

**SOUTHEASTERN LOUISIANA
UNIVERSITY**

**ANIMAL RESOURCES AND CARE
(ARAC) POLICIES**

AND

STANDARD OPERATING PROCEDURES

IACUC Approved

TABLE OF CONTENTS

Policy	Page
U.S. Government Principles for the Utilization and Care of Vertebrate Animals.....	3
Procedure for Reporting Animal Welfare Concerns.....	4
Employee Concern Action Form (ECAAF).....	5
Animal Welfare Disaster Plan.....	6
Policy on Investigator Training.....	7
Investigator Maintained Rooms.....	8
Privately Owned Animals.....	9
Protective Attire while Mixing Concentrated, Toxic Compounds.....	10

AR	ADM	Page
001	Organizational Chart.....	11
002	Pest Control.....	12
003	Animal Biosafety Level-2 (ABSL-2).....	13

AR	AH	Page
001	General Vivarium Duties, Procedures, and Laboratory Animal Husbandry.....	15
002	Aquatic Facilities Approved Cleansers and Disinfectants.....	20

AC	VC	Page
001	Frog Care.....	21
002	Rabbit Care.....	22
003	Rodent Care (other than guinea pigs).....	24
004	Fish Room Care.....	26
005	Snake Room Care.....	27
006	Turtle Room Care.....	28

AR = Animal Resources

AC = Animal Care

ADM = Administration

AH = Animal Husbandry

VC = Veterinary Care

U. S. GOVERNMENT PRINCIPLES FOR THE UTILIZATION AND CARE OF VERTEBRATE ANIMALS USED IN TESTING, RESEARCH, AND TRAINING

The development of knowledge necessary for the improvement of the health and well-being of humans as well as other animals requires *in vivo* experimentation with a wide variety of animal species. Whenever U. S. Government agencies develop requirements for testing, research, or training procedures involving the use of vertebrate animals, the following principles shall be considered; and whenever these agencies actually perform or sponsor such procedures, the responsible Institutional Official shall ensure that these principles are adhered to:

1. 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. (see footnote)
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, 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.
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 should not be performed on unanesthetized animals paralyzed by chemical agents.
6. 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.
7. 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 should be provided as indicated.
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 proper and humane care and use of laboratory animals.
9. 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, with due regard to Principle 2, by an appropriate review group such as an institutional animal care and use committee. Such exceptions should not be made solely for the purposes of teaching or demonstrating.

Footnote: For guidance throughout these Principles, the reader is referred to the Guide for the Care and Use of Laboratory Animals prepared by the Institute of Laboratory Animal Resources, National Academy of Sciences and the Institutional Administrator's Manual for Laboratory Animal Care and Use, Public Health Services, National Institutes of Health, NIH Pub. #88-2959.

PROCEDURE FOR REPORTING ANIMAL WELFARE CONCERNS

1. Purpose

In accord with federal law (Code 9 of Federal Regulations Part 2 Regulations, Subpart C, 2.32 c (4)) on this matter, the University must provide a system whereby employees can report concerns about perceived or suspected deviations from animal welfare laws and regulations, or from University policies and standards.

Employees doing so must be assured that:

- a. they can report their concerns without fear of reprisal,
- b. their concerns will be promptly and fairly investigated, and
- c. they will be informed of the outcome of the investigation.

2. Responsibility

Any employee concerned that a possible violation of animal welfare policy has occurred should complete part 2 of the enclosed form. Concerns may include perceived problems, deviations, or deficiencies regarding animal housing, care, or use at Southeastern Louisiana University facilities.

3. How to Report

Item 2 of the attached Employee Concern Action Form (ECAF) should be filled out by the concerned employee, whose name should be known by the chairperson of the Institutional Animal Care and Use Committee (IACUC). The ECAF is given to the chairperson of the IACUC (currently Dr. Penny Shockett). If the IACUC chairperson is not available, the ECAF should be given to the veterinarian serving on the IACUC (currently Dr. Peyroux) or the PHS recognized Institutional Official (IO) (currently, Dr. Jerald Ainsworth, Dean of Research and Graduate Studies).

4. Initiation of Investigation

After the chairperson of the IACUC has received and reviewed the submitted ECAF, he/she will remove the name of the person reporting the concern and other personal information before relaying the information. If the submitted ECAF is not clear or complete, the chairperson will interview the concerned employee to obtain additional information. Within 3 working days after receipt of the ECAF, the chairperson will complete and send a copy of the ECAF to the University appointed veterinarian.

The veterinarian and the IACUC chairperson are normally responsible for investigating the report; however, these individuals may decide to have someone else lead the investigation (normally someone not involved in the allegation).

5. Resolution of Investigation

Other items on the ECAF will be completed by the chairperson, IACUC, and by the attending veterinarian.

CONFIDENTIAL**EMPLOYEE CONCERN ACTION FORM (ECAAF)**

This form initiates university review of possible violations of:

- a. animal welfare laws or regulations, or
- b. related university policies or standards, or
- c. unacceptable moral or aesthetic aspects of animal use.

1. Confidentiality: This report is not discussed with persons not involved in its follow up. Only the IACUC chairperson will retain the original copy, which may reveal the concerned employee's name and other personal information. Copies of this form will have this personal information removed before copies are passed to other individuals.

2. Employee's Animal Welfare Concern (Append additional sheets as necessary):
(Type or Print)

3. Signature of IACUC Chairperson:

Date Report Received:

4. Signature of Veterinarian on the IACUC/Date:

5. Signature of Individual leading Investigation:

Date Initiated: _____ Date Investigation Completed: _____

6. Summary of Finding: (append additional sheets as necessary)

7. Actions Taken/Recommended: (append additional sheets as necessary)

8. Discussed with Concerned Employee:

Yes _____ No _____ Date: _____

Employee Concurred with Action Taken:

Yes _____ No _____ Date: _____

ANIMAL WELFARE DISASTER PLAN

1. When on the scene of a fire (or other circumstances of probable danger), ensure that all personnel in the vicinity of the fire (or other threat) have been evacuated and that reentry is prohibited until an "ALL CLEAR" is announced. In all cases the safety of personnel shall take precedence over the safety of animals in situations of *immediate* danger.
2. If a fire or other dangerous situation is deemed by authorities to not yet be threatening, select or call trained persons (Dr. Sever –snakes 549-3741]; Dr. Shockett – rodents [549-3434]; Dr. Valverde – turtles [549-3029]; Dr. Font – rodents [549-2091]) to anticipate or actually conduct either moving or release of animals to a safe area or securing them in their rooms. This process will continue until the danger threatens the facility, in which case all persons shall leave the threatened area immediately, as noted in paragraph 1 above.

In the case of ongoing surgical or other procedures in which the movement of animals is not possible, one individual in each area will be authorized to "determine the level of threat to the immediate area." If there is no immediate threat to that area, efforts will be made quickly to finish or abort the procedure and return the involved animals to a condition whereby they can be moved (e.g., abort an ovariectomy procedure, close the abdomen and skin wounds, remove animal from anesthetic machines) and move the animal(s) to safety. If at any time the threat to the area becomes immediate, the personnel will evacuate the facility leaving the animals unattended.

3. Considerations dictating animal movement or release:
 - a. Nature and immediacy of the danger should be considered. Animals should not be released if not threatened.
 - b. In so far as possible, animals will be moved and kept in such a place as where they are not likely to injure personnel or other animals. Animals may panic in a fire or storm and cause serious injury to personnel.
 - c. Animals moved from a dangerous to a safe area should be restrained or confined during the time of alarm and until returned to a safe environment.
 - d. Rodents, poultry, and fish used in teaching and research should be removed to safety only if time and access are adequate to avoid human injury. To save animal lives in an impending emergency, chickens, dogs, cats, small ruminants, swine, rabbits, and raptors should be released into separated areas, as predatory animals may injure prey animals.
 - e. Injured animals may have to be euthanized.
4. These persons should be called for plans if a power failure threatens animal well-being:
Dr. David Sever (Facility Director) 549-3741
Dr. Penny Shockett (IACUC chair) 549-3434
Dr. Roldan Valverde 549-3029
Dr. William Font 549-2901

POLICY ON INVESTIGATOR TRAINING

The “Animal Welfare Act” and implementing regulations specify that research facilities must ensure that all scientists, research technicians, animal technicians, and other persons involved in animal care, treatment, and use are qualified to perform their duties.

This requirement shall be satisfied by completion of the course offered through the Office of Research and Graduate Studies.

Attendance at all sessions shall be kept, and this attendance (or completion of the on-line course) plus a curriculum vita from principal investigators shall provide the IACUC with documentation for evaluating training.

INVESTIGATOR MAINTAINED ROOMS

Southeastern Louisiana University does not have a Laboratory Animal Resources and Care (LARAC) unit; therefore, investigators provide maintenance and care for animals housed on campus.

Investigators must provide 7-day a week, 365 day per year routine care and must review requirements of AAALAC and other applicable regulatory agencies. Additional instruction and training beyond the basic "Care and Use of Animals" course may be required.

In the conduct of that regular care, any investigator or his / her staff must maintain AAALAC standards as interpreted by the IACUC and must conduct that care under a university appointed veterinarian and the IACUC's ultimate direction-authority.

Appeals of any or all aspects of this policy's enforcement must be presented to the IACUC, where a majority vote decides. A decision of the IACUC is final within the University.

PRIVATELY OWNED ANIMALS

Animals housed for research or teaching purposes are maintained under controlled conditions. Privately owned animals are not allowed in University controlled animal areas. This prevents possible transmission of disease to or from University maintained and owned animals.

PROTECTIVE ATTIRE WHILE MIXING CONCENTRATED, TOXIC COMPOUNDS

Standard Practices

1. Doors to animal rooms shall open inward, be self-closing, and be kept closed when biohazardous substances or agents are present.
2. Work surfaces shall be decontaminated after use or spills of biohazardous substances or agents.
3. Eating, drinking, smoking, and storing of food for human use will not be permitted in animal rooms.
4. Personnel shall wash hands after handling biohazardous substances or agents and animals and before leaving the animal room.
5. All procedures shall be carefully performed to minimize the creation of aerosols.
6. An insect and rodent control program shall be in effect.

Special Practices

1. Laboratory coats, masks, gowns, or uniforms will be worn while in the animal room. This protective clothing is removed before leaving the animal facility.
2. The laboratory or animal facility director must limit access to animal rooms to personnel who have been advised of the potential hazard and who need to enter the room for program or service purposes when work is in progress. In general, persons who may be at increased risk of contamination are not allowed in the animal room.
3. The laboratory or animal facility director shall establish policies and procedures whereby only persons who have been advised of the potential hazard and meet any specific requirements may enter the animal room.
4. When a biohazardous substances or agent(s) is in use in an animal room special entry provisions are required, a hazard warning sign, incorporating the universal biohazard symbol, shall be posted on the access door to the animal room. The hazard warning sign identifies the infectious agent, lists the name and telephone number of the animal facility supervisor or other responsible person(s), and indicates the special requirement(s) for entering the animal room.
5. Special care shall be taken to avoid skin contamination with biohazardous substances or agents; gloves should be worn when handling animals and when skin contact with hazardous materials is unavoidable.
6. The animal facility shall be designed and constructed to facilitate cleaning and housekeeping. Disposable papers on exposed surfaces should be used and discarded properly.
7. A hand washing sink shall be available in the room where animals are housed.
8. It is recommended, but not required, that the direction of airflow in the animal facility is inward and that exhaust air is discharged to the outside without being recirculated to other rooms.

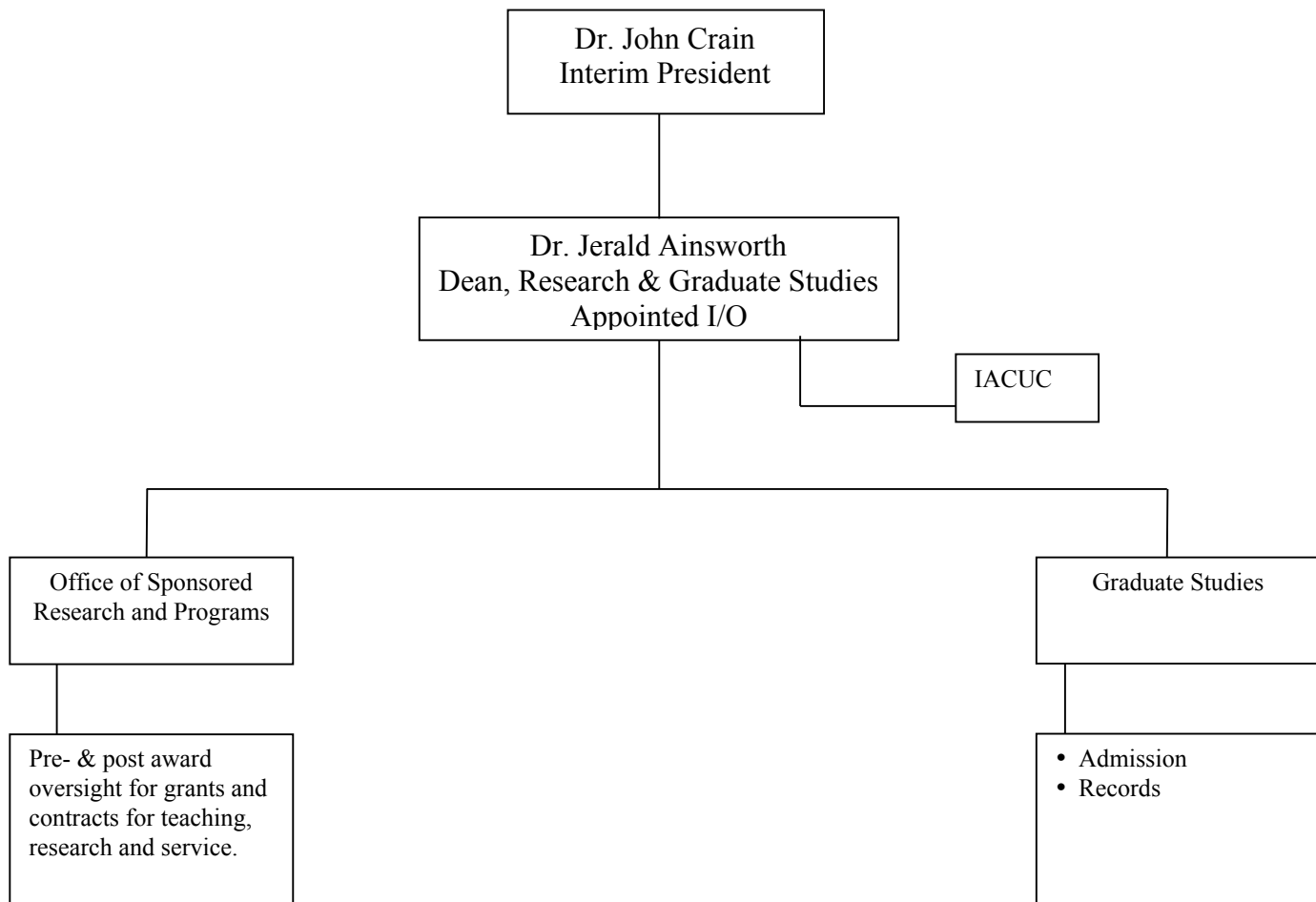
ARAC
Standard Operating Procedure

TITLE: Organizational Chart Regarding Animal Use

NUMBER: AR ADM 001

ISSUE NUMBER:

SUPERSEDES ISSUE NUMBER:



ARAC
Standard Operating Procedure

TITLE: Pest Control

NUMBER: AR ADM 002

ISSUE NUMBER: 6/08

SUPERSEDES ISSUE NUMBER:

Procedures:

The IACUC will ensure appropriate pest control in animal holding facilities. Although each investigator is responsible for pest control within his/her assigned area(s) and shall maintain an inventory of products. The IACUC has overall responsibility for this function. The university-appointed laboratory animal veterinarian(s) will provide advice in this area. Proper control of insects is critical to disease prevention.

ARAC
Standard Operating Procedure

TITLE: Animal Biosafety Level-2 (ABSL-2)

NUMBER: AR ADM 003

ISSUE NUMBER: 6/08

SUPERSEDES ISSUE NUMBER:

General Procedures

1. All general and standard procedures noted for ABSL-1 facilities apply to animals maintained at this level. All smoking, drinking, eating, applying cosmetics, handling contact lenses, etc., are to be done in designated areas only.” (Quoted from the Guide.)
2. An ABSL-2 biohazard sign must be posted at the entrance to the animal room whenever infectious agents (ABLS-2) are present. The hazard warning sign must identify the infectious agent(s) in use and list the name and telephone number of the responsible person(s).
3. Access to an ABSL-2 room is limited. Personnel who must enter this room for program or service purposes when work is in progress must be advised of the potential hazard(s) by the scientist or facility supervisor.
4. Equipment and work surfaces in the room must be decontaminated routinely with an effective disinfectant after work with infectious agents, and especially after overt spills, splashes, or other contamination with infectious materials. In addition, surfaces will be decontaminated at least once a week. This should be scheduled around changing out cages, where applicable.
5. All infectious samples must be collected, labeled, transported, and processed in a manner that contains and prevents transmission of the agent(s). This requires that all samples be transported in a leak-proof container, such as double bagging.
6. All wastes from the animal room must be transported from the animal room in leak-proof, covered containers for proper disposal. Bedding, animal carcasses and tissues, unused feed, and cloth and paper refuse will be incinerated or discarded in an approved method. Glass, sharps, plastics, and other materials of this nature will be shipped to an approved facility. The outer surface of the containers must be disinfected before moving the material to another location. Autoclaving of the contents before incineration will be done whenever possible (depends on animal size, etc.)
7. Personnel working in ABSL-2 rooms or handling animals are required to wear gloves. Personnel must wash their hands after handling cultures and animals, after removing gloves, and before leaving the animal room.

Safety attire for entering and working in ABSL-2 rooms (program or service personnel)

1. Personnel must be suited in an appropriate gown, uniform, or laboratory coat before entering an ABSL-2 animal room. Clean gowns, uniforms, and laboratory coats are stored, preferentially outside the ABSL-2 animal room to prevent inadvertent contamination. The laboratory coat must be removed and left in the animal room. Gowns, uniforms, and laboratory coats must be

removed before leaving the animal facility. Gloves must be worn when handling infected animals and when skin contact with infectious materials is unavoidable.

2. Face shields or nose-mouth masks must be worn while handling animals or changing out cages. Re-usable face shields should be left in the room and decontaminated after each use. Masks should be discarded into a waste container in the room for decontamination by autoclaving. Decontamination will be done upon completion of the project or when the container is full.
3. Although not required by CDC guidelines, it is advisable to have certified biological safety containment cabinets to house mouse cages in ABSL-2 rooms.

ARAC
Standard Operating Procedure

TITLE: General Vivarium Duties, Procedures, and Laboratory Animal Husbandry

NUMBER: AR AH 002

ISSUE NUMBER: 06/08

SUPERSEDES ISSUE NUMBER:

Vivarium Graduate Assistant General Duties:

1. Daily rounds: checks census, animal health, food/water, and room temperature/humidity range and record on room log.
2. Contact PI to remove dead animals to storage or necropsy, or if food/water replenishment is required. (Be sure all feeders and waterers are filled on Friday p.m. and before holidays)
3. Sweep hallways and cagewash area floors once a week and disinfect every two weeks.
4. Clean stainless steel sinks, cabinets, counters, and cage wash station weekly.
5. Remove all trash, animal, and food waste from the vivarium as generated and discard in biology dumpster.
6. Replenish Clidox[®] disinfectant footbaths (1 part base:18 parts water: 1 part activator) every two weeks.
7. Inform IACUC Chair of any special request made directly to Vivarium GA by an investigator.
8. Inform IACUC Chair of any major census changes, animal health problems, or maintenance or repair needs.
9. Keep cage wash area(s) neat and tidy
10. Maintain stocks of cleaning supplies, and Clidox[®] squirt bottles in animal rooms.
11. Sweep and disinfect animal rooms when requested by investigators. In cases of heavily soiled rooms or where disease is present or suspected, Clidox[®] (1:5:1) or 15-20% sodium hypochlorite may be used.

Animal Investigators General Duties:

1. Maintain animal census
2. Minimize overcrowding in cages
3. Species should generally be separated by species, source, and health status. Cages should be labeled, at a minimum, with the IACUC approved protocol number, investigators name, animal identification, date of birth, and any other crucial information.
4. Sick animals should be isolated in individual cages, and if necessary, in individual rooms.
5. Maintain cage cleanliness (cages should be changed at least once per week).
6. For rodents, rinse gloves with Clidox[®] between cage transfers.

7. Maintain general cleanliness of rooms
8. Routinely wipe down stainless steel with disinfectant and sweep floors
9. Remove all trash, animal, and food waste from the vivarium as generated and discard in biology dumpster.
10. Replenish food and water when less than 1/2 full
11. Be sure all feeders and waterers are filled on Friday p.m. and before holidays
12. Inform Vivarium GA of food/water requirements for weekends/holidays/emergencies
13. Enter vivarium only through main entrance using disinfectant footbath
14. Noise in vivarium should be kept to a minimum

General Vivarium and Animal Room Minimum Supplies:

1. Supplies should be checked frequently and replaced as needed. Inform the Vivarium GA if you are unable to locate a needed item.
2. Rodent bedding. Kept on pallet in storage closet in clean cage wash area
3. Rodent food. Kept on shelves sealed in plastic in 2nd floor biology walk-in cold room for long-term storage.
4. General Vivarium supplies:

Physical Plant:

- Absorbent white towel wipes
- Brown paper towel rolls
- Floor cleaner
- Large squirt bottles
- Hand soap
- Dust pan
- Brooms
- Mop bucket with ringer
- Plastic trash bags

VWR:

- 235 ml spray bottles
- Thermometers/Hygrometers

Fisher:

- 1000 ml spray bottles

Pharmacial:

- Clidox Base 35 gal
- Clidox Activator 35 gal

Local businesses, e.g., Walmart, Lowes

- Foot mats and basins
- Sticky hooks
- Clipboards
- Squeegee heads
- Mop heads
- Long handle scrub brush & head
- Dish soap
- Bleach
- Clidox mixing bottle

Ellard Instrumentation:

- Small CO₂ euthanasia cover

Room supplies:

1. spray bottle with working disinfectant solution
2. feed cans for each feed in use
3. paper towels
4. hand soap
5. clip board
6. thermometer/hygrometer
7. pen

Laboratory Animal Breeding:

The investigators are responsible for maintaining colonies of rats and mice for research and teaching.

The two most important aspects of maintaining a breeding colony are knowledge of the animals' breeding cycles and accurate record keeping.

This table provides necessary data for breeding colonies:

Item		Rat	Mouse
Breeding Age	Male	100 days	50 days
	Female	100 days	50 – 60 days
Estrus Cycle		5 days	4 – 5 days
Gestation		20 – 22 days	17 – 21 days
Weaning Age		16 – 21 days	21 days
Litter Size		12	8 – 12
Breeding Life	Male	1 year	18 months
	Female	1 year	7 – 9 months
Rebreed		Immediately*	Immediately**
Mating Group		1.3 - 5	1.3 – 4

* Males should not remain with pups if problems occur.

** Only of the females are fertile upon postpartum heat.

Procedures for Breeding Mice:

The most important item on a rodent breeding bin is the cage ID/breeding record card.

One male and 2-3 females are placed in the breeder cage. Females should be housed together. The male is then introduced into the females' bin and the females begin synchronous cycling.

Males used previously for breeding should not be housed together. Males may be housed together in small numbers, i.e., 1-3 per cage. But any time more than one male is housed they must be watched carefully for fighting and food competition.

It is advisable to remove males from cages prior to parturition to prevent trampling and cannibalism.

Pups are weaned at 21 days of age.

It is also important to identify individual breeding animals as closely as possible and record their ages and breeding data. This can be accomplished by grouping adult breeders and identifying the cage with a regular cage I.D. card.

Animals that reach or exceed their breeding life should be culled from the colony and replaced with offspring reserved for this purpose. It is also a good idea to periodically bring in "new blood," i.e., new animals from other blood lines in order to maintain the viability of the colony.

Quarantine of Animals Newly Arriving to Vivarium:

Rodents entering vivarium from outside sources should be quarantined for 1 month in Exam Room 138.

Euthanasia of Rodents:

The vivarium houses a euthanasia station for rodents in the “dirty” cage wash area. Place cover on cage and turn on CO₂ to a flow rate displacing 20% of the chamber volume per minute. Maintain gas flow for one minute after apparent death.

Cagewash Procedures:

Note: All housing, feed and water containers should be sanitized once per week. Normally the cage washer is set to wash and sterilize at 185⁰ F with the alkaline detergent cycle.

1. All physical "dirt," i.e., litter and feces, must be removed and cages and racks rinsed before cage washing.
2. Litter from caging is dumped into a plastic trash bag and disposed of immediately in biology dumpster.
3. Water bottles and sippers should be washed with soap and hot water and well-rinsed.

Instructions for Use of Cage Washer:

Please note that cage washer can't run unless steam generator is on and warmed up (~10 min). Steam generator is located on the clean side of the cage wash station. The water level in the tube on the front of the steam generator must be at least 1/2 full, if not, contact Jim Gerike.

To turn on steam generator, turn switch at left to ON, and the red light will come on. The steam generator will automatically turn off at the end of the day because the electrical outlet is on a timer.

For Washes:

(Please load on dirty side of washer)

1. Remove and rinse ALL debris and labels from cages
2. Place cages in washer, avoiding sides where sprayer bars move back and forth.
3. For light items that will move around during wash place in closed (but permeable) container or weight down with stainless steel racks.
4. Open front control door and turn POWER ON.
5. Shut washer door and push CYCLE/START 2X (STD CYCLE rinses at 180°F to sterilize)
6. When finished, wait 5 minutes and slowly open door on clean side of washer. Remove cages ASAP, and leave door open.

(Washing takes about 1/2 hour. Cages may be temporarily left to dry in washer but may be moved by the next user to table on clean side of washer if necessary)

7. Open front control door and switch to STANDBY.

Cagewash Maintenance:

1. Cagewash areas are maintained for cleanliness by the Vivarium GA.
2. Jim Gerike performs daily, weekly, monthly, quarterly, and yearly maintenance and troubleshooting of the cage washer as described in the Cage Washer manual (Steris) beginning on page 6-4. This includes:

Daily:

Inspection of vortex plate
Clean water level float ball
Grease exhaust fan bearings

Weekly:

Clean spray jets and header

Monthly:

Inspect self-cleaning screen
Remove any hard-water deposits from chamber and accessories

Quarterly:

Clean building supply-line strainers
Replace detergent squeeze tube
Clean water inlet strainer

Yearly

Lubricate pump motor
Adjust heat exchanger control

As Necessary:

Replace detergent container
Change print paper

Entry/Exit from Vivarium:

1. Entry into vivarium should occur only through the main double door.
2. All individuals entering vivarium are required to step in disinfectant footbath, and wipe shoes on mats before entering.
3. Side doors should be used for exit only.
4. Interior door to outside should be kept locked at all times when not in use.

ARAC
Standard Operating Procedure

TITLE: Aquatic Facilities Approved Cleansers and Disinfectants

NUMBER: AR AH 002

ISSUE NUMBER: 6/08

SUPERSEDES ISSUE NUMBER:

Procedures

Note: The best method for killing aquatic infectious agents is to allow the tanks and other equipment to dry thoroughly. Disinfectants should be used sparingly and equipment, and supplies and utensils should be rinsed thoroughly.

Disinfectants:

Wescodyne: Dilute 1:50 Wescodyne to water for 10 minutes surface contact.
Use in dip tanks and to disinfect utensils while cleaning tanks.
Use 1:10 for foot baths.

Chlorine: Usually dilute 1:10 use for footbaths.
May be used undiluted in infectious tank cleaning.

Quatracide: Please note-Quatracide is very toxic to fish if not used at proper levels and if not thoroughly rinsed before fish are replaced in the tank.
1/2 oz/gal - spray bottle for counter tops and surface disinfecting.

Cleansers:

Ajax, Comet or other powdered chlorine type - use *ad lib* on stained tanks and pipes.

Tide - liquid

Ajax - liquid, 1 oz/gal with 1 oz/gal sodium hypochlorite on floors only

ARAC
Standard Operating Procedures

TITLE: Frog Care

NUMBER: AC VC-001

ISSUE NUMBER: 6/08

SUPERSEDES ISSUE NUMBER:

Procedure:

Daily Animal Care Procedures:

1. The husbandry of the frogs is going to vary dramatically depending on the type of frog. For example, Xenopus frogs are strictly aquatic and do not eat live prey – they need special commercially available Xenopus food. Leopard frogs need both a terrestrial and aquatic area, and will eat crickets and mealworms. Bullfrogs prefer almost exclusively a dry terrestrial area with a shallow “wading pool”.

Because the husbandry requirements are specific to each species and even sub-species of frog, species-specific husbandry policies will be written and posted when frogs are present.

2. Animal Observation. Report abnormalities on a Veterinary Request form. Note the following abnormal signs:
 - listlessness, depression
 - injuries to feet or legs
 - mouth ulcers
 - hemorrhages, red leg
3. Census. Complete a daily animal census report.

Daily Room Maintenance:

1. Mechanical Checks: Be sure all systems and facilities of the room are in safe and proper working order.
 - a. Light cycle should be set for 12/12 from 6 a.m. to 6 p.m. unless written instructions specify otherwise.
 - b. Temperature will vary according to species.
 - c. Report variations or suspected malfunctions to the facility supervisor or campus maintenance.
2. Keep all surfaces clean, neat, and free of clutter. This includes walls, floors, counter tops, ledges, air vents, windowsills, fixtures, doors, door facings, and sinks.
3. Empty wastebasket, replace liner, as needed.
4. Replenish room supplies as needed.
5. Sweep air supply and return grills.
6. Sweep floor area.
7. Keep floor drains free of debris.

Other Maintenance Procedures:

Soap mop floor area weekly.

Sanitize the entire room monthly.

ARAC
Standard Operating Procedures

TITLE: Rabbit Care

NUMBER: AC VC-002

ISSUE NUMBER: 6/08

SUPERSEDES ISSUE NUMBER:

Procedure:

Daily Animal Care Procedures:

1. Water will be made available at all times unless written instructions specify otherwise.
 - a. Bottles. One water bottle will be filled with fresh water as needed and rinsed every other day. Return each bottle to the cage from which it was taken and check for vapor lock by tapping the sipper tube with a finger and watching for air bubbles.
 - b. Automatic Watering. Watch for signs that the watering system may be malfunctioning, such as an absence of urine or feces in the cage or rabbits exhibiting hunched posture or a rough coat. Test sipper daily with finger, and if a mechanical malfunction exists replace or repair the sipper tube.

2. Feed. Unless instructed otherwise in writing, feed 2 to 3 ounces per Dutch Belted adult rabbit and 4 to 6 ounces per New Zealand White adult rabbit. When fruit or greens are ordered by an investigator or veterinarian, place 1/4 orange, 1/4 apple, or handful of greens in the cage daily. Either or both of these special foods is given in addition to the regular food.

Check feeders for food blockage. Uneaten food should be left no longer than 3 days. Empty food dust from feeders as needed. Return each feeder to the cage from which it was taken.

Consult with the supervisor before making any food substitutions.

3. Animal Observations. Do not assume the rabbits are healthy and comfortable; examine them daily. Report any abnormalities on a Veterinary Request form. Check for:
 - not eating or drinking
 - listlessness
 - snuffles, sneezing, coughing, noisy breathing
 - dirty or bloody nostrils
 - dehydration
 - discoloration or wetness near muzzle, anal, urinary, genital openings
 - matting around nose or eyes
 - sores, infections, excessive scratching
 - scabs in ears
 - overgrown teeth and nails
 - sore feet

4. Census. Complete a daily animal census report.

Daily Room Maintenance:

1. Mechanical checks: Be sure all systems and facilities of the room are in safe and proper working order.

- a. Light cycle should be set for 12/12 from 6 a.m. to 6 p.m. unless written instructions specify otherwise.
 - b. Room temperature must be between 61° to 72° F.
 - c. Report variations or suspected malfunctions to the building supervisor or campus maintenance.
2. Keep all surfaces clean, neat, and free of clutter. This includes walls, floors, counter tops, ledges, vents, windowsills, doors, door facings, fixtures, sinks, etc.
 3. Empty wastebasket and replace liner as needed.
 4. Replenish room supplies as needed.
 5. Sweep or vacuum air vents.

Other Maintenance Procedures:

1. Soap mop the floors and flush floor drains with water daily.
2. Keep floor drains free from debris.
3. Litter Pans. Remove soiled pan and replace pan with a clean pan three times per week. (Monday, Wednesday, and Friday)
4. Cage Rotation. The entire rack of rabbit cages will be changed once every week. The rack, cages, pans, feeders, bottles, and all accessories will be changed at this time.
 - a. Determine the number of cage units needed.
 - b. No piece of equipment will be used unless it is clean, complete, and in good working order. Check all equipment before leaving the cage wash area. Move clean cages and accessories on the rack on which they will be used.
 - c. Unhook the dirty rack from the watering system (if applicable) before moving the rack.
 - d. Position the clean rack, aligning the cage holes with the sipper tubes of the automatic watering system, if one is used. After the water is hooked up to the line, open the safety valve(s) at the opposite end enough to run off the warm water and any air bubbles; then close the valve(s) again. If bottles are used, be sure each has an air bubble; test with the finger against possible vapor lock or blockage.
 - e. Spread the preferred bedding evenly in clean pans and slide pans into the cages.
 - f. Transfer the rabbit from the dirty unit into the clean cage. Examine rabbits completely (ears, feet, eyes, teeth, etc.) at the time of cage rotation. Move the cage ID card as the animal is moved.
 - g. Provide feed and water according to instructions.
 - h. Move the dirty rack to the cage washroom.
5. Wash the room walls with soap solution and sponge weekly, at the time of cage rotation.

ARAC
Standard Operating Procedures

TITLE: Rodent Care (Other than guinea pigs)

NUMBER: AC VC-003

ISSUE NUMBER: 6/08

SUPERSEDES ISSUE NUMBER:

Procedure:

Daily Animal Care Procedures:

1. Water will be available at all times unless written instructions specify otherwise. Empty and refill bottles with fresh water every other day. Return each bottle to the cage from which it was taken. Be sure the spout is below any other part of the bottle, and check with finger for vapor lock.
2. Feed the preferred lab chow free choice unless instructed otherwise. Check feeders for food blockages. Remove powdered food pellets as needed. Return the feeder to the cage from which it was taken.

Maintain a reasonable (3 or 4 days) supply of food in each room.

Do not substitute feeds unless specifically directed to do so.

3. Animal Observation. Report abnormalities on a Veterinary Request form. Note the following:
 - lack of alertness, listlessness
 - sneezing, noisy breathing, coughing
 - dirty or bloody nostrils
 - discoloration, wetness near muzzle, anal, urinary, genital openings
 - ocular or nasal discharge
 - pale, anemic look around nose and paws
 - sores, infections, excessive scratching
 - animals not eating or drinking
4. Census. Complete a daily animal census report.

Daily Room Maintenance:

1. Mechanical Checks: Be sure all systems and facilities of the room are in safe and proper working order.
 - a. Light cycle should be set for 12/12 from 6 a.m. to 6 p.m. unless written instructions specify otherwise.
 - b. Temperature must be between 64° and 79° F.
 - c. Report variations or suspected malfunctions to the building supervisor.
2. Keep all surfaces clean, neat, and free of clutter. This includes walls, floors, counter tops, ledges, vents, windowsills, doors, door facings, fixtures, sinks, etc.
3. Empty wastebasket and replace liner as needed.
4. Replenish room supplies as needed.
5. Sweep down the air supply and return grills.
6. Sweep alleyways.

Daily Maintenance Procedures:

1. Cage changes. Rodent cages are normally changed twice per week.
 - a. Determine the number of rack units that will be needed.
 - b. No piece of equipment will be used unless it is clean, complete, and in proper working order. Check all equipment before leaving the cage wash area.
 - c. Spread contact bedding evenly in the cages.
 - d. Transfer the animals from the dirty cage to the clean cage. Examine the animals during this procedure. Move the cage ID card as the animals are moved.
 - e. Provide feed and water according to instructions.
 - f. Remove dirty cages to the cage wash area.
2. Mop floors (including hallway) weekly. Flush floor drains (if any) with water.
3. Take water bottles and sipper tubes to the bottle wash area for cleaning and bring clean replacements to the clean bottle storage room weekly.

ARAC
Standard Operating Procedures

TITLE: Aquatic Room Care

NUMBER: AC VC-004

ISSUE NUMBER:

SUPERSEDES ISSUE NUMBER:

Procedure:

Daily Room Maintenance

1. Mechanical Checker: Be sure all systems and facilities of the room are in safe and proper working order.
 - a. 1A--Light cycle should be set for 12/12 from 6 a.m. to 6 p.m. unless written instructions specify otherwise.
 - b. Temperature must be between 68° and 74° F.
 - c. Report variations or suspected malfunctions to the building supervisor or campus maintenance.
2. Keep all surfaces clean, neat, and free of clutter. Includes walls, floors, counter tops, ledges, air vents, sills, fixtures, doors, door facings, and sinks.
3. Empty waste basket, replace liner as needed.
4. Replenish room supplies as needed.
5. Sweep down the air supply and return grills.
6. Sweep alleyways.
7. Sweep floor area.
8. Keep floor drains free of debris.
9. Ensure that tanks or rooms have laminated cards for identifying experiments, investigator, and IACUC protocol number.

Other Maintenance Procedures

1. Soap mop floor area weekly.
2. Sanitize the entire room monthly.

ARAC
Standard Operating Procedures

TITLE: Snake Care

NUMBER: AC VC-005

ISSUE NUMBER:

SUPERSEDES ISSUE NUMBER:

Procedure:

Transport: Snakes will be obtained from the wild or, if necessary, from commercial suppliers. Snakes will be brought to the vivarium in sealed and insulated containers. They may be transported or shipped via air freight to the New Orleans airport & picked up by authorized personnel.

Snakes shall *not* be shipped directly to any office or destination at the University and shall not be handled by any unauthorized departmental or university staff.

Animal Housing:

Location: Vivarium, Biology Building

1. Snake Rooms: Will be sealed against animal escape using screening to block all points of entry/exit, including the ceiling and airspaces under doors.
2. Security: Room access will be limited to authorized personnel, including the department head (Dr. Sever), and campus safety officials. There will be no access to public hallways and rooms will open only to vivarium hallway. Doors will be kept closed at all times and locked when a person is not working inside.
3. Room Identification: Room will be labeled with the following information:
 - a. Animals contained
 - b. Instructions for gaining access if necessary by medical, fire department, or other emergency personnel.
 - c. Emergency contact information for persons authorized to enter room.
4. Cages:
 - a. For venomous snakes, individual cages will contain a locking plexiglass door.
 - b. In some situations, cages may be glass aquaria with tight-fitting screen or solid acrylic lids with ventilation holes (for small venomous snakes) or plastic “sweater box” containers with plastic locking lids (harmless snakes only).

General Maintenance:

1. Cleaning:
 - a. Cages will be cleaned after snakes defecate
 - b. Only authorized persons can clean snake rooms and cages.
 - c. During cage cleaning, animals will be removed from cages safely using tongs or a snake hook stored in a large plastic trash can with a self-locking lid.
 - d. During room cleaning, animals will remain locked in their cages.
2. Ventilation:
 - a. Snake room will be fully compliant with the guidelines specified in the Guide for the Care and Use of Laboratory Animals

3. Feeding:
 - a. Acclimated snakes will be fed pre-killed mice, purchased frozen from commercial suppliers
 - b. Newly acquired snakes may be fed live mice during period of acclimation to the new environment. Live mice obtained from animal suppliers will be fed to snakes immediately and will be placed in cages with tongs. All feedings with live mice will be monitored directly and uneaten mice will be removed after 20 minutes. Live mice will not be housed in the snake room
4. Handling of Snakes:
Harmless snakes may be handled directly. Venomous snakes are handled only by mechanical means until they are completely restrained. All handling will be done in a dedicated, locked animal room using techniques that are established practice in zoos around the world and that have been used safely in laboratory and field research for over 30 years (See Murphy, 1971, listed above).

Procedures for restraining venomous snakes are as follows:

Venomous snakes will be transferred from their locked cages first into a large plastic trash can for intermediate handling, then into a clear acrylic tube, and finally into a Rubbermaid container.

The following specific steps will be used to prevent any contact between the snake and the experimenter during these steps:

1. First, snake tongs or a hook is used to transfer a snake from its cage into a large plastic trash can. The trash can is too tall for snakes to reach the top, and tongs and hooks are used to keep animals safely out of striking distance.
2. While the snake is in the trash can, it is induced with a hook to crawl up into a long clear acrylic tube of appropriate diameter, which safely restrains the front 2/3 of the body. The top end of the tube is sealed closed; the snake's tail protrudes from the bottom of the tube.
3. Once the snake is in the tube, its body can be held where it enters the tube. The animal cannot strike or bite in this position. The tail is then threaded through an opening in the side of a Rubbermaid container and fixed into place in the opening using Velcro tape.
4. The container and snake (still safely restrained in the tube) are then placed back into the trash can, and the snake is released from the tube so that it coils up in the container. The snakes naturally seek to hide, and readily curl themselves up into the container.
5. The container lid is lowered into place and snapped onto the container using the long tongs. The container can be firmly taped closed for additional security.
6. The snake is now safely sealed in the container, and the container can be picked up and handled without any risk of bites.

Backup Personnel:

The individuals listed below have been trained regarding safe handling of snakes and have agreed to deal with the snakes if called upon to do so. All are members of the Department of Biology, and readily available. Whenever necessary, they will be able to obtain keys to the animal room and cages from the department head, Dr. Sever, who also serves as the animal facility director. Contact information is as follows (and is also posted on the animal room door):

Names and contact info:

Dr. David Sever: Home 985-370-7601; Cell 985 215 1779

Dr. Brian Crother: Home 985-345-9130; Cell 985 981 3977

Dr. Cliff Fontenot: Home 225-587-4408; Cell 985 351 4816

ARAC
Standard Operating Procedures

TITLE: Turtle Room Care

NUMBER: AC VC-006

ISSUE NUMBER:

SUPERSEDES ISSUE NUMBER:

Procedure:

Transport:

Turtle eggs may be obtained from commercial suppliers. They may be brought to the vivarium in crates provided by commercial suppliers. In the vivarium, eggs are to be placed in incubators. Until hatching, all eggs may be maintained at 28-29°C to yield a ~50% male:female ratio. Substrate should be prepared by using equal parts of substrate (dryrite) and water. Humidity can be maintained by monitoring the mass of the incubator+eggs+substrate+moisture and adding water to original mass.

Turtles or eggs shall not be handled by any unauthorized departmental or university staff. Once hatched, neonates will be transferred to turtle tanks with adequate levels of water, substrate and heating lamps.

Animal Housing:

Location: Vivarium number #130, first floor of the Biology Building, of Southeastern Louisiana University, Hammond, LA, 70402.

1. Turtle Rooms: rooms #132 and #134 will be used for turtle housing. Turtle tanks will be placed atop plastic and metal shelves.
2. Security: room access is limited to authorized personnel (Dr. Roldán A. Valverde and his assistants). No access will be allowed to the public, unless explicitly specified. Vivarium doors should be locked to public hallways at all times.
3. Room Identification: rooms will be labeled with the following information:
 - a. Vivarium room number
 - b. Name of the head of the project.
4. Containers:
 - a. Turtles will be placed in open, plastic containers.
 - b. They will be sorted out by size and, according to this parameter; density of animals in each container will be maintained as low and consistent as possible throughout the aquariums. The larger the animals, the lower the density of turtles in the tank.
 - c. Enough water will be added so that the turtles can swim freely, but not high enough that they can escape.
 - d. The bottom of the tanks will have a layer of gravel for environmental enrichment.
 - e. A basking platform consisting of cork wood or floating plants should be present in each tank.
 - f. Heating will be provided via a porcelain lamp with glow reflector containing a basking spot lamp of 50 W. Each tank will have its own lamp or it will be share with one other tank.

General Maintenance:

1. Cleaning:
 - a. Tanks will be cleaned once weekly. All water will be replaced and the walls will be washed with a sponge.
 - b. During the cleaning process, the gravel will be stirred manually and rinsed with water to remove wastes before fresh water is added.
 - c. Small and medium sized turtles (less than 500 g) will remain in tanks during the cleaning. Bigger turtles (500 g or more) will be placed in a separate bin during cleaning.
 - d. Rooms will remain closed while cleaning and feeding takes place, to prevent cross-contamination with germs between the different rooms in Vivarium #130
2. Ventilation: each vivarium room is equipped with an air ventilation system to prevent accumulation of odors.
3. Feeding: turtles will be fed every other day with a high protein content pellet food purchased from commercial suppliers.
4. Handling: turtles will be manually handled. When handled, care will be taken to avoid the head for risk of being bitten.

Backup Personnel: the following people should be contacted regarding the turtle rooms in the vivarium:

Dr. Roldán A. Valverde (head of project):

- Office: 332 Biology Building
- Phone: (985) 549-3029
- Email: roldan.valverde@selu.edu

Diana Solis-Solis (graduate student):

- Graduate student office #122
- Phone: (985) 215-5676
- Email: diana.solis@selu.edu

Melissa Juneau (undergraduate student)

- Phone: 985-774-1862
- E-mail: Melissa.Juneau@selu.edu