



POLICY HANDBOOK FOR THE CARE
AND USE OF ANIMALS IN RESEARCH
AT:

THE UNIVERSITY OF TEXAS AT TYLER

I. ADMINISTRATIVE OVERSIGHT

Contact Information for Animal Related Activities at UT Tyler:

The Office of Sponsored Research

903-565-5670 or 903-566-7132

The Associate Vice President for Research (AVPR) in the Office of Sponsored Research (OSR) is delegated by the President of the University to be the Institutional Official (IO)/administrator who oversees the university's Institutional Animal Care and Use Committee (IACUC) and all animal care related activities for The University of Texas at Tyler (UT Tyler). The AVPR is directly accountable to the Provost and Vice President for Academic Affairs at UT Tyler. Animal care related activities may be conducted only after full approval by the IACUC. Animal care related activities may be conducted only by employees of UT Tyler.

The OSR is open Monday through Friday from 8:30 a.m. until 5:00 p.m. It is closed on weekends and all university holidays. After hours, leave an appropriate message on the voice mail system and the call will be returned as soon as possible.

The responsible veterinarian, who is a member of the IACUC, may be contacted for services for university animals through either the IACUC Chair or the AVPR. The qualifications, responsibilities, and authority of the veterinarian are as follows:

- Experience with laboratory animals.
- Has direct or delegated program authority and responsibility for activities involving animals at UT Tyler, including suspension of any animal-related activity that does not reflect compliance with the standards established by this Handbook, *The Guide*, and/or federal, state, and local regulations.
- Provides or designates a qualified person to do species-specific training.
- Oversees and/or collaborates with trained scientists on housing, feeding, and care of all animals used for research purposes.
- Serves as consultant for investigators, especially for the appropriate use of anesthetic, analgesic, or tranquilizing drugs.
- Provides veterinary care as indicated.
- Inspects vivarium every 6 months and submits written report to the AVPR.
- Provides consultation regarding appropriate animal husbandry, nutrition, sanitation practices, zoonosis control, hazard containment, animal procurement, and transportation.
- Provides emergency weekend and holiday care to treat diseases and injuries.

II. INTERNAL GUIDELINES FOR THE CARE AND USE OF ANIMALS IN RESEARCH AT UT TYLER

- A. The objectives of the OSR and the IACUC are to provide humane and scientifically appropriate care for research animals at UT Tyler. The care and use of these animals will be in compliance with the Animal Welfare Act regulations of the U.S. Department of Agriculture (as appropriate) and its amendments, the *Public Health Service Policy*

on *Humane Care and Use of Animals*, and the *Guide for the Care and Use of Laboratory Animals* (see <http://www.nap.edu/readingroom/books/labrats/chaps.html>).

Note: Any reference in this Handbook to the *Guide for the Care and Use of Laboratory Animals* will be referred to as *The Guide*.

- B. The internal guidelines for the use of animals in research at UT Tyler are set forth in this document titled *Handbook for the Care and Use of Animals in Research at The University of Texas at Tyler*. All individuals working with animals at UT Tyler must be familiar with this Handbook which describes the laboratory animal program at UT Tyler. This Handbook covers broad aspects of the formal regulations only, and details relevant to other aspects of animal care and use in research must be referred to in *The Guide*.
- C. Investigators should be aware of their individual and collective responsibilities for compliance with laws and regulations pertaining to animal care and use.
- D. Ethical Treatment of Animals:

The following principles shall be observed in the conduct of humane animal-based research at UT Tyler: respect for life, societal benefit, and non-maleficence. Moreover, investigators should recognize that preventing pain and distress results in improved experimental results, and that pain and distress can drastically alter the physiological state of animals. Animals in distress are no longer able to adapt to changes in their environment or physiological condition, displaying unpredictable maladaptive or abnormal responses, which represents an uncontrolled experimental variable. For these reasons, it is critical that individuals working with animals are knowledgeable in the appropriate animal handling, care, and use procedures.

- E. Reporting Deficiencies in Animal Care and Treatment:

The Institutional Animal Care and Use Committee (IACUC) has the responsibility of reviewing, and when warranted, investigating concerns involving any deficiencies in animal care and treatment by personnel at UT Tyler, whether such concerns are received from the public or from University personnel or employees.

Concerns regarding deficiencies in animal care and treatment should be made known to (all reports are anonymous):

**The UT Tyler Compliance/Ethics Hotline
(800) 500-0033
Calls are answered 24 hours a day, 365 day a year**

Or

**The Compliance/Ethics Box at UT Tyler
P. O. Box 131292
Tyler, TX 75713-1292**

Concerns should be specific enough to permit an investigation of the situation. Such concerns will be forwarded to the Chair of the IACUC who, if she/he deems it warranted, will appoint a subcommittee of members of the IACUC to complete an initial review and pursue an investigation of the concern. Any individual who is the subject of a complaint will be notified in writing of the specific nature of the concern but not the identity of the individual raising the concern, and will be given an opportunity to comment, either verbally or in writing, regarding the concern. Once the investigation is complete, the subcommittee will present the results of its investigation to the IACUC for consideration. The Chair of the IACUC will notify the individual who is the subject of the concern of the results of the investigation and determinations concerning corrective actions if needed.

The IACUC will maintain a file documenting the complaint, the review, investigation, and corrective action. The person reporting the concern will be notified that action has been taken at the conclusion of the investigation.

No University employee, IACUC member, laboratory personnel, or other personnel will be discriminated against or be subject to any reprisal for reporting concerns regarding any deficiencies in animal care and treatment.

F. Resources Available to Investigators:

- Veterinary consultation.
- Research collaboration.
- Continuing education opportunities.
- Training materials and reading lists.

III. Laws and Regulations Applicable To Research Utilizing Animals at UT Tyler

Continued concern by the public and scientific organizations regarding humane care and use of animals has resulted in the creation of laws applicable to animals used in research, testing, and teaching. The care and use of animals in research must adhere to specific guidelines. All protocol reviews conducted by the UT Tyler IACUC incorporate these laws and regulations into determining approval/non-approval of protocol requests.

All investigators are responsible and accountable for adherence to these laws and regulations for any regulated animal care and use activity at UT Tyler. A broad overview of the three major regulatory laws is provided below.

A. The Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals

This policy requires that each institution receiving Public Health Services (PHS) funds, e.g., from the NIH, for research involving animals, submit detailed information to the Office of Laboratory Animal Welfare (OLAW) in an Animal Welfare Assurance Statement of Compliance regarding the institution's program for the care and use of animals. PHS regulations are enforced by OLAW. This policy mandates the following:

- A veterinarian qualified in laboratory animal medicine must participate in the program.
- An IACUC oversees animal care related activities and is composed of an individual unaffiliated with UT Tyler, a veterinarian qualified to participate, a practicing scientist experienced in research involving animals, and a member whose concerns are in a nonscientific area.
- Institutions develop mechanisms to review and approve those sections of applications for PHS funds that relate to the care and use of animals (Vertebrate Animals Section) before PHS funds may be awarded.
- A self-assessment of the institution's program based on the *The Guide* must be conducted. Significant deficiencies in the program must be identified, an approved plan for correction of any deficiencies, and scheduled timeframes for the corrections to be implemented, must be submitted. UT Tyler assures the PHS that all uses of animals for research, testing, or instruction will be in accordance with the United States Principles outlined below.

B. *The U.S. Government Principles for Use of Animals* (Federal Register, May 20, 1985, Vol. 50, No. 97, Office of Science and Technology Policy.)

These principles, which are enforced by the US Department of Agriculture, were prepared by the Interagency Research Animal Committee. This committee, which was established in 1983, serves as a focal point for federal agency discussions of issues involving all animal species needed for biomedical research and testing. The committee's principal concerns are the conservation, use, care, and welfare of research animals. Its responsibilities include information exchange, program coordination, and contributions to policy development.

The development of knowledge necessary for the improvement of the health and well-being of humans or animals requires *in vivo* experimentation with a wide variety of animal species. The IO is responsible for ensuring adherence to the Principles which apply to the use and care of vertebrate animals used in teaching, testing, research, and training. The Principles include:

- The transportation, care, and use of animals should be in accordance with the Animal Welfare Act and other applicable Federal laws, guidelines, and policies.
- 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.

- 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.
- Proper use of animals, including the avoidance or minimization of discomfort, distress, and pain when consistent with sound scientific practices, is imperative. Unless the contrary is established, investigators should consider that procedures that cause pain or distress in human beings may cause pain or distress in other animals.
- Procedures with animals that cause more than momentary or slight pain or distress should be performed with appropriate sedation, analgesia, or anesthesia. Surgical or other painful procedures should not be performed on unanesthetized animals paralyzed by chemical agents.
- Animals that would otherwise suffer severe or chronic pain or distress that cannot be relieved should be painlessly killed at the end of the procedure or, if appropriate, during the procedure.
- The living conditions of animals should be appropriate for their species and contribute to their health and comfort. Normally, the housing, feeding, and care of all animals used for biomedical purposes must be directed by a veterinarian or other scientist trained and experienced in the proper care, handling, and use of the species being maintained or studied. In any case, veterinary care shall be provided as indicated.
- 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.
- Where exceptions are required in relation to the provisions of these Principles, the decisions should not rest with the investigators directly concerned, but should be made by the IACUC.
- Failure to adhere to these regulations, policies, and guidelines could lead to severe sanctions including civil and/or criminal penalties, loss of funding, and university disciplinary action.

C. The Animal Welfare Act

Investigators at UT Tyler who carry out animal-based research or teaching fall under the regulations of the “Animal Welfare Act” (7 U.S.C. 2132 *et. seq.*) if the animals they conduct research on include nonhuman primates, dogs, cats, rabbits, guinea pigs, hamsters, gerbils, and aquatic mammals, and any other warm blooded animals, regardless of funding sources. Mice and rats bred for research and birds are not covered by the Animal Welfare Act **but are covered under OLAW and UT Tyler policies**. The objective of this legislation is to “effectively minimize the pain and discomfort of animals while under experimentation.” In essence, the Act mandates:

- Unannounced inspections to ensure compliance with respect to humane care of animals used in research, their housing, and medical care including "the appropriate use of anesthetic, analgesic, or tranquilizing drugs, when such use would be proper in the opinion of the attending veterinarian...."

- That the IACUC conduct annual review of all research and semi-annual inspections of the animal care facilities.
- That procedures which may cause more than momentary or slight pain or distress to the animals require a written narrative description of the methods and sources (e.g., the Animal Welfare Information Center of the National Agricultural Library) used to determine that alternatives to these procedures are not available. There must be written assurance that the activities do not unnecessarily duplicate previous experiments. The protocol must also describe the qualifications and training of the personnel with respect to the procedures to be performed. These points are all addressed in the instructions accompanying the IACUC application forms.

Enforcement of the animal welfare act regulations is conducted by veterinary inspectors from Animal Care, United States Department of Agriculture, who make unannounced site visits every year to research facilities. Reports filed by these inspectors are available to the public under the Freedom of Information Act.

IV. UT Tyler Animal Welfare Assurance

The UT Tyler IACUC recognizes that no activity involving animals may be conducted or supported by the PHS until UT Tyler has filed a written Animal Welfare Assurance Statement of Compliance with the Office of Laboratory Animal Welfare (OLAW), National Institutes of Health. This assurance will be applicable to all activities involving live vertebrate animals by UT Tyler faculty or staff at any location. The Assurance will be signed by the AVPR.

The assurance with OLAW will stipulate UT Tyler's commitment to quality care and use of animals. The assurance will specify the institutional responsibilities which include defining lines of responsibility and authority, monitoring animal care and use, providing veterinary care, record keeping, ensuring appropriate environment and housing of animals, personnel training, and establishing an appropriate occupational health and safety program. At UT Tyler, *The Guide* is used as a basis for developing and implementing the institutional program for activities involving animals.

V. Definitions

- 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 12 hours.

- C. *Public Health Service* — The Public Health Service (PHS) currently includes the Agency for Healthcare Research and Quality (AHRQ), Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the Health Resources and Services Administration (HRSA), the Indian Health Service (IHS), the National Institutes of Health (NIH), and the Substance Abuse and Mental Health Services Administration (SAMHSA).
- D. *Quorum* — A majority (greater than 50%) of the members of the Institutional Animal Care and Use Committee (IACUC).
- E. *Vertebrates* — Includes all cold blooded and warm blooded vertebrate animals.

VI. Institutional Animal Care and Use Committee (IACUC)

A. Introduction

The use of animals in research and education or training involves responsibility for stewardship of the animals, to the scientific community, and to society as a whole. Investigators, associates/assistants, students, technicians, and staff must be aware that use of animals in research is a privilege governed by public concerns, federal and local regulations, and UT Tyler policies and procedures.

The UT Tyler IACUC will operate under the policies and regulations of UT Tyler, the PHS (<http://grants.nih.gov/grants/olaw/references/phspol.htm>), the Animal Welfare Act (Code of Federal Regulations [CFR], Title 9, Chapter 1, Subchapter A, Parts 1, 2, and 3) as appropriate, and the US Government Principles for Animal Care.

B. Investigator Responsibilities

The Investigator is responsible for the implementation of the specifics of his or her approved protocol. The vivarium staff is responsible for general feeding, watering, bedding, housing, and general care of research and teaching animals housed in the UT Tyler vivarium. Any special feeding, medical, enrichment, or extraordinary care (lighting, heating, cooling, breeding, etc.) of the Investigator's animals is solely the responsibility of the Investigator. If the Investigator needs to make a change in environmental conditions, outside of the parameters of an approved protocol, an amendment form must be completed and submitted to the vivarium manager, IO, or chair of the IACUC in advance.

When conditions allow, the vivarium staff will attempt to provide any reasonable extraordinary conditions in the vivarium for an Investigator, when directed and supported by the Investigator. When researchers are using colony room space not shared with other researchers, they may make environmental changes as necessary within approved protocols. For example, the UT Tyler vivarium is a small facility and will occasionally require the sharing of colony rooms by more than one investigator's research animals. When this occurs, priority for lighting and other environmental conditions will be given to the ongoing research protocol unless all Investigators whose animals are held in a common colony room agree to different settings. This

agreement must be obtained prior to making any environmental changes. If extenuating circumstances exist for sharing a common colony room, the IACUC will review and advise the IO about appropriate recommendations to satisfy the animal protocols. In any case, the vivarium veterinarian is the ultimate authority on environmental conditions for all species held in the vivarium and in all satellite facilities. In addition, according to OLAW guidelines, the Veterinarian is required to uphold the health and welfare of all animals over and above approved protocol measures.

The final responsibility for insuring that the parameters of an approved protocol are followed lies with the Investigator. The Investigator may request that simple procedures outside of normal vivarium operating procedures (e.g., normal food and bedding) be implemented and maintained by vivarium staff. The request can be made directly to the vivarium manager or to the IO. If the request is within the parameters of the approved protocol, every attempt will be made by the vivarium staff to implement the new procedures. If the vivarium staff is not able to implement the new procedures, the Investigator will be responsible for that implementation.

Other Investigator responsibilities include the following:

- Abide by all approved protocol terms.
- Ensure that only UT Tyler IACUC approved procedures/research are performed on animals.
- Participate only in UT Tyler IACUC approved protocols.
- Ensure that any deviation from an approved protocol in terms of drugs used, procedures, genotypes used, personnel added, or total numbers of animals used, is first approved, as evidenced by a UT Tyler IACUC-reviewed protocol amendment. Changes to protocols must be approved prior to instituting any changes.
- Ensure that animals are properly identified at all times via the use of cage cards, ear punches, or tattoos, and that the UT Tyler IACUC can track animals from receipt to disposal.
- Ensure the proper husbandry for animals on an approved protocol according to IACUC approved policies.
- Ensure adequate training of personnel involved in projects.
- Ensure that personnel involved in projects are enrolled in the Occupational Health and Safety Program.
- Provide a safe working environment.
- Maintain complete record keeping.

C. Non-Compliance

It is a violation of federal regulations to conduct research, breeding, training, or teaching using animals without an approved protocol and to maintain animals after expiration of a previously approved protocol. The UT Tyler IACUC must approve of maintaining animals after a study has ended. It is a violation of federal regulations to deviate or make any changes in an approved protocol without first receiving authority to do so via a UT Tyler IACUC-approved amendment.

Failure to comply with the provisions of a grant or contract among the investigator, UT Tyler, and the federal government can lead to severe sanctions for the investigator and for the university. Such sanctions include but are not limited to:

- Loss of privilege to use animals in research.
- Loss of funding for animal research.
- Principal Investigator being held personally responsible for professional misconduct.
- Criminal and civil penalties for the PI and/or Institution.

D. Animal Facilities

Only those numbers of animals that are necessary and sufficient for an investigator's approved experimental, breeding, and/or teaching protocol are permitted to be housed in the university vivarium at any one time. In addition, approved animals may not be housed in the teaching area of the vivarium or any classroom on campus, without IACUC permission, for more than 12 hours at a time. Except for removal by the veterinarian for treatment purposes, no research animal may be removed from the UT Tyler campus.

Federal regulations require that UT Tyler's facilities and husbandry practices promote animal well-being and protect the health and safety of personnel. Facilities are inspected daily by the manager of the vivarium, or trained designee, and by the veterinarian and the IACUC every 6 months. When registered with the USDA, unannounced inspections will be conducted by USDA Animal Care Inspectors. Specific guidelines for the investigator to refer to for noise, lighting, temperature, social environment, activity, food, water, bedding, sanitation, and waste disposal are presented in the *The Guide*.

Special emphasis for inspections is paid to:

- Daily observation and care of animals, including weekends and holidays.
- Husbandry, including food, water, bedding, sanitation, waste disposal, and pest control.
- Ensuring that animal-housing systems are selected using professional knowledge and judgment and based on the nature of the hazards in question, the types of animals used, and the design of the experiments. All animal housing systems must be constructed of stainless steel.
- Animal identification, genetic monitoring, and animal health records.
- Physical and social environment of the animals.
- Facility location, components, construction, management, and operation.
- Resources to facilitate personal and environmental cleanliness.
- Appropriate identification of research and clinical laboratories.
- Limitation of access to laboratories by authorized personnel.
- Use of ergonomically sound operations that reduce the potential of physical injury to personnel.

If hazardous agents are utilized within the context of animal experimentation, special consideration will also be given to:

- Containment of hazardous agents within the study environment.
- Separation of animal housing from other animal housing and support areas.
- Cleanliness and maintenance of mechanical systems through proper design and maintenance. For example, a double corridor facility or barrier entry system is recommended to be used as an effective means of reducing cross-contamination.
- Ensuring floor drains always contain liquid or are sealed effectively by other means. Automatic trap priming can be provided to ensure that traps remain filled.
- Control of airflow (such as through the use of biologic-safety cabinets) that minimizes the escape of contaminants is a primary barrier that should be used in the handling and administration of hazardous agents as well as the performance of necropsies on contaminated animals. Special features, such as airlocks, negative air pressure, air filters, and redundant mechanical equipment with automatic switching, are secondary barriers aimed at preventing accidental release of hazards outside the facility and work environment.

Primary enclosures for the animals: Efforts toward ensuring that primary enclosures are kept in good repair to prevent escape of or injury to animals, promoting physical comfort, and facilitating sanitation and servicing are monitored. Rusting or oxidized equipment that threatens the health or safety of the animals should be repaired or replaced.

Primary enclosure space should be based on professional judgment, current literature reviews of best practices, consideration of the animals' physical, behavioral, and social needs, and the nature of the protocol and its requirements.

Primary enclosures must be approved by the IACUC. Primary enclosures for animals are constructed to:

- Allow for the normal physiologic and behavioral needs of the animals, including urination and defecation, maintenance of body temperature, normal movement and postural adjustments, and, where indicated, reproduction.
- Allow conspecific social interaction and development of hierarchies within or between enclosures.
- Make it possible for the animals to remain clean and dry (as consistent with the requirements of the species).
- Allow adequate ventilation.
- Allow the animals access to food and water and permit easy filling, refilling, changing, servicing, and cleaning of food and water utensils.
- Provide a secure environment that does not allow escape of or accidental entrapment of animals or their appendages between opposing surfaces or by structural openings.
- Be free of sharp edges or projections that could cause injury to the animals.
- Allow observation of the animals with minimal disturbance of them.
- Whenever possible, environmental enrichment appropriate to the species will be provided.

Space allocations (See Appendix #1 for space guidelines) of the primary enclosure take into consideration the complex needs of the animal, and are not limited to consideration of the animal's body weight or surface area.

The following are guidelines presented by the PHS (note that these may differ from the AWA) and should be considered when determining space allocations at UT Tyler:

- Vertical height, structuring of the space, and enrichments can clearly affect animals' use of space. Some species benefit more from wall space (e.g., "thigmotactic" rodents). Thus, basing cage-size recommendations on floor space alone is inadequate.
- Space allocations should be reviewed and modified as necessary to address individual housing situations and animal needs (for example, for prenatal and postnatal care, obese animals, and group or individual housing).
- Animal performance indexes such as health, reproduction, growth, behavior, activity, and use of space can be used to assess the adequacy of housing. At a minimum, an animal must have enough space to turn around and to express normal postural adjustments, must have ready access to food and water, and must have enough clean bedding or unobstructed area to move and rest in.
- Floor space taken up by food bowls, water containers, litter boxes, or other devices not intended for movement or resting should not be considered part of the floor space.
- Assessment of animals' space needs should be a continuing process. With the passage of time or long-term protocols, adjustments in floor space and height should be considered and modified as necessary.

NOTE: Current written documentation must be on file at all times concerning the location, square footage, species of animals housed, and average daily inventory by species.

Notification Procedures

Vivarium: If any problem or concern is discovered in the vivarium by workers, PIs or any other personnel, it is to be reported to the Vivarium Manager at 903-714-0992. The Vivarium Manager is on call 24 hours per day. If the problem is related to the physical facilities, the Manager will notify physical plant personnel. If the problem is animal related, the Manager will notify the veterinarian and the PI whose animals are affected. The Manager will also notify the AVPR and the IACUC Chair of the problem and will follow-up to ensure that the issue has been resolved.

Ophidian Colony: If any problem or concern is discovered in the ophidian housing areas by workers, PIs or any other personnel, it is to be reported to Dr. Neil Ford at 903-566-7249 or to Dr. John Placyk at 903-566-7147. If the problem is related to the physical facilities, physical plant personnel will be contacted. If the problem is animal related, the veterinarian and the PI whose animals are affected will be contacted. The AVPR and the IACUC Chair will also be notified of the problem and will follow-up to ensure that the issue has been resolved.

E. Veterinary Care

To provide quality care, UT Tyler's veterinary and animal care staff have access to all animals for evaluation of their health and well being. Veterinary care includes provision of appropriate animal husbandry, nutrition, sanitation practices, zoonosis control, hazard containment, animal procurement, and transportation. The veterinarian has oversight of the daily care of the animals through the lead animal care technician. The contracted veterinarian provides oversight and guidance for treatment of disease, surgery programs, pre- and post-surgical care, anesthesia, analgesia, and euthanasia procedures. The veterinarian provides emergency weekend and holiday care to treat diseases and injuries, and is available for advice and consultation. In the absence of the contracted veterinarian, the veterinarian's office should be contacted for back-up veterinary services. UT Tyler has an occupational health and safety plan in place to ensure freedom from and control of infectious disease (See Section VII).

UT Tyler's statement of assurance for animal welfare compliance requires the ongoing and consistent practice of relief from pain and timely euthanasia. All drugs must be stored and maintained appropriately. All drugs must be clearly labeled as to the name, dosage information, and expiration date. No expired drugs are to be used, and must be discarded upon expiration date.

- Policy on Sick Animals: When an animal becomes sick or dies, an investigation must be conducted to determine the cause of the death. If an animal is observed to be sick, the person making the observation will immediately notify the vivarium veterinarian and the PI whose animal it is. If the animal dies before it is seen by the veterinarian, it must be immediately placed into the refrigerator, not the freezer, until the veterinarian is able to retrieve the animal. The veterinarian will conduct an investigation into the probable cause of death of the animal and will report the findings to the responsible PI, the vivarium director, and the IACUC.

F. Pain and Distress

"Painful procedures" in animals is defined as any procedure resulting in pain in excess of that caused by injections or other minor procedures. Any procedure that causes pain and or distress to humans is assumed to do the same in animals. Animals exhibiting signs of pain, discomfort, or distress such as decreased appetite and/or activity level, adverse reactions to touching inoculated areas, open sores or necrotic skin lesions, abscesses, lameness, conjunctivitis, corneal edema, and photophobia are expected to receive appropriate relief unless written scientific justification is provided in the animal activity proposal and approved by the IACUC.

G. IACUC Membership

Membership on the Institutional Animal Care and Use Committee (IACUC) is appointed by the AVPR (IO) in writing, for renewable terms. The membership appointments on the IACUC are forwarded to the Research Council who in turn forwards them to the Faculty Senate and the President. The Chair of the IACUC is also appointed by the AVPR (IO) for a one-year, renewable term. Qualified members are selected based on their experience and expertise. The IACUC

monitors and evaluates the animal use program, facilities, and procedures as mandated by the PHS Policy and Animal Welfare Act (AWA), and state and local laws that deal with animal protection as research participants.

The IACUC executes its oversight functions through semi-annual evaluations of the animal care program, semi-annual inspections of facilities, and by advising the university administration on ways to improve the animal care program including animal facilities, personnel training, and an occupational health and safety program. The committee reviews all animal use proposals (including teaching, breeding, and experimental protocols) and animal welfare concerns. In the event of non-compliance with federal regulations or university policies, the committee is authorized by federal law to suspend animal-related activities. The committee reports all of its activities to the IO, the Research Council, and the relevant federal agencies.

The UT Tyler IACUC committee consists of a minimum of five members, and includes at least:

- 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; the percent of time devoted to the IACUC by the DVM will be a minimum of 3 hours per month, or 2% FTE time. This time is used in consultation, advice, animal care, and/or facility inspections;
- one practicing scientist experienced in research involving animals;
- one member whose primary concerns are in a nonscientific area (for example, ethicist, lawyer, member of the clergy); and,
- 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 detailed in this policy may fulfill more than one requirement. However, per federal regulations, the IACUC shall never have less than five members.

H. Functions of the UT Tyler IACUC

1. Review at least once every six months UT Tyler'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 UT Tyler's animal facilities (including satellite facilities) using the *The Guide* as a basis for evaluation. The template checklist in Appendix 2 of this Handbook should be used for this purpose.
3. Prepare and submit reports of the IACUC evaluations to the UT Tyler AVPR, and ensure availability of reports for OLAW inspection upon request. The reports must contain a description of the nature and extent of the institution's adherence to the *The Guide*, must identify specifically any departures from the provisions of the *The Guide* and PHS Policy, and must state the reasons for each departure. The reports must distinguish significant deficiencies from minor deficiencies.

- A significant deficiency is one which, consistent with PHS Policy, and, in the judgment of the IACUC and the IO, is or may be a threat to the health or safety of the animals. If program or facility deficiencies are noted, the reports must contain a reasonable and specific plan and schedule for correcting each deficiency.
4. Review and investigate internal or external concerns or allegations involving the care and use of animals at UT Tyler.
 5. Make recommendations to the AVPR regarding any aspect of UT Tyler's animal program, facilities, or personnel training.
 6. Review research projects, including breeding, experimental, and teaching protocols (PHS-conducted or supported or other research projects).

I. Review of Animal Care Protocols by IACUC

1. In order to approve proposed research, breeding, or teaching projects or proposed significant changes for ongoing projects, the IACUC will conduct a review of those components related to the care and use of animals and determine that the proposed projects are in accordance with the PHS Policy. In making this determination, the IACUC will confirm that the project will be conducted in accordance with the Animal Welfare Act insofar as it applies to the project, and that the project is consistent with the *The Guide* unless acceptable justification for a departure is presented. Further, the IACUC will determine that the project conforms to UT Tyler's Assurance and meets the requirements outlined below as per PHS Policy:
 - Procedures with animals will avoid or minimize discomfort, distress, and pain to the animals, consistent with sound research design.
 - 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.
 - 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.
 - The living conditions of animals will be appropriate for their species and contribute to their health and comfort. The housing, feeding, and non-medical care of the animals will be directed by a veterinarian or other scientist trained and experienced in the proper care, handling, and use of the species being maintained or studied.
 - Medical care for animals will be available and provided as necessary by a qualified veterinarian.
 - Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures.

- Methods of euthanasia used will be consistent with the recommendations of the [American Veterinary Medical Association \(AVMA\) Panel on Euthanasia](#) (PDF), unless a deviation is justified for scientific reasons in writing by the investigator.
 - The research project is justified by demonstrating a thorough literature review.
2. The Principal Investigator of an animal research, teaching, or breeding protocol must be a member of the faculty or other employee of UT Tyler. Research activities which use live vertebrate animals require annual review and approval by the IACUC. In order to accomplish this, all investigators must submit protocols on the appropriate UT Tyler IACUC review forms.

At least five working days prior to the meeting, each IACUC member will be provided with a list of proposed projects to be reviewed. Electronic copies of the IACUC review form and protocols will be made available to all IACUC members, and any member of the IACUC may obtain, upon request, full committee review of those projects. If full committee review is not requested, a Designated Reviewer (DR), who is a member of the IACUC and qualified to conduct the review, will be designated by the chairperson. The DR will review the projects and have the authority to approve, require modifications to (to secure approval), or request full committee review of those projects. A DR may not disapprove a protocol, but, if unwilling to approve, will forward it for full committee review.

If full committee review is requested, approval of those projects may be granted only after review at a convened meeting of a quorum 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 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.

3. 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.
4. The IACUC will notify investigators and the AVPR (IO) in writing of its decision to approve 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.
5. Types of Reviews

- a. Initial Approval Requests

The PI must complete the *Application for Use of Animals and Year 3 Review Form* (see "Application"). Protocols requiring the use of radioactive or

biohazardous materials, including chemicals, infectious agents, and recombinant DNA also require the approval of the Chair of the UT Tyler Safety Committee. The request is electronically submitted to the IACUC Chair for review two weeks before the next scheduled meeting and the forms are then circulated to all members of the IACUC.

IACUC meetings are open to non-members. No member may contribute to the quorum or to the simple majority for the vote if that member is listed on the protocol or has a conflict of interest in any other manner. The member must also leave the room for the vote.

All reviews and subsequent approvals/disapprovals are made according to the laws and regulations of the Animal Welfare Act, the PHS Policy, and the *U.S. Government Principles for the Use of Animals*. At the monthly meeting, a quorum (50% of membership) is required to vote on protocols, and a simple majority determines the outcome. One of three decisions may be made:

- Approval with No Revisions
- Returned for Revision
- No Approval--Major Revisions Required

The IACUC Chair or designee may approve a protocol that is "Returned for Revisions" once the determination has been made that the revised protocol complies with the suggested revisions. In addition, any member of the committee may call for full-committee review of the revised protocol. Actions taken on protocols by the Chair or designee outside of the full committee review will be reported at the next scheduled meeting.

b. Modification Requests

Investigators who have initial protocol approvals must have any changes to the protocols approved before instituting them. The Protocol Modification Form (see Attachment #4) must be completed and electronically submitted to the IACUC Chair. The Chair or designee will review, approve, request modifications for approval, or request that a full committee review be conducted at the next regularly scheduled meeting. Any action taken on reviews outside of a full review must be reported at the next regularly scheduled meeting. Protocol changes include, and may require full committee review, the following:

- Change in study objectives.
- Change in prognosis of survivable surgery or procedure.
- Change in the degree of invasiveness of a procedure or discomfort to an animal.
- Change in species or in the approximate number of animals used.
- Change in personnel involved in animal activities/procedures.
- Change in anesthetic agents or in the use of withholding of analgesics.
- Change in methods of euthanasia.

- Change in type, duration, frequency, or number of procedures performed on an animal.

c. Continuing Reviews

Two types of continuing review are conducted: An abbreviated review that is conducted annually and a detailed review that is conducted every three years as required by PHS Policy. The PI is required to complete the *One- and Two-Year Continuation Form* (see Attachment #3) for the first and second years of the project, and the *Application for Use of Animals and Year 3 Review Form* (see "Application") for any project ending its third year, and electronically submit it to the IACUC Chair one year after the previous approval. All protocols undergo full committee review and action every three years. Actions taken for the annual review may be that of approval or a request for full committee review at the next scheduled meeting. Actions taken for the full committee reviews may be:

- Approval
- Request for Further Information
- Disapproval of Further Continuance of Study

d. Suspension of Protocols

The IACUC may suspend, for an indeterminate amount of time, an activity involving animals per PHS Policy (IV.C.6). This is accomplished using the following procedure:

- Any animal-related activity may be suspended immediately by either the Attending Veterinarian or the IACUC Chair.
- The IACUC members will be notified of the suspension immediately.
- If the IACUC deems the suspension to be warranted, the suspension will be sanctioned.
- If the IACUC suspends an animal-related activity, the AVPR, as the IO, shall be notified as to the reasons for the suspension.
- The AVPR will review the reasons, take appropriate corrective action, and report the action with a full explanation to the OLAW.

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

7. Reports required to be submitted:

a. The IACUC will conduct and approve a semi-annual report which will be signed by the IO, sent to OLAW, and will include:

- Any change in the institution's program or facilities which would place the institution in a different category than specified in its Assurance once it is

received (UT Tyler's current category is Category 2, evaluated by the Institution: UT Tyler IACUC).

- Any change in the description of the institution's program for animal care and use as required by IV.A.1.a.-i. of the PHS Policy.
 - Any changes in the IACUC membership.
 - Notice of the dates that the IACUC conducted its semi-annual evaluations of the institution's program and facilities and the dates that it submitted the evaluations to the IO.
 - Significant deficiencies will be distinguished from minor deficiencies.
 - A plan or schedule with correction dates will be provided.
- b. At least once every 12 months, if there are no changes to report, the IACUC shall report to OLAW in writing, through the AVPR, that there are no changes and inform OLAW of the dates of the required IACUC evaluations and submissions to the AVPR.
- c. The IACUC, through the AVPR, will promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to:
- Serious or continuing non-compliance with PHS policy:
 - Failure to correct situations identified in previous semiannual evaluations as significant deficiencies.
 - Conducting animal-related activities without appropriate IACUC review and approval.
 - Failure of animal care and use personnel to adhere to the IACUC policies and procedures that are reviewed and approved on a regular basis.
 - Serious deviation from the provisions of the *The Guide* or PHS Policy:
 - Conditions that jeopardize the health or well-being of animals, including accidents, natural disasters, and mechanical failures resulting in actual harm or death to animals.
 - Shortcomings in programs of veterinary care, occupational health or training, identified during semiannual program review and not corrected within UT Tyler's determined time frame.
 - Departures from these provisions will be detailed and the reasons for the departures will be provided.
 - Suspension of an activity by the IACUC:
 - An IACUC intervention that results in the temporary or permanent interruption of an activity involving animals.

Reports to OLAW will be forwarded by OLAW to other applicable regulatory and/or funding agencies. Species covered by AWA will be reported to the USDA. Such actions may result in internal disciplinary action by administrative personnel at UT Tyler.

Reports will include any minority views filed by members of the IACUC.

Reports will be submitted to the IO and the Provost within 60 days of review.

Reports will not be altered by any local official once approved by the IACUC and IACUC members will not be pressured by local officials to change any report.

The IACUC will notify the Research Council, the IO, the Provost, and PHS within 15 business days of the following:

- Finding instances of non-compliance.
- Suspensions of protocols.
- Failure to correct major deficiencies.

The PHS Assurance, annual updates, and correspondence to and from OLAW are all sent to the Research Council and the IO.

8. Records

- a. Records relating to animal activities must be current, legible, and comprehensive in order to demonstrate delivery of adequate care and to convey necessary information to all parties involved in animal care.
- b. Records should include at least:
 - Identity of the animal, species, sex, age, strain, source, protocol number, and principal investigator including contact information on animal cage cards.
 - Description of procedures or manipulations performed and relevant dates.
 - Descriptions of illness, injury, distress, and/or behavioral abnormalities, and resolution of the problem.
 - Dates, details, and results of all medically-related observations, examinations, tests, procedures, and treatments.
- c. Records relating to IACUC meetings should include written minutes that include records of attendance, activities of the committee, and committee deliberations; records of applications, proposals, and proposed significant changes in the care and use of animals and whether IACUC approval was given or withheld; all evaluation and monitoring reports that include recommendations and appropriate follow up.
- d. All records shall be maintained for at least three years.
- e. Case records shall be maintained for the duration of the activity and for an additional three years after completion of the activity.
- f. All records shall be accessible for inspection by authorized OLAW, PHS, or other Federal representatives. Records shall be available to veterinary staff to

enable appropriate clinical decisions. Records of facility inspections and minutes of IACUC meetings are kept by the IACUC Chairperson and will be made available to researchers upon request.

- g. The IACUC will randomly review records representing at least 5% of the total active projects with a minimum of 5, to determine if documentation of the initial review, the approval letters, annual and triennial approvals, modifications, and investigator correspondence, are all present.

VII. The Occupational Health and Safety Program for Laboratory Animal Handlers

The occupational and health and safety program for personnel who work in UT Tyler laboratory animal facilities has been established to ensure that all persons working in laboratory animal settings have the proper training to maintain a safe working environment in accordance with UT Tyler policies and with all applicable local, state, and federal rules, regulations, and laws.

All personnel involved in animal handling will be educated regarding safe animal handling and environmental hazards. Animals that have infectious diseases are isolated from other animals and are appropriately identified so that all personnel can use appropriate precautions. Animals with known risks of zoonosis are identified and monitored for relevant signs of disease or any other condition that would result in higher health risks for the involved animal, other animals, and/or animal handlers/vivarium personnel.

The UT Tyler safety management program deals with procedures for hazard and risk assessment associated with animal care and use, occupational use of hazardous chemicals, infection control, and occupational injury and management.

- A. Risk assessment for personnel who are involved with animal care and use is assessed annually and is reviewed by the UT Tyler IACUC, in collaboration with the UT Tyler Director of Environmental Health and Safety to determine degree of risk. If a specific risk is identified, an appropriate action plan will be developed in consultation with the veterinarian in order to take every precaution necessary to ensure the health and safety of those coming into contact with laboratory animals. All personnel will be informed of any potential risks or hazards that they may be exposed to as a result of working with the animals, including any reproductive/fertility risks and risks to the fetus. The PI is responsible for ensuring that risks and hazard exposure are kept to minimal levels/degrees and that any personnel working with potential risks or hazards are well informed of these risks and consequences of exposure. Appropriate methods will be used for assessing exposure to potentially hazardous biologic, chemical, and physical agents where the possibility of exceeding permissible exposure limits (PELs) exists.
- B. Pre-exposure immunization will be offered to people at risk for infection or exposure to such agents as rabies or hepatitis B virus. Vaccination is recommended if

research is to be conducted on infectious diseases for which effective vaccines are available.

- C. If any personnel should be injured or be involved in any accident related to animal care use or the animal care use environment, the incident must be reported immediately to the Safety Director who will refer the individual to the appropriate health care provider if needed.
- D. All investigators, staff, and laboratory personnel are required to complete successfully, annual safety training courses that deal with fire safety, blood borne pathogens, TB exposure control, lab safety, and hazardous chemicals. Animal procedures involving indigenous or exotic agents that may cause serious or potentially lethal disease as a result of exposure by inhalation are monitored to ensure personnel are adhering to all precautions to avoid exposure to the agents.
- E. Personnel at risk will be provided with clearly defined procedures for conducting their duties, will understand the hazards involved, and will be proficient in implementing the required safeguards.
- F. It is essential that all personnel maintain a high standard of personal cleanliness. Clothing suitable for use in the animal facility and laboratories in which animals are used will be supplied and laundered by the institution. Appropriate arrangements will be made to decontaminate clothing exposed to potential hazards. Disposable gloves, masks, head covers, coats, coveralls, shoe covers, and other personal protective equipment (PPE) must be used when necessary. Personnel will wash their hands and change clothing as often as necessary to maintain personal hygiene. Outer garments worn in the animal rooms will not be worn outside the animal facility. Personnel are not permitted to eat, drink, use tobacco products, or apply cosmetics in animal rooms.

VIII. Training of Animal Care Personnel

- A. All IACUC members are provided with copies of *The Guide* and the UT Tyler IACUC Policy Handbook. Once a year a designated member of the IACUC is encouraged to attend animal training-related courses/workshops/meetings and to present a synopsis of the event to the committee. The Chair appraises the committee members on issues impacting animal research during monthly meetings and other relevant times. Members are also encouraged to browse OLAW, USDA, AND IACUC.org websites regularly to familiarize themselves with changes in issues relating to animal research. Issues of particular concern are routinely discussed as part of the IACUC meetings and documented in the minutes.
- B. Before any protocol is approved, the IACUC requires that all personnel (investigators, instructors, trainees, students, technicians, animal care personnel, professional/management/supervisory personnel) involved with a project using animals are appropriately trained. All personnel will be very familiar with the brochure published by The NIH Office of Laboratory Animal Welfare (OLAW): *What Investigators Need to Know About the Use of Animals*. This brochure is included in

the UT Tyler IACUC Policy Handbook and delineates investigator and personnel responsibilities under PHS regulations and provides a succinct resource for investigators to grasp the main expectations and requirements when using animals in research. The brochure may be accessed at <http://grants.nih.gov/grants/olaw/InvestigatorsNeed2Know.pdf>

- C. All PIs are responsible for assuring that any individuals handling animals are adequately trained. Personnel will be trained regarding the following:
- Zoonoses;
 - Species-specific training (provided by veterinarian or designee) includes guidance on basic needs of the species to be used; proper handling, pre- and post-procedural techniques and care, aseptic procedures; alternative methods to the use of animals; techniques to minimize stress; proper use of anesthetics, analgesics, and tranquilizers;
 - Chemical safety;
 - Microbiologic and physical hazards (including those related to radiation and allergies) and access to OSHA hazard notices;
 - Unusual conditions or agents that might be part of experimental procedures (including the use of genetically engineered animals and the use of human tissue in immuno-compromised animals);
 - Handling of waste materials;
 - Personal hygiene;
 - New procedures: All new techniques and procedures are performed in the presence of the IACUC Veterinarian until he or she is satisfied with the appropriateness of the procedure and the abilities of the personnel;
 - Reporting mechanisms for laboratory or animal-related events;
 - Research methods that minimize animal pain, distress, and numbers; and
 - Other considerations (e.g., precautions to be taken during personnel pregnancy, illness, or decreased immuno-competence) as appropriate to the risk imposed by the animal facilities laboratory.
- D. Each individual involved in the protocol will complete an on-line animal training course in the humane practice of animal care and use including correct handling of the species involved. The program modules include general humane animal care as well as specific modules for rats, mice, hamsters, guinea pigs, and other species to be used at UT Tyler. Individual training records of all who are authorized to handle animals on approved protocols are maintained by the IACUC administration and in the vivarium office.
- E. All animal care and use activities are subject to review at any time by members of the IACUC and are closely monitored by the veterinarian and senior vivarium staff. Investigators are strongly encouraged to consult with the IACUC veterinarian and the members of the IACUC in the design and development of animal use protocols.

IX. Vivarium Disaster Plan

A. INTRODUCTION

A disaster is defined as any event that causes or has the potential to cause the injury or release of research animals or that jeopardizes the integrity of an ongoing research protocol. The purpose of this plan is to provide a mechanism by which appropriate actions may be taken to minimize the consequences of the disaster and to define the individuals responsible for directing the response.

B. AUTHORITY TO ACTIVATE

The Manager of the Vivarium, or in his/her absence, the Attending Veterinarian, or in his/her absence the Chair of the IACUC are authorized to activate the plan.

C. DISASTER RESPONSE TEAM:

Members:

- Vivarium Manager
- Attending Veterinarian
- IACUC Chair
- Vivarium Staff
- Physical Plant Representative
- Police Dept Representative

Tasks:

1. The Vivarium Manager will serve as oversight leader.
2. The Attending Veterinarian will discern the clinical status of the animals and direct the removal of any animals from the facility.
3. The IACUC Chair will triage the situation based on the importance of the research.
4. The Vivarium Staff will assist in removing animals, assuring that they are maintained in appropriate containment etc.
5. The Physical Plant Representative will ascertain the nature of the problem and will provide an estimate of the time to restoration of normal services.
6. The Police Department Representative will assure facility security and in the event of criminal acts, will interact with local, state, and federal law enforcement agencies.

D. ACTIVATING THE PLAN AFTER HOURS, WEEKENDS, AND HOLIDAYS:

When Police Department personnel or Telecommunications operators receive notification of a possible disaster, they will:

1. Take the name, title, and phone number of the notifying party and the available disaster information.
2. Confirm the event and then notify the Vivarium Manager, or if he/she is unavailable, the IACUC Chair, in accordance with the contact information provided as Attachment A.

E. TRAINING

Written sub-plans that address specific scenarios will be developed for utilization of personnel in support of this basic plan. Copies of these sub-plans will be maintained in the Vivarium and by those responsible for activating the plan. Copies of the sub-plans will be maintained both at the home of the Vivarium Manager, and on campus.

The disaster plan will be tested at least annually and any revisions made at that time.

ATTACHMENT A—CONTACT INFORMATION

TITLE	NAME	OFFICE PHONE	CELL PHONE	HOME PHONE
Vivarium Manager	Tina Ridley	903.566.7380	903.714.0992	
Attending Veterinarian	Will Hadden	903.894.3033	903.752.1523	903.894.7939
IACUC Chair	Cliff Boucher	903.566.7313	903.530.9387	903.839.2282

ATTACHMENT B – EVENT SUB-PLANS

- **Fire:** Follow UT Tyler Fire (Code 1) procedures. Do NOT attempt to rescue animals until trained personnel are on the scene and indicate that it is safe to enter the facility.
- **Tornado:** Follow UT Tyler Tornado (Code 2) procedures. In the event of damage to the facility resulting from a tornado, the Disaster Plan will be activated and the situation assessed.
- **Bomb:** Follow UT Tyler Bomb (Code 3) procedures.
- **Hazardous Chemical Spill:** Follow UT Tyler Hazardous Chemical Spill Plan.
- **Security Breach:** Follow UT Tyler Police Emergency (Code Green). Ensure that doors to Vivarium are locked when the Vivarium is unattended and that individual animal rooms remain locked at all times (at the discretion of the individual PIs) to slow down access.
- **Damage to the Facility:** In the event of structural damage to the Vivarium resulting from any cause, the Disaster Plan will be activated and a determination made with respect to the time frame during which the building can be repaired either temporarily or permanently. The decision to evacuate the animals will be based on the extent of damage to the Vivarium and the projected time to restore utilities and/or structural integrity.
- **Utilities:**
 - Flooding
 - The Vivarium lies well above the 100 year flood plain so flooding due to inclement weather is not a significant risk. Internal flooding could result from water pipes that burst. In this event, Physical Plant should be notified to turn off the water to the building and the Disaster Plan activated. The Disaster team will determine if the animals need to be evacuated or relocated while repairs are made.
 - Loss of Power
 - Activate emergency generator.
 - If generator is damaged, the Disaster Plan will be activated. If the Disaster Response Team determines that the projected time before power can be restored represents a risk to the animals then they will be evacuated as described below.
 - Loss of water
 - Approximately 2 days of water is available on-site.
 - Once this is exhausted, water will be brought in from the Physical Plant Building.
 - If water is unavailable on campus, it will be brought in from off campus.

- Loss of chilled water for HVAC
 - Emergency water chiller will be activated by Physical Plant personnel and utilized until central chilled water is restored.
 - If chiller is damaged, the Disaster Plan will be activated. If the Disaster Response Team determines that the projected time before air conditioning can be restored represents a risk to the animals, then they will be evacuated as described below.
- Loss of heat
 - Space heaters will be utilized to maintain temperature.
- **Infectious Disease in Animals:** The Attending Veterinarian, in consultation with the respective PIs, will make the determination as to whether the infected animals should be euthanized to protect other animals or if it is feasible to try to treat them.
- **Release of Animals:** The Disaster Plan will be activated in the event that animals are released by whatever means. The Police Department will secure the building and no one will be allowed to enter the facility until the Disaster Response Team has made an assessment of the health status of the released animals. Animals that are not individually identifiable will be euthanized.
- **Evacuation of Animals:** Any event that results in the need to evacuate the Vivarium animals will be cause to activate the Disaster Plan. Animals will be evacuated according to a Triage Plan overseen by the Chair of the IACUC and the Attending Veterinarian. This Plan will be based on such parameters as the unique nature of the animals and the time invested in the project.
 - **Animals infected with non-BSL-3 pathogens:** animals will be transferred to the PI's lab or to available space in the PI's building in micro-isolator cages.
 - **Animals infected with BSL-3 level pathogens:** animals will be euthanized as soon as this can be done safely.
 - **Immunosuppressed animals:** animals will be transferred to the PI's lab or to available space in the PI's building in micro-isolator cages and kept in Biosafety cabinets.
 - **All other animals:** animals will be transferred to the PI's lab or to available space in the PI's building in standard cages.
- **Anti-Animal Research Activities-** Follow the directions for the "Security Breach," or "Release of Animals," or "Evacuation of Animals" when appropriate.
 - **Threat to Animals:** Follow procedures described in the "Evacuation of Animals"
 - **Threat to Researchers:** Immediately contact UT Tyler security.

- Inform the program/scientific staff of the NIH funding component of threatening or potentially threatening situations, as they arise. (If activist activities result in conditions that jeopardize the health or well-being of animals or result in actual harm or death to animals, the conditions must be reported to OLAW in accordance with NOE-OD-05-034.)