Boston College
Animal Care and Use Policy and Manual

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Table of Contents

I. Ethical Principles Governing the Care and Use of Laboratory Animals	4
II. Definitions	4
III. BC Policies	
A. Policies, Regulations, and Standards for Care and Use of Laboratory Animals	5
B. Animal Care and Use Misconduct	6
C. Occupational Health Program	6
D. The Reduction, Refinement, and Replacement of Animal Activities	7
E. Environmental Systems and Monitoring	8
F. Vermin Control	9
G. Veterinary Care and Clinical Services	9
H. Surgery	11
IV. Institutional Care and Use Committee (IACUC)	
A. Membership	12
B. Responsibilities of the IACUC	13
C. IACUC Member Registration with OLAW	14
D. Education of IACUC Members	14
E. Termination of Membership	14
F. Guidance on Program Review	14
G. Criteria for the Review of Animal Protocols	15
H. Sole Authority of the IACUC	17
I. Procedures for Animal Activity Violations	17
V. Animal Investigator/User Ethical Responsibilities	
A. Responsible Animal Care and Use	19
B. Conflict of Interest	19
C. Report of Unforeseen and Adverse Events	20
VI. IACUC Protocol Application Requirements	
A. Instructions for Developing and Submitting Animal Use Protocols	20
B. Training Program on the Use of Animals	20
VII. Facilities and Services	
A. Facilities	20
B. Housing Recommendations	20
C. Health Care Regimens for Incoming and Long-Term Animals	21
D. Controlled Drug Procedures/Controlled Substances Act	21
VIII. Minimum Care Standards for Laboratory Animals	
A. Handling Common Laboratory Species	21

B. Nutrition	21
C. Basic Food and Water Requirement	21
D. Animal Diets	21
IX. Anesthetic, Analgesic, Tranquilizing, and Euthanizing Agents for Laboratory Animals	
A. Anesthetics, Analgesics, and Tranquilizers	22
B. Euthanasia	22
X. Administrative Support of the Animal Care and Use Program	
A. Administrative Support of the IACUC	22
B. Animal Use Administrators	23
C. Communicating Adverse Events	23
D. Communication with Regard to the Animal Facility and/or Research Projects	23
E. Policy Updates	23
F. Licenses, Assurances, and Other Registrations	23
Appendix 1: *Guide to Working in the Animal Facility*	25

I. ETHICAL PRINCIPLES GOVERNING THE CARE AND USE OF LABORATORY ANIMALS

The development of knowledge necessary for the improvement of the health and well-being of humans and animals requires experimentation with a wide variety of animal species. The Boston College (BC) Animal Care Program is guided by the ethical principles of research set forth in the Animal Welfare Act (7 U.S.C. 2131 et. seq.), Public Health Service Policy on the Human Care and Use of Laboratory Animals, The Guide for the Care and Use of Animals , National Aeronautics and Space Administration Principles for the Ethical Care and Use of Animals (1979). BC's polices and procedures involving animal care and use have been developed to comply with the federal, state and local laws and regulations relating to animals.

Applicability

Boston College recognizes and accepts its responsibilities specified in the aforementioned law, policies, and principles for animal activities.

Boston College will exercise administrative oversight of all animal activities consistent with this Policy and applicable federal policy. All federally supported animal care and use will comply with applicable animal care and use regulations and policies of cognizant agencies. In reviewing animal activities, the Institutional Animal Care and Use Committee (IACUC) will oversee and ensure that all of the responsibilities required by animal care and use regulations and policies are followed.

II. Definitions (adopted in part from the *Public Health Service Policy on Humane Care and Use of Laboratory Animals*)

A. *Animal* - Any live, vertebrate animal used or intended for use in research, research training, experimentation, or biological testing or for related purposes.

B. *Animal Facility* - Any and all buildings, rooms, areas, enclosures, or vehicles, including satellite facilities, used for animal confinement, transport, maintenance, breeding, or experiments inclusive of surgical manipulation. A satellite facility is any containment outside of a core facility or centrally designated or managed area in which animals are housed for more than 24 hours. The Boston College facility is known as the Animal Care Facility (ACF).

C. *Animal Welfare Act* - Public Law 89-544, 1966, as amended, (P.L. 91-579, P.L. 94-279 and P.L. 99-198) 7 U.S.C. 2131 et seq. Implementing regulations are published in the Code of Federal Regulations (CFR), Title 9, Chapter 1, Subchapter A, Parts 1, 2, and 3, and are administered by the U.S. Department of Agriculture.

D. *Animal Welfare Assurance or Assurance* - The documentation from an institution assuring institutional compliance with this Policy.

E. *Guide* - *Guide for the Care and Use of Laboratory Animals*, EXIT Disclaimer National Academy Press, 1996, Washington, D.C., or succeeding revised editions.

F. *Institution* - Any public or private organization, business, or agency (including components of federal, state, and local governments).

G. *Institutional Official* - An individual who signs, and has the authority to sign the institution's Assurance, making a commitment on behalf of the institution that the requirements of this Policy will be met.

H. *OLAW* – Office of Laboratory Animal Welfare; and agency of the U.S. Department of Health and Human Services responsible for overseeing and regulating research involving animals.

I. *Quorum* - A majority of the members of the Institutional Animal Care and Use Committee (IACUC).

J. *USDA/APHIS* – U.S. Department of Agriculture, Animal and Plant Health and Inspection Service.

III. BC Policies

A. Policies, Regulations, and Standards for Care and Use of Laboratory Animals

It is the purpose of this Policy to set forth proper measures to ensure the ethical care and use of all animals involved in research, research training, education and biological testing activities (hereinafter referred to as "activities") conducted at or supported by BC.

All proposed BC activities shall be performed consistent with the following standards:

1. The regulations and policies covering the transportation, care, and use of animals should be in accordance with the Animal Welfare Act (7 U.S.C. 2131 et. seq.) and other applicable federal laws, guidelines, and policies.

2. Procedures involving animals should be designed and performed with due consideration of their relevance to human or animal health, the advancement of knowledge, or the good of society.

3. The animals selected for a procedure should be of an appropriate species and quality and the minimum number required to obtain valid results. Methods such as mathematical models, computer simulation, and in vitro biological systems should be considered.

4. Proper use of animals includes the avoidance or minimization of discomfort, distress, and pain when consistent with sound scientific practices and is imperative for activities at BC. Unless justified for scientific validity investigators must consider that procedures that cause pain or distress in human beings will cause pain or distress in other animals.

5. Procedures with animals that may cause more than momentary or slight pain or distress should be performed with appropriate sedation, analgesia, or anesthesia.

Surgical or other painful procedures will not be performed on animals not anaesthetized by chemical agents.

6. Animals that would otherwise suffer severe or chronic pain or distress that cannot be relieved must be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure.

7. The living conditions of animals should be appropriate for their species and contribute to their health and comfort. The housing, feeding, and care of all animals used for biomedical purposes must be directed by a veterinarian or other appropriately trained individual experienced in the proper care, handling, and use of the species being maintained or studied. Veterinary care shall be available as needed.

8. Investigators and other personnel shall be appropriately qualified and experienced for conducting procedures on living animals. Adequate arrangements shall be made for their in-service training, including the proper and humane care and use of laboratory animals.

9. Where an exception is required in relation to the provisions of these standards, the decision does not rest with the investigators performing the research, but are made by the IACUC. Such exceptions will not be made solely for the purposes of teaching or demonstration.

B. Animal Care and Use Misconduct (Whistle Blower policy and protections)

The unethical use or treatment of animals constitutes research misconduct under BC's policy, *Ethical Conduct of Research and Research Misconduct*. Faculty, staff, and students may confidentially disclose what they believe to be misconduct to the Director, Office for Research Protections who will consult with the Vice Provost for Research (VPR). It is impermissible to retaliate against an individual who has made a good faith allegation of research misconduct. Such retaliation is considered as an additional act of research misconduct.

C. Occupational Health Program

Exposure to animals includes a risk of developing adverse health outcomes. The risks of animal associated illness include transmission of infection, respiratory illness, allergies and asthma. Proper animal handling procedures and personal protective equipment can minimize these risks. All persons with significant animal contact are required to participate in the BC Animal Care and Use Occupational Health Program. The program provides educational information on the health risks associated with animal handling and ways to minimize the chance of developing illness as a result of prolonged animal exposure. For additional information see the Boston College Occupational Health Policy for Exposure to Research Animals (OHPERA).

D. The Reduction, Refinement and Replacement of Animal Activities

1. Reduction - The numbers of animals used in research can be reduced in a variety of ways.

Literature review:

No experiment using animals may be performed without a thorough review of the literature to eliminate the possibility of needless repetition and to determine the most appropriate model to answer a particular research question.

Use based on requirements to achieve statistical significance:

All experiments should be planned to provide sufficient data points to determine statistical significance. Using insufficient numbers of animals may require a repetition of the experiment and, therefore, may be as undesirable as using too many animals. Formulae for estimating the number of animals needed for a particular experiment may be found in Statistical Methods for Rates and Proportions (2nd ed.) by Joseph L. Fleiss and Biostatistical Analysis (2nd ed.) by Jerrold H. Zar, or may be obtained through consultation with a biostatistician.

Disease free animals:

While the cost of disease free animals, sometimes called SPF (Specific Pathogen Free), is much greater initially, the long term benefits of using such animals usually far outweigh the initial cost. Even sub clinical infections can alter an organism's responses to research-induced challenges, thereby invalidating results.

Sharing animals or tissues:

In some cases, organs, tissues, antibodies, etc. may be commercially available. Several investigators sharing the organs of a single animal reduces the number of animals necessary and the cost to the investigator.

2. Refinement – refining techniques or protocols to reduce stress to the animal subject

Whenever possible, investigators should design experiments so that death is not the end point. Minor modifications of the approach to the experimental problem may allow euthanasia of an animal before it suffers significant discomfort or anxiety. Along the same lines, when passaging tumors or growing tumors in vivo, efforts should be made to collect tissues or evaluate effects prior to the time that the animal is incapacitated.

Anesthetic, analgesic, or tranquilizing agents should be administered for any procedure potentially causing more than minimal or momentary pain or distress to the animal. Exceptions must be justified and approved by the IACUC prior to the performance of such procedures.

The researcher must be alert to, and recognize signs of, pain or distress in the species with which he/she is working. Changes in dietary or grooming habits or changes in posture or

temperament may indicate that an animal is in pain or distress. If investigators have any questions, they should consult the ACF Manager or staff.

3. Replacement

Teaching new techniques:

New techniques should be demonstrated or practiced on models or cadavers. Videotapes and slide-tape presentations should be developed and used as much as possible in training programs. Computer simulation programs are another option to consider.

Alternative or adjunctive methods:

While an intact biological system may be required to answer some research questions, tissue culture, or other in vitro techniques, including computer or mathematical modeling may provide satisfactory alternative or adjunctive methods.

Use the lowest species on the phylogenic scale possible to obtain desired data.

E. Environmental Systems and Monitoring

Environmental monitoring is a major concern due to the potential adverse effects on the physiological, biochemical, and behavioral status of animals that result from fluctuations in the environment caused by mechanical breakdown or variations in external climatic conditions. The ACF Manager is solely responsible for changing the settings to the environmental controls.

1. Temperature and Humidity Control

These are important factors as they affect the heat regulation of the animal which, in turn, affects the metabolic rate, body weight, etc. IACUC policy is to maintain an approximate temperature of 68-72° F and a relative humidity of 45-60%. These are optimal conditions. Please see the *Guide for the Care and Use of Animals* (National Academies Press, pp. 30 and 32) for actual compliance standards.

2. Ventilation The animal facilities are maintained under negative pressure relative to the surrounding areas to prevent escape of animal dander and odors to general areas of human occupancy. The supply and exhaust components of the air-conditioning system are designed to accomplish ten or more changes per hour of filtered, unrecirculated, conditioned air. Particulate and toxic aerosols are removed from the air by the use of roughing and HEPA filters, when indicated. All filters are changed regularly and written documentation of these changes is maintained.

F. Vermin Control

1. The Problem

Vermin control in the ACF is directed primarily at control of cockroaches, silverfish, drain flies and rodents (wild or escaped laboratory rodents). Aside from obvious aesthetic problems, cockroaches can serve as mechanical or biological vectors for several animal diseases. Rodents cause extensive building damage, including chewing of electrical wires. Wild and feral rodents carry infectious diseases that can be transferred to research animals. All sightings of vermin must be reported to the ACF Manager immediately.

2. Control of Insects

Traps are used throughout the animal facility for monitoring cockroach populations and movements. Drain flies are controlled by pouring quaternary ammonium down a drain and replacing the cover. The drain is then rinsed fifteen minutes later.

Mops and brooms are suspended from the floor; food and bedding bags are maintained on pallets; waste, food and bedding containers are on casters; shipping boxes are removed from the animal rooms immediately after housing the animals.

3. Control of Rodents

Traps are used in animal rooms, feed and bedding stores and other locations in the facility. Trapped rodents should be taken for euthanasia.

G. Veterinary Care and Clinical Services

1. Clinical Veterinary Staff

The clinical veterinary staff consists of a consulting veterinarian who is ACLAM certified. Animal Care Staff tour the facilities and observe the animals daily. In addition, the animal caretakers will inform the ACF Manager of any animal related problems. Investigators will be contacted in regards to the health, husbandry, or experimental status of their animals if abnormalities or inconsistencies are found. In addition to phone contact, written documentation is placed in a daily log and on the animal cages. Unless an emergency situation exists, diagnostic tests or medical and/or surgical interventions are not performed until the investigator has been contacted.

Routine diagnostic tests and prophylactic immunization programs are described under quarantine regulation, Section III.B below and detailed in the BC ACF SOPs. Investigators requiring additional information, specialized diagnostic testing or prophylactic treatment apart from that routinely performed, should contact the ACF Manager who will discuss the matter with the Consulting Veterinarian.

2. Medical Records

Medical records are maintained on a colony basis for rodents and other small laboratory species. The ACF Manager or Veterinary Technician must be contacted if medical or health status information is needed for an animal colony.

3. Murine Health Surveillance Program

The "Sentinel Mouse Health Surveillance Program" has been developed and instituted in the ACF. This program monitors (1) the health status of mice housed at a vendor's facility, (2) the opportunity for exposure to murine pathogens that may exist during shipment to BC, and (3) the health status of colonies housed at Boston College. Sentinel animals are sampled regularly and subjected to gross necropsy examination, bacteriological monitoring of the nares, lungs and intestines, endoparasite and ectoparasite examination, and serologic screens for antibodies to a panel of murine viruses. Results are reported to investigators who house mice in the respective rooms being surveyed. For detailed information on the surveillance procedure see BC ACF SOPs.

4. Reporting Sick Animals

Investigators must contact the ACF Manager if abnormalities are noted in their experimental animals. If animals requiring attention are noted on weekends, the assigned animal technician should be notified so that the ACF Manager can be contacted. If emergency care is required and ACF staff members are unavailable, a personnel listing with telephone numbers is posted in the ACF. The ACF Manager shall notify the ORP Director, Chair of the IACUC, and the Consulting Veterinarian in the event of contamination and/or potential problems with an animal and/or animal colony that could threaten the health and welfare of other animals in the ACF. The Chair of the Committee shall notify all other members of the Committee. Proper care and diligence will be used in handling sick or contaminated animals so as to prevent the spread of infections or contamination to other animals and parts of the facility. Sick or contaminated animals will be moved to the Quarantine Room using procedures designed to keep the potential for exposure to the absolute minimum.

5. Treatment

After the ACF Manager has assessed the health status of sick animals, and if necessary contacted the Consulting Veterinarian, the investigator will be contacted regarding recommended diagnostic work up and treatment. If the investigator cannot be reached and it is deemed necessary, therapy will be instituted without investigator consultation. In the event a colony of animals needs to be re-derived, the procedures will be set forth in writing and approved by the ORP Director, the Consulting Veterinarian, and the investigator. The written procedures will be kept on file by the ACF Manager. Quarantine protocols will be similarly agreed upon. The ACF Manager and the investigator shall ensure that individuals involved in implementing the quarantine protocols are completely familiar with the Protocol. A copy of all such protocols will be kept on file by the ACF Manager and shall be inserted as an Attachment to this Manual for future reference.

6. Quarantine/Isolation Requirements

The quarantine and conditioning periods required for incoming animals are dependent on the species the vendor from which animals are purchased and their intended use. Experimental studies indicate that all animals must be allowed 72 hours to acclimate to their new environment and recover from the stress of shipping. Experimental results may vary considerably during the immediate post shipment period. Animals may harbor infectious agents that are communicable to man and other animals. The M.I.T. Research Animal Diagnostic Laboratory under contract with Boston College performs various diagnostic tests dependent on species so as to ensure that animals are free of such microbial agents. All animals procured from non-commercial sites must be permanently quarantined. Researchers must consult with the ACF Manager, seek IACUC approval, follow the National Research Guidelines for the Humane Transportation of Research Animals(2006) ISBN 0-309-65724-5, available from the National Academies Press http://www.nap.edu/catalog.php?record_id=11557).

General Quarantine Protocols may be found in the BC ACF SOPs. All such protocols are to be written in clear, unambiguous language. All individuals involved in implementing quarantine protocols will be trained in those protocols and will be given a copy of them. In addition, the ACF Manager will maintain a copy of all such protocols and shall ensure they are posted in visible locations for easy reference during quarantine procedures.

H. Surgery

1. Experimental Surgery

Prior to surgery, all protocols must be approved by the IACUC. This includes surgical manipulations, post-surgical care and personnel responsible for these duties. All medical records will be made available on request to members of IACUC to assure implementation of approved protocols. Major survival surgery is defined as surgical intervention that penetrates a body cavity, or has the potential for producing a permanent handicap in an animal that is expected to recover. Each animal may undergo one major survival surgery. Multiple major survival surgery requires special consideration and approval by the BC IACUC. Each survival surgery requires the submission of a Surgery Reporting Form and Post-Surgical Care Form to the ACF Manager.

2. Survival Surgery (rodents)

Perform surgery in clean, well kept areas intended for such use. Rodent surgery may be performed in a Procedure Room or the Surgical Suite, and strict aseptic technique must be used. Use sterile gloves, sterile instruments, and aseptic preparation of the surgical field. See BC ACF SOPs for procedures.

3. Non-Survival Surgery

Perform non-survival surgery in clean, well kept areas intended for such use and inspected and approved by the IACUC. Non-survival surgery may be performed in a Procedure Room

or the Surgical Suite, but procedures must meet all requirements for survival surgery including the use of complete aseptic technique. See BC ACF SOPs for procedures. The animal must be euthanized before it recovers from anesthesia.

IV. Institutional Animal Care and Use Committee (IACUC)

A. Membership

The President of BC, or his duly authorized designee, appoints the members of the Institutional Animal Care and Use Committee (IACUC) who are qualified through their experience and expertise to oversee the institution's animal program, facilities, and procedures. Voting members are appointed to the IACUC for 3-year terms. Each member must attend 50% or more of scheduled meetings per year in order to maintain membership status.

The committee shall consist of not less than five members, and shall include at least:

(1) One Doctor of Veterinary Medicine, with training or experience in laboratory animal science and medicine, who has direct or delegated program authority and responsibility for activities involving animals at the institution;

(2) One practicing scientist experienced in research involving animals;

(3) One member whose primary concerns are in a nonscientific area (for example, ethicist, lawyer, member of the clergy); and

(4) One individual who is not affiliated with the institution in any way other than as a member of the IACUC, and is not a member of the immediate family of a person who is affiliated with the institution.

An individual who meets the requirements of more than one of the categories (1) through (4) above may fulfill more than one requirement. However, the IACUC may not consist of less than five members. No department may be represented by more than three members.

The IACUC meets at least twice yearly or more frequently as needed. No member of the IACUC may vote on or be present for the IACUC review and discussion of a proposal in which the member has a financial or institutional conflicting interest. In such instances the IACUC member will excuse herself/himself from the IACUC meeting until the IACUC takes action on the protocol. No member may vote on a protocol on which he/she will be performing or supervising research.

B. Responsibilities of the IACUC

The charge of the Boston College Institutional Animal Care and Use Committee (IACUC) is to assure the humane care of animals used in biomedical and behavioral research, teaching, and testing. The BC IACUC is a standing committee that oversees animal use and care at BC.

All animal use (including classroom use) and research must be reviewed and approved by the IACUC prior to ordering, breeding or using animals in research, teaching or testing at BC. The IACUC is responsible for assuring appropriate use, care, and treatment of all vertebrate animals used for BC activities, and has the authority to approve or withhold approval of protocols for all such activities involving animals in accordance with the Public Health Service Policy on the Humane Care and Use of Laboratory Animals regulations resulting from the Animal Welfare Act, as amended (7 U.S.C., 2131-2159).

The responsibilities of the IACUC, with respect to all animal activities, shall include:

1. Review at least once every six months the institution's program for humane care and use of animals, using the Guide as a basis for evaluation;

2. Inspect at least once every six months all of the institution's animal facilities (including satellite facilities) using the Guide as a basis for evaluation;

3. Prepare and submit reports of the IACUC evaluations conducted as required by the Institutional Official;

4. Review concerns involving the care and use of animals at BC. Make recommendations to the Institutional Official regarding any aspect of the institution’s animal program, facilities, or personnel training;

5. Approve the proposed animal activities as submitted;

6. Approve the proposed animal activities contingent upon specific revisions;

7. Table the proposed animal activities for substantive changes;

8. Disapprove the proposed animal activities;

9. Monitor animal activities for compliance with IACUC recommendations and this Policy by any means it deems appropriate, including direct observation of the processes and procedures of animal activities, and/or appointment of a third party to undertake such observation; and to

10. Suspend or terminate animal activities whenever the animal activities are not conducted in accordance with the IACUC's requirements, if animals have suffered harm, or the welfare of animals has been or may be jeopardized.

C. IACUC Member Registration with OLAW

All voting IACUC member names and qualifications are registered with the Office of Animal Laboratory Welfare. The Director of ORP will notify OLAW within 15 working days of any changes to membership.

D. Education of IACUC Members

All new members of the IACUC will be oriented to the BC Animal Care and Use Policies and Procedures by the Director of the Office of Research Protections. The Manager of the Animal Care Facility, or her designee, in cooperation with the attending Veterinarian will provide education to members on up to date and accepted animal procedures.

E. Termination of Membership

An IACUC member may be terminated for serious misconduct or breach of membership duties if approved by a majority of voting IACUC members. This action may only be taken at a convened IACUC meeting.

F. Guidance on Program Review

The IACUC will review the animal care and use program on a semi-annual basis (every six months) to verify and ensure a quality animal care and use program. The Program Review will include an assessment of the overall functioning of the IACUC, the adequacy of this Policy and related procedures, the Occupational Health Program, and Veterinary procedures as outlined by OLAW.

The IACUC will inspect all BC animal facilities, including satellite facilities, as part of the semi-annual program review. In addition, any member may, at his/her discretion, inspect the ACF at any time un-announced to verify that IACUC authorized procedures are being followed. The semi-annual inspection will include;

1. Animal Rooms, enclosures and housekeeping;
2. Cage wash and sanitation procedures;
3. Procedure rooms and areas;
4. Environmental Conditions; and
5. Documentation of problems.

The IACUC will report the findings of the semi-annual program review and facilities inspection directly to the Institutional Official. This report will be maintained by ORP and be made available to OLAW and the USDA upon request. The reports must contain (1) a description of the nature and extent of the institution's adherence to the Guide and this Policy and (2) identification of any departures from the provisions of the Guide and this Policy. The reports must distinguish significant deficiencies from minor deficiencies.

A significant deficiency is one which, consistent with this Policy, and, in the judgment of the IACUC and the Institutional Official, is or may be a threat to the health or safety of the animals or animal handlers. If program or facility deficiencies are noted, the reports must

contain a reasonable and specific plan and schedule for correcting each deficiency.

G. Criteria for the Review of Animal Protocols

In order to approve proposed research projects or proposed significant changes to ongoing research projects, the IACUC shall conduct a review of those components related to the care and use of animals and determine that the proposed research projects are in accordance with this Policy. In making this determination, the IACUC shall confirm that the research project will be conducted in accordance with the Animal Welfare Act insofar as it applies to the research project, and that the research project is consistent with the Guide unless acceptable justification for a departure is presented.

1. Criteria for Animal Protocol Approval

The IACUC shall determine that the research project conforms to the institution's Assurance and meets the following criteria:

(a) Procedures with animals will avoid or minimize discomfort, distress, and pain to the animals, consistent with sound research design.

(b) Procedures that may cause more than momentary or slight pain or distress to the animals will be performed with appropriate sedation, analgesia, or anesthesia, unless the procedure is justified for scientific reasons in writing by the investigator.

(c) Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly killed at the end of the procedure or, if appropriate, during the procedure.

(d) The living conditions of animals will be appropriate for their species and contribute to their health and comfort.

(e) Medical care for animals will be available and provided as necessary by the Consulting Veterinarian.

(f) Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures. The Animal Facility Manager keeps a record of each researcher's training.

(g) Methods of euthanasia used will be consistent with the recommendations of the 2007 American Veterinary Medical Association (AVMA) Panel on Euthanasia, unless a deviation is justified for scientific reasons in writing by the investigator.

2. Procedure for Animal Proposal Review

<u>Designated Review:</u>

Prior to the review, each IACUC member shall be provided with a list of proposed research projects to be reviewed. Written descriptions of research projects that

involve the care and use of animals will be sent to all IACUC members, and any member of the IACUC may obtain, upon request, a convened committee review of those research projects. If full committee review is not requested, in addition to review by the attending DVM, at least one member of the IACUC, designated by the chairperson and qualified to conduct the review, shall review those research projects and have the authority to approve, require modifications in (to secure approval) or request full committee review of those research projects. Designated reviews and the results of these designated reviews will be presented to the IACUC at each meeting.

Review by the Convened Committee:

If a convened review is requested, approval of those research projects may be granted only after review at a convened meeting of a majority of the IACUC and with the approval vote of a majority of the quorum present. No member may participate in the IACUC review or approval of a research project in which the member has a conflicting interest (e.g., is personally involved in the project) except to provide information requested by the IACUC; nor may a member who has a conflicting interest contribute to the constitution of a quorum.

The IACUC may invite consultants to assist in the review of complex issues. Consultants may not approve or withhold approval of an activity or vote with the IACUC unless they are also members of the IACUC.

Investigator Notification:

The IACUC shall notify investigators and the institution in writing of its decision to approve, defer, or withhold approval of those activities related to the care and use of animals or of modifications required to secure IACUC approval. If the IACUC decides to withhold approval of an activity, it shall include in its written notification a statement of the reasons for its decision and give the investigator an opportunity to respond in person or in writing.

Annual Review:

The IACUC shall conduct annual continuing review of each previously approved, ongoing activity covered by this Policy at appropriate intervals as determined by the IACUC, including a complete review in accordance with IV.C.1.-4. at least once every three years or for USDA species, at least annually. Gaps in approved periods are not acceptable, and no research involving animals may occur during unapproved periods. Neither initial nor continuing approvals may be backdated.

3. Procedure for Protocol Suspension

The IACUC may suspend an activity that it previously approved if it determines that the activity is not being conducted in accordance with applicable provisions of the following: the Animal Welfare Act, the Guide, or this Policy. 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.

If the IACUC suspends an activity involving animals, the Institutional Official in consultation with the IACUC shall review the reasons for suspension, take appropriate corrective action, and report that action with a full explanation to OLAW.

H. Sole Authority of the IACUC

Applications and proposals that have been approved by the IACUC may be subject to further appropriate review and approval by officials of the institution. However, those officials, including the Institutional Official, may not approve an activity involving the care and use of animals if it has not been approved by the IACUC.

I. Procedures for Animal Activity Violations

An animal activity violation occurs when there is a variance between the activity that has been reviewed and approved by the IACUC and the actual activities being performed. A violation may be minor or major in nature. All incidents of alleged or known protocol violations may be investigated using the following procedures:

1. Minor animal activity violation:

Animal activity violations that (1) have no substantive effects on animal welfare or to animal handlers, (2) indicate that the value of the data collected is not compromised (meaning the violation does not confound the scientific analysis of the results); and 3) do not result from research misconduct on the part of the investigator(s).

The following steps will be taken to investigate minor protocol violations:

a. A fact finding inquiry process may be initiated by the IACUC chair in cooperation with the ORP Director.

b. The IACUC chair and the ORP Director will analyze all information gathered regarding the protocol violation and compare it to the approved protocol. When necessary, the chair and the ORP Director will consult with experts in the particular area of research in order to make definitive, unbiased and educated decisions regarding the violation. A conclusion will then be made regarding the seriousness of the violation.

c. For minor protocol violations, the IACUC chair will notify the principal investigator in writing what must be done (if anything) to correct the conditions that led to the violation.

d. The IACUC chair will present a summary of the violation, process, facts, and conclusions at the next scheduled convened IACUC meeting.

e. If the findings from steps a or b above do not support that a violation has occurred, the matter will be closed.

2. Major Protocol Violation

Major protocol violations include those (1) that have or pose a significant risk of substantive harm to research participants, (2) that damage the scientific integrity of the data collected, (3) where there is evidence of research misconduct on the part of the investigator; or (4) where the investigator(s) demonstrate other serious or continued noncompliance with federal, state or local research policy, laws or regulations. In such cases the following steps will be taken to investigate major protocol violations:

a. A fact finding inquiry process will be initiated by the IACUC chair in cooperation with the ORP Director.

b. The chair will convene a hearing committee to consider all the facts of the case and to meet the investigator (s). The hearing committee will consist of:

1. IACUC Chair
2. ORP Director
3. Vice Provost for Research
4. A representative from the BC Legal Counsel

c. If the hearing committee finds any of the four criteria noted above for major protocol violations, the IACUC Chair will immediately suspend the protocol. (Note: this does not preclude the IACUC chair from suspending the protocol in advance of the hearing if, in the chair's assessment, the conditions of suspension stated in the PHS Policy for the Care and Use of Animals have been met and warrant an emergency protocol suspension).

d. Any protocol suspension will be reported directly to the Director of Research Integrity and Compliance who will determine the appropriate federal agencies or sponsors to notify, and the Director will notify the Institutional Official of the need to make such notification in writing as well as the appropriate time at which the written notification should be made.

e. Depending on the nature or the seriousness of the violation, the hearing committee may elect to direct the IACUC to audit all protocols that involve the investigator in question. The IACUC chair may delegate this duty to a designee or appropriate third party.

f. If the findings of the hearing committee support research misconduct, the Vice Provost for Research will be notified.

g. A summary of the issue, process, facts, conclusions and actions will be presented at the next scheduled IACUC meeting. A written report will be sent to the PI, the PI's

department chair, and the appropriate dean. A copy will be retained in the ORP protocol file.

If an investigator disagrees with the findings or requirements of the Committee, investigators have the right to appeal the Hearing Committee's Decision to the Provost. The Chair will forward all information gathered by the hearing process to the Provost who will consider it along with any additional information provided by the investigator. If, as a result of the appeal, the IACUC chooses to change the decision, then the results of this subsequent review will be communicated to the PI within 48 hours of the subsequent review.

V. Animal Investigator/User Ethical Responsibilities

A. Responsible Animal Care and Use

Boston College is committed to the highest ethical standards of all research, care, and use of animals. It is the primary responsibility of the investigator or handler to uphold the ethical standards of research as defined in this Policy and the ethical guidelines that govern each researcher's academic discipline(s). The individual researcher is responsible for adhering to all pertinent animal protection laws, regulations, and policies.

B. Conflict of Interest

The University's Conflict of Interest Policy promotes objectivity in research by establishing standards to ensure there is no reasonable expectation that the design, conduct, or reporting of research will be biased by any conflicting financial interest of an Investigator.

To ensure the continued confidence in Boston College and individuals employed by the University, researchers shall at all times act in a manner consistent with their responsibilities to the University, and shall exercise particular care that no real or perceived detriment to the University results from conflicts between personal interests and those of the University. Conflict of Interest situations, or the appearance of conflicts of interest, have the potential to cause serious harm and direct losses to the University and the researcher. The losses are often difficult to detect and include not only direct monetary losses and loss of confidence in the University, but also negative publicity and erosion of employee morale.

It is the policy of Boston College that its officers, faculty, staff and others acting on its behalf have the obligation to avoid ethical, legal, financial or other conflicts of interest and to ensure that their activities and interests do not conflict with their obligation to the University or to its welfare. All researchers are expected to abide by the BC Policy on Conflict of Interest found on the Office for Research Compliance and integrity (http://www.bc.edu/offices/policies/meta-elements/pdf/policies/IV/4-205-010.pdf).

C. Report of Unforeseen and Adverse Events

All adverse events of physical or cognitive harm, threats to the safety of animal users or animal subjects must be immediately communicated to the Office for Research Protection and the IACUC Chair. All adverse events will be communicated to the IACUC at the next scheduled IACUC meeting. All unanticipated research events that include animal subjects in federally sponsored research will be reported to the Office of Animal Laboratory Welfare, as well as any federal agency or sponsor that provides funding for the animal care and use by the Institutional Official.

VI. IACUC Protocol Application Requirements

A. Instructions for Developing and Submitting Animal Use Protocols

Investigators must seek prospective approval of all animal care and use activities. To apply for approval, use the IACUC proposal application available on line (http://www.bc.edu/research/oric/animal/iacucforms.html). The Investigator must use only approved animal procedures as outlined in the BC Standard Operating Procedures for Animal Care and Use (SOPs).

B. Training Program on the Use of Animals

All persons handling animals at BC must complete required animal handling education including basic handling, and when applicable education on invasive or surgical procedures by authorized personnel. To begin training, all persons handling animals or animal tissues must complete the IACUC CITI training (http://www.citiprogram.org) and attend live training with the Animal Resource Center Manager or the Veterinary Technican. Educational sessions are available to all students, faculty and staff.

VII. Facilities and Services

A. Facilities

All Boston College animal facilities shall be in compliance with federal and state standards. The BC animal facility has over 15,000 square feet of space available and shall contain feed & bedding storage, administration, quarantine, cage-wash, testing and procedure rooms, and animal housing areas. The animal facility has restricted access as well as specific training for facility entry.

B. Housing Recommendations

Housing recommendations follow those set forth in the Guide for the Care and Use of Laboratory Animals. All animals shall be housed in species appropriate caging, and individual characteristics such as size, sex, and social behavior shall be brought under consideration. All animals will be kept in rooms that have temperature, light, and humidity strictly controlled. The size of the cage and the amount of animals per cage will be in accordance with the spacing requirements stated in the Guide.

C. Health Care Regimens for Incoming and Long Term Animals

All animals will be observed daily, including holidays and weekends, for any signs of pain, distress, or illness. Temperature and humidity will also be monitored daily to maintain stable environmental conditions. If it is observed that the animal is having difficulty, then the principal investigator shall be contacted and if necessary, the veterinarian shall be consulted. The animal will be treated according to the veterinarian's instructions. If euthanasia is warranted, then it shall be done following the recommendations put forth in the AVMA Report on Euthanasia.

Any incoming animals will be given a three-day stabilization period to allow for observance of failing health or injury as well as to acclimate the animals to their new environment.

D. Controlled Drug Procedures/Controlled Substances Act

Potentially addictive or habit forming drugs for human or animal use are classified under this law. Examples of controlled substances include barbiturates and narcotics. The U.S. Drug Enforcement Administration (DEA) enforces this law and requires appropriate security and record management of these substances.

VIII. Minimum Care Standards for Laboratory Animals

A. Handling Common Laboratory Species

Handling and restraint will be kept to the minimum amount necessary to perform the task at hand. Animals should only be handled by trained personnel and by proper technique. Incorrect handling can result in injury to the handler as well as the animal. Proper handling and restraint procedures are covered in SOPs approved by IACUC.

B. Nutrition

Each species of laboratory animal under the care of the BC Animal Facility shall receive clean, fresh food that meets the nutritional needs for the individual species. Any changes in the animals' diet for research purposes are subject to prior approval from the IACUC and the Consulting Veterinarian.

C. Basic Food and Water Requirement

Most rodents will be fed *ad libitum* with fresh clean water available at all times. The only exceptions will be for research purposes. Any changes in this policy will require written justification and approval from the IACUC and the Consulting Veterinarian.

D. Animal Diets

All animal diets will be purchased from a reputable commercial source and will be appropriate for those species involved. All animal diet materials will be stored according to the manufacturer's and the Guide's recommendations and in accordance with federal, state and local regulations.

IX. Anesthetic, Analgesic, Tranquilizing, and Euthanizing Agents for Laboratory Animals

A. Anesthetics, Analgesics, and Tranquilizers

All controlled substances, anesthetics, analgesics, tranquilizers, and skeletal muscle relaxants will be used in accordance with federal and state laws as well as the consulting veterinarian's instructions. Only those trained in the use of these agents will be allowed to handle and administer them. When required, specific drugs will be kept in a double lock box with strictly limited access and a register of usage kept. This is in accordance with the Controlled
Substances Act.

B. Euthanasia

All euthanasia shall occur under the methods recommended by the 2007 Report of the AVMA Panel on Euthanasia. The methods used most by the BC Animal Facility will be CO_2 asphyxiation, and anesthetic overdose. Any AVMA-approved method of euthanasia can be used, but all methods must be named in any protocol and approved by the IACUC Committee prior to initiating animal use activities.

X. Administrative Support of the Animal Care and Use Program

A. Administrative Support of the IACUC

The Office for Research Protection (ORP) provides administrative support to the IACUC. ORP maintains records of IACUC activities for at least three years and records related to protocols for at least three years after the completion/termination of the research. All records will be accessible to OLAW, PHS or USDA representatives within a reasonable time and manner as required by law, regulation or agency policy. The ORP will keep written IACUC records of the following items;

1. A copy of the PHS Assurance and USDA Registration (as applicable to current animal use);

2. Records of all animal protocols, amendments, continuing reviews, and IACUC actions governing these documents;

3. Minutes of the IACUC meetings in sufficient detail to show attendance, actions taken at the meeting and votes on actions, the basis for requiring changes in research, and a summary of the IACUC discussion of issues and their resolution;

4. Copies of all correspondence between the IACUC, ORP, and researchers;

5. A list of IACUC members, their qualifications for serving on the board, and their terms of services;

6. Written IACUC procedures;

7. Records of semiannual IACUC review and recommendations forwarded to the Institutional Official; and,

8. Any reports to OLAW.

B. Animal Use Administrator

The Director of the Office for Research Protections is the institutional agent for BC who exercises operational responsibility, on a day-to-day basis, for the institution's program for protection of animals. The Director should be contacted for comprehensive information regarding all aspects of BC's Animal Protection Program. The Director is the primary institutional liaison between BC and all animal agency representatives, both national and international.

C. Communicating Adverse Events

The ORP Director and the IACUC chair must be contacted if any adverse animal events occur. The ORP Director and IACUC Chair will confer on the appropriate action(s) to be taken to resolve the reported event. The results of that discussion will be conveyed to the IO for additional consultation. The final decision on appropriate action will be consistent with the *PHS Policy on the Humane Care and Use of Research Animals* and the *Guide*.

D. Communication with Regard to the Animal Facility and/or Research Projects

All communication with individuals not affiliated with the ACF or any individual not known to the researcher or ACF staff should be referred immediately to the ORP Director. This is particularly true of any communication requesting specific information about the location of the ACF or the nature of the research performed in the ACF.

E. Policy Updates

The ORP Director is responsible for informing and consulting with the IACUC on required updates in University Policy and procedures regarding animals as new laws and regulations are promulgated.

F. Licenses, Assurances, and Other Registrations

<u>PHS Animal Assurance</u>

The BC Animal Resources Facility operates under the PHS animal assurance #A3905-01.

<u>USDA Registration</u>

Currently, the BC ACF is not registered with the USDA/APHIS. In the event that use of species covered by the USDA inspection service is proposed, the Director of Research Protections will begin the process of obtaining the USDA license following IACUC approval of the proposed use.

Reptiles and Amphibians

Non-endangered reptiles and amphibians do not require Federal or State permits for maintenance if legally acquired from a dealer (e.g. iguanas purchased in a pet store). Field studies or collection of native species require licenses or permits specific to particular locations.

Appendix I

Boston College Animal Facility

Guide for Working in the Animal Facility

Introduction: The Office of Laboratory Animal Welfare is the agency that oversees the "The Public Health Service Policy on Humane Care and Use of Laboratory Animals (PHS Policy). Boston College applies the PSH Policy to all research conducted under its auspices. Every 5 years the university must provide a written Assurance to the federal Office of Laboratory Animal Welfare (OLAW) providing information that it is complying with the PHS Policy. OLAW requires institutions to use the "Guide for the Care and Use of Laboratory Animals" as a basis for developing and implementing an institution program for activities involving animals.

The chief executive officer, president, or designee at each institution that conducts animal research appoints people to serve on an *Institutional Animal Care and Use Committee (*IACUC). There is no upper limit in the number of members on an IACUC, but there must be a veterinarian with experience in laboratory animal medicine, a scientist from within the institution who uses research animals, a nonscientist, and a lay person not affiliated with the institution. The CEO, president, or designee also serves as, or appoints, the *Institution Official,* the person to whom the IACUC reports. At Boston College, the Institutional Official is the Vice Provost for Research.

The IACUC is responsible for overseeing animal research programs at the institution. The IACUC reviews research protocols that include the use of animals to ensure that the methods of animal care and use are appropriate and in compliance with federal regulations and institutional policies. The IACUC inspects animal facilities and evaluates animal care programs twice a year. It reports its findings and plans for correction of deficiencies to the Institutional Official and to OLAW. It also serves as an information resource on animal welfare concerns for the institution and for the community at large.

Occupational Health & Safety: All persons who have contact with laboratory animals must be made aware of the potential hazards of working with animals and the procedures available to prevent and treat such hazards. Personal protective clothing must be worn at all times when working with animals. Such clothing minimally includes lab coat, gloves, hair cover, and shoe cover. Surgical masks are optional and may be worn to protect the wearer from odors. NIOSH N95 masks should be worn when working with diseases that may be airborne or in high allergy producing atmospheres. Respirators are used for individuals that have known allergies to laboratory animals. Respirators are used in accordance with Environmental Health and Safety (EH&S) guidelines.

All animal handlers must complete the Animal Handler Health Risk Assessment Survey. This document can be obtained from the Animal Facility Manager. After the survey is completed, the

animal handler must deliver it to the Boston College Health Services where it is kept on file. All information will be kept confidential.

a. Zoonotic diseases are diseases transmitted from animals to man. These diseases present a risk to the animal handler but are not common. The use of commercial animal vendors has decreased the potential of exposure to these diseases because they have virtually eliminated zoonotic diseases from their colonies. There is, however, still a potential for animals to harbor these diseases, but if animal handlers wear protective clothing and wash their hands after handling animals or animal equipment, it will substantially reduce the potential for exposure.

b. Laboratory Animal Allergy (LAA) is a significant occupational health concern for many animal handlers. LAA is a hypersensitivity reaction upon exposure to a laboratory animal's fur, dander, urine, saliva, or other bodily tissues. Symptoms range from mild (with little effect on the ability to work) to severely debilitating (preventing further work near the causative allergens). Death can result from severe allergic reactions. Studies have shown that 10% to 44% of animal handlers will develop an LAA during the time they work with laboratory animals.[1] If you believe you have developed a laboratory animal allergy please report this to the Manager of the Animal Facility and to your supervisor/advisor.

c. Animal Bites & Scratches: The risk of animal bites and scratches can be reduced if the animal handler uses the proper techniques when handling the animals, their tissues, or their cages and also wearing the appropriate protective clothing. Animal bites and scratches should be immediately washed with soap and water. All animals have bacteria in their mouths and under their claws, which could cause an infection. Every incident must be reported to the Manager of the Animal Facility and to your supervisor/advisor.

d. Needle Sticks: **Needles used for injection should never be recapped after use because this increases the risk of inadvertent skin puncture.** All "sharps" (needles, scalpel blades, sharp glass, etc.) must be placed in a sharps containers (marked with the biohazard symbol) for proper disposal. Skin puncture from a needle stick should be scrubbed liberally with soap and water. Every incident must be reported to the Manager of the Animal Facility and to your supervisor/advisor.

Entering the facility: Everyone who enters the facility must don protective clothing. Paper lab coats are found on a cart in the locker area or on the cart next to the entrance to the animal facility. Booties and caps must be put on just before one enters the facility. These can be found in labeled boxes on the wall next the entrance of the facility. Also, there are bootie butlers on the floor next to the entrance to the facility. If you are bringing supplies or equipment into the facility they must be sprayed with Quatricide and placed in a plastic bag. Once the item is in the plastic bag the outside of

[1] Hollander et.al, 1996, and Knysak, 1989, as referenced in Committee on Occupational Safety and Health in Research Animal Facilities, Institute of Laboratory Animal Resources, Commission on Life Sciences, National Research Council, *Occupational Health and Safety in the Care and Use of Research Animals*, (National Academies Press, 1997).

the bag must be sprayed with Quatricide. Both the Quatricide and the plastic bags can be found on the cart next to the entrance to the facility. If you are bringing in an electronic item such as a laptop, electronic scale, etc., you must spray a wipe cloth found on the cart and wipe down the instrument, then place in a plastic bag and spray the bag. Once inside the facility take the plastic bagged item to an animal room or a procedure room and then remove the item from the bag. Once you are in an animal room or in a procedure room please don protective gloves. Gloves are found in the glove holders hanging on the walls in animal and procedure rooms.

Exiting the facility: When exiting an animal room or a procedure room remove your protective gloves and dispose of them in the trash barrel inside the animal or procedure room. Any item that was brought into the facility and is being taken out when exiting must be placed into the plastic bag and sprayed with Quatricide before leaving the animal or procedure room. Exit the animal facility into the animal facility vestibule. Dispose of the bonnet and the booties in a trash barrel located in the vestibule. Paper lab coats may be worn for a full work week. They can be hung on the hooks in the vestibule. Lab coats will be disposed of on Friday afternoons by the animal care staff. Please remove items from pockets before this time.

If you are removing animals from the animal facility to the lab, you must place the caged animals in a black plastic bag for the entire trip from the animal facility to the lab. Once in the lab, take the caged animals out of the plastic bag immediately. The purpose for placing the caged animals in a black plastic bag is for the safety of the animals and the research technicians. This also protects people you may pass along the way who may have allergies to animals.

Opening or changing cages under the laminar flow hood or bio-safety cabinet: When using a laminar flow hood or bio-safety cabinet you must turn it on and let it run for 5 minutes before placing animals in the hood. Spray all inside surfaces of the hood or bio-safety cabinet with Quatricide and wipe down all surfaces. Spray the floor of the hood or bio-safety cabinet with Quatricide and leave it (do not wipe).

Place the cage in the hood or bio-safety cabinet and remove the micro-isolator top and then spray your gloved hands. Do not touch anything under the micro-isolator until you spray your gloved hands. After removing the micro-isolator top from each cage with which you are working, you must spray your hands before touching the wire bar lid, bottle, food or the animals. When changing cages, you must remove the micro-isolator tops from the clean cage and the soiled cage before spraying your hands.

Do not leave clean or dirty caging in the hood. Place dirty cages on the rack in the hallway provided for this purpose. Clean the hood after using by sweeping up any bedding with the dustpan and brush found hanging on the wall.

When opening or changing cages on a cart, you must spray the surface of the cart before you begin. Then follow the procedures as outlined in the second paragraph of this section.

Cage Based Documentation:

a. **Cage cards** must contain the following information investigators name, protocol number, species, strain, source, and date of arrival or birth.

b. **Health Check:** This is a two piece carbon copy document that the Animal Care Technician will fill out if he/she observes any abnormality with the animals. The top portion of the document (white copy) will be posted on the animal room door. The bottom portion of the document (yellow) will be posted to the cage. The Veterinary Technician (Vet Tech) will check the door of each animal room daily for a white copy. He/she will then check the animal to make a determination if this animal is in immediate pain or distress. If pain or distress is present, he/she will call the investigator to discuss euthanizing the animal. If the abnormality is treatable (e.g., conjunctivitis) the Vet Tech will turn the yellow portion on the cage over and prescribe a treatment for the Animal Care Technician to follow. Each day the Vet Tech will then observe the animal and document the condition of the animal. **NOTE: Do not remove the white copy from the animal room door. This copy is for the Vet Tech.** If you decide to euthanize an animal that has been tagged with Health Check documentation, place the yellow copy that is on the cage behind the cage card and turn the white copy that is on the door around with the blank side showing. This will help the Vet Tech know that you have euthanized the animal or have taken it to the lab. If the condition of the animal is questionable to either the Vet Tech or the investigator, the Consulting Veterinarian will be called. The instructions from the Consulting Veterinarian will be followed.

c. **Separation Request.** This is a two piece carbon document to notify the investigator that cage is overcrowded. The top portion (original) will be placed on the door and the bottom portion (carbon) will be placed on the cage. There are several situations that constitute an overcrowded cage.

For litters that are 28 days and in some approved protocols 30 days old, the request may be posted before the 28/30 day deadline in order to announce to the investigator that a cage is nearing the required separation date. If the cage has not been separated by the deadline date, the investigator will be notified and asked to come before the end of the business day to separate the cage. If the cage is not separated by 9:00am the next day the animal care technicians will separate the cage.

When a new litter is born in a cage that contains weaning age pups (21 days or over) this will constitute an emergency separation. The investigator will be called and asked to come and separate the cage immediately. *The investigator can request that the animal care staff separate the cage.* If the cage is not separated by 2:00pm that day the animal care staff will separate the cage.

When two litters are born in a cage at the same time, the animal care staff will post a separation request. They will notify the investigator that the investigator will be given 3 day deadline date to separate the cage. If not done by the deadline date, the animal care technicians will separate the cage.

When two pregnant females are observed in one cage, the animal care staff will post a separation request. They will notify the investigator that if the cage is not separated by the deadline date the animal care staff will separate.

When a pregnant female with a litter in the cage is nearing parturition, a separation request will be posted. The investigator will be called to come and wean the existing litter. If not done by 2:00pm that day the animal care staff will wean the litter.

If a cage houses 5 mice over 25 grams, a separation request will be posted and a 3 day deadline date will be given to separate the cage. If not done by the deadline date, the animal care staff will separate the cage.

A small rat cage (132 sq. in) can house 4 rats under 100 grams. A large rat cage (260 sq. in.) can house 8 rats under 100 grams. A small rat cage can house 3 rats 100 grams or over. It can also house 1 dam, +/- a sire and a litter. A large rat cage can house 4 rats 100 grams or over. It can also house 2 dams +/- a sire and 2 litters. Any cage that exceeds these parameters will be labeled with a separation request. The same separation procedures will follow as with mice overcrowding.

If the research staff separates the animals, the separation form on the cage can be discarded. The research staff must also turn over the separation form copy that is on the room door so that the blank side is showing. The Vet Tech will then know that the animals have been separated. **Note: Do not remove the separation form from the room door.**

d. **Found Dead Notice:** This is a two piece carbon document that notifies the investigator that animals have been found dead. If an animal is found dead it will be placed in a carcass bag.. If the carcass is to be saved, one copy of the "Found Dead" slip goes on the outside of the carcass bag with the information showing; one copy is placed on the cage. The carcass bag is then placed in the carcass refrigerator for 48 hours after which the carcass bag will be placed in the freezer. If bodies are not to be saved, both copies of the "Found Dead" slip go on the cage. The dead animal will be placed in a carcass bag and placed directly into the freezer. The "Found Dead" Slip will remain on the cage for one week, and then the slip is discarded, the animal tech will write "FD", date animal died, and initials, on back of cage card. If entire cage died, or last animal in cage, use the slip along with the cage card as a place holder for the cage.

e. **"Red Cage Cards"** are used when the research staff does not want the animal care staff to perform certain husbandry duties such as feeding the animals, watering the animals, changing the cages, touching or moving the cages.

If the investigator does not want the animal care staff to perform any of the duties mentioned above, the research staff must check off which duties the animal care staff must not perform. The animal care staff will not perform the husbandry duties checked off, but it will perform the duties not checked off. Therefore, the research staff must be careful when checking off the duties that they do not want performed by the animal care staff.

When the research staff performs any or all of the husbandry it must be documented. **Laboratory Husbandry Record Sheets** are provided for the animal rooms where research staff is performing the husbandry. The research staff must fill out the Laboratory

Husbandry Record Sheet with the appropriate information regarding the husbandry that is being performed. Failure by the research staff either to complete the sheets or to do them properly will be reported to the Animal Facility Manager. Repeated instances will be reported to the Consulting Veterinarian

f. **Surgery Report**: The surgery report is required to document the post-surgical monitoring for each animal that surgery has been performed. The surgery report is kept in the procedure room where the P.I. performs the surgery. Information that must be provided on the surgery report includes:

1. Date
2. Room & rack where the animals are housed
3. Contact person
4. 24 hour Phone # of contact person
5. E-mail of contact person
6. Procedure performed
7. Major or Minor surgery
8. Implants
9. Anesthetic (type and amount)
10. Analgesic (type and amount)

There is ascoring system on the surgery report to indicate the activity of the animal, the condition of the incision, the pain level of the animal, the weight of the animal.

There is a place on the surgery report for comments on the condition of the animal to be filled in by the research staff, the Vet Tech, or animal care staff.

There is a place on the surgical report for the initials of the person who is documenting the post surgical conditions of the animals.

The analgesic administered must be recorded on the day and time given. The type, the amount and the duration of analgesic must be used as described in the protocol or directed by the Veterinarian.

g. **Surgery Identification Stickers**: After surgery, the cage card on the cage where the animal is housed must be turned over and a surgery identification sticker will be placed on the blank side of the cage card. The required information will be filled out on the identification sticker.

The cage card with the identification sticker facing out will be placed back in the cage card holder. This surgery identification sticker will remain facing out throughout the post-operative period, after which the cage card can be turned back to the usual status.

h. **Animals Separated: (Original Cage)** is used when it is necessary for the animal care staff to separate animals. The “Animals Separated: (original card)” will be placed on the animal cage being separated. The card has a printed number in the right corner. The card will be filled out indicating why the cage was separated, the number of other cages the

animals were separated into, the date of the separation, and the name of the technician who separated the cage.

i. **Animals Separated: (Newly Created Cage Card)** is placed on the cages that animals have been separated into from the original cage. The printed number on the Animals Separated: (Original Cage) will be hand-printed in the upper right hand corner of the newly created card, so that it will be known where the animals originated. Requested information on the card will be filled out indicating the date of separation, number of animals in cage, sex of animals, protocol number, species, principal investigator, contact person, source, birth or arrival date, and strain of animal.

I have read, understood and agree to abide by the contents of *The Guide for Working in the Animal Facility.*

Printed Name _____ Date_____

Signature_____

Name of Principal Investigator _____