assigned, **whichever occurs last.**

4. Care of Laboratory Animals.

a. Projects involving live animals must be performed by, or under the direct supervision of, a qualified investigator/ instructor.

b. Anesthetic, analgesic, or tranquilizing drugs will be used to minimize pain and discomfort when any animal would experience pain levels above that inflicted by normal injection procedures (e.g., any time the skin is incised). LAM and the IACUC will provide guidelines and consultation concerning appropriate use of these drugs. Any exceptions to the use of drugs for relief of pain or discomfort must be fully justified in an approved protocol.

c. Muscle relaxants or paralytic drugs (e.g., succinylcholine or other curariform drugs) will not be used alone for restraint or surgical procedures. Such drugs will only be used in conjunction with drugs known to produce an adequate plane of surgical anesthesia. The criteria for monitoring the level of anesthesia must be detailed in the research proposal.

d. Experimental procedures

involving induced pain or distress whereby the use of anesthetics, analgesics, or tranquilizers would defeat the purpose of the experiments require a detailed explanation paragraph in the proposal and specific approval by the IACUC and must be directly supervised by the responsible investigator, or by a trained designated representative whose name is included on the approved protocol.

e. Major survival surgery on all nonrodent vertebrate species will be performed in accordance with acceptable aseptic hospital/surgical practices and guidelines established by LAM and the IACUC. Major survival surgery is defined as any surgical intervention that penetrates and exposes a body cavity or any surgical procedure that produces a permanent impairment of physical or physiological function. Only one major survival surgery will be performed on an individual animal, unless multiple procedures are required as components of a single research project and such multiple use is specifically approved by the IACUC.

f. Preoperative and postoperative care of animals is the responsibility of the PI who will request professional veterinary care, when and if appropriate. Every effort will be made to minimize discomfort to the animal during convalescence, in accordance with acceptable hospital practice.

g. Care and treatment of animals will comply with established policies, SOPs, and all applicable regulations and guidelines.

5. Euthanasia of Animals.

a. Euthanasia of animals will be performed in a humane manner by methods that produce rapid unconsciousness and subsequent death, without visible evidence of pain or distress, or a method that utilizes anesthesia produced by an agent that causes painless loss of consciousness and subsequent death. Euthanasia methods must be in accordance with the "2007 AVMA Guidelines on Euthanasia" and approved by the USUHS IACUC.

b. LAM will provide facilities for euthanasia of animals and, by prior arrangements, will perform euthanasia on excess or used animals provided no other disposition can be arranged by LAM.

6. Disposal of Animals and Animal Waste.

a. Live Animals. Animals which are suitable for use in additional experiments will be returned to LAM for disposition. Per diem will be charged to the donor PI for up to 60 days or until a suitable recipient for transfer is located. All animal transfers will require a completed LAM Form 488 be submitted to the Chief, Veterinary Medicine Division, LAM. Detailed and updated records will be returned with the animals describing the experimental procedures to which the animals were subjected.

b. Animal Carcasses. LAM will be responsible for the disposal of all animal carcasses. Investigators and instructors are responsible for returning animal carcasses to LAM for disposal. The Director, LAM has established and distributed specific procedures for packaging animal carcasses based on the contractor requirements. No package can weigh more than 50 pounds. All packages containing carcasses destined for necropsy will be labeled appropriately, and placed in the LAM necropsy refrigerator.

c. Unexpected Deaths. Animals found dead unexpectedly will be handled in accordance with procedures established by LAM, in cooperation with the individual investigators.

d. Animal Bedding and Waste. LAM is responsible for disposing of all animal waste and used bedding material. Individual investigators and instructors are responsible for returning the material to

LAM for disposal. The Director, LAM, has established procedures for packaging animal waste and used bedding material. Packages containing potentially dangerous material will be labeled with appropriate hazard labels and placed in appropriately labeled containers for pick-up/removal.

7. Host Facilities.

a. All equipment, animal space allocations, and animal care supervision will be under the control of the host facilities supporting USUHS programs (e.g., at AFIP, AFRRI, NIH).

b. Animal care costs will be charged in accordance with the agreement between the host facility and the USUHS investigator.

8. USUHS Barrier Facilities.

a. Only authorized personnel will be allowed into the barrier facilities.

b. Once any animal leaves the barrier facility it will not be allowed to re-enter the barrier.

c. All animal husbandry procedures performed within the barrier facility will be performed in accordance with the LAM SOPs.

C. SAFETY

1. General.

a. The maintenance of high standards of personal cleanliness among persons associated with research animals is mandatory.

b. Personnel will not eat, drink, smoke, or apply make-up or lip balm in areas where animals are located, the necropsy facility, or areas where radioactive materials are used.

c. All laboratory animals are potentially dangerous in some aspect or another. Larger species may inflict serious bite and or scratch wounds while small rodents may cause painful although less serious wounds. All species may transmit zoonotic diseases through a person's contact with the animals, their tissues and/or waste products, or contaminated bedding and caging equipment. **NOTE:** Inanimate objects, such as cages, may transmit zoönotic diseases. Some of these diseases may be fatal to humans. For these reasons, persons handling research animals must take every precaution to minimize the physical and disease dangers posed by the animals while simultaneously protecting the well-being of the animals and minimizing the effect of handling for measurements taken during the study.

d. Normally, only experienced animal handlers will transfer, restrain, or handle research animals. Persons not experienced with a certain species may not handle that species. Persons being taught to handle animals may accomplish "hands-on" practice only under the direct supervision of an experienced person.

e. Appropriate protective clothing will be worn by all animal handlers.

f. LAM is responsible for the establishment of handling procedures for all animal species used by USUHS personnel.

g. Equipment and supplies normally will not be stored in corridors within the animal facility. The exceptions are corridors G and H, which are designated storage areas.

h. Animals will not be removed from the USUHS without the express approval of the Director, LAM. The animal tracking and accounting system used by LAM requires this for record keeping purposes.

2. Bites, Scratches, and Injuries.

a. All bites, scratches, and injuries will be reported immediately to the person's supervisor and the responsible Department Chair/Activity Head.

b. Emergency and follow-up treatment will be provided in accordance

with appropriate procedures as specified by Environmental Health and Occupational Safety (EHS), the Division of Occupational Medicine, and LAM.

c. After arranging for treatment as described above, the Department Chair/ Activity Head will notify LAM and arrange for the examining and managing of the animal(s) involved.

d. LAM will notify the treating physician of any special disease hazards associated with that particular animal.

e. The Department Chair/Activity Head will then notify the Director, EHS who will investigate the circumstances involving the incident. The Director, EHS will submit a written report of the findings to the Department Chair/Activity Head, with a copy to Director, LAM.

f. All federal civilian personnel who are injured during the performance of their duties will process the necessary Accident Report forms, including CA-1 and CA-2, with Civilian Human Resources (CHR).

3. Occupational Health and Safety.

a. The occupational health and safety procedures for LAM personnel and other animal handlers will be developed by EHS and LAM. Additional job-specific training will be provided where applicable.

b. Participation in the USUHS Occupational Health and Safety Program is mandatory for all personnel who are determined, by EHS, to have health risks associated with the exposure to research animals.

c. Pre-placement physical exams will be given to all employees who are determined to be at-risk following an EHS risk assessment, in accordance with current EHS operating procedures. This may include vision and hearing screening, baseline serum screening (SMAC), and chest radiograph, serum toxoplasmosis titer evaluation, and serum measles and Q Fever (*Coxiella burnetii*) titer evaluation. The exam will always include a screen for risks associated with allergies to laboratory animals. Annual exams and risk assessments will then be provided to all at-risk personnel. The cost of such exams and risk assessments for USUHS employees will be paid by USUHS. The cost of such exams and risk assessments for LAM HMJF employees will be paid by HMJF. The cost of such exams and risk assessments for HMJF employees will be charged against the grant. The grant application should include such costs.

d. An immunization schedule will be adopted. All animal care personnel will be immunized against tetanus. In addition, an opportunity for protection by pre-exposure immunization will be afforded to people who handle animals at substantial risk of infection with rabies virus or hepatitis B virus. A rabies titer of 1:50 is considered protective; if titers are below this level, the person will be offered immunization with human diploid vaccine.

e. Female laboratory personnel, upon learning of their pregnancy, will inform the immediate supervisor who will, in turn, inform EHS. EHS will evaluate the employee's work environment for any potential hazards to the employee during the pregnancy. Health information concerning the effects of radiation on pregnancy are covered in USUHS Instruction 6402-M[i].

f. When nonhuman primates are housed at the USUHS, occupational health exams and monitoring will be based on current Centers for Disease Control (CDC) guidelines and current Federal regulations.

D. TRAINING

1. Animal Care Technicians.

LAM will establish and supervise a continuous in-house training program for all animal care technicians. Teaching resources in the Washington, D.C. area may be used in

this program (e.g., NIH, WRAIR). Classes and instruction may be conducted during normal duty hours.

2. Investigators, Research Technicians, and Non-LAM Animal Handlers.

a. All personnel involved in the care and use of animals should be qualified to perform their duties.

b. The IACUC, through LAM, should make training and instruction available to these personnel to provide guidance in the following areas:

(1) Humane methods of animal maintenance and experimentation, to include the following:

(a) The basic needs of each species of animal.

(b) Proper handling and care for the various species of animals used by the facility.

(c) Proper pre- and post-procedural care of animals.

(d) Aseptic surgical methods and procedures.

(2) The concept of nonanimal alternatives to limit the use of animals.

(3) Proper use of anesthetics, analgesics, and tranquilizers for any species of animals used in the facility.

(4) Methods whereby deficiencies in animal care, use, and treatment are reported.

(5) Utilization of services available to provide information:

(a) On appropriate methods of animal care and use.

(b) On alternatives to the use of live animals in research.

(c) That could prevent unintended and unnecessary duplication of research involving animals.

(d) Regarding the intent and requirements of Title 7, USC, Chapters 2131-2157[e].

c. Species-specific "hands-on" training sessions will be provided by LAM.

d. Attendance at one general instructional or training session will be required of all new investigators, instructors, technicians, and other personnel involved with the use and care of animals. Species-specific training sessions will be optional for new personnel, although participation is required prior to handling animals or performing procedures on animals if experience or prior training is not considered adequate by the IACUC.

3. Medical Students, Graduate Students, and Professional Staff.

LAM will develop instructional material and/or programs for presentation to medical students, graduate students, or professional staff personnel on an as needed basis. Courses for medical or graduate students may be accomplished through an academic department. Subject matter may include, but is not limited to, experimental animal techniques, laboratory animal handling and care, zoonoses, and comparative medicine. Material presented as part of an existing approved animal use training course will be reviewed by the Director, LAM, and the appropriate Department Chair/Activity Head. Material prepared as a new and separate course will be submitted through the appropriate curriculum review/approval procedures. Material to be presented in an optional "seminar" format will be reviewed by the Director, LAM.