University of San Diego
Policies and Procedures for Animal Care and Use

Contents

Policies and Procedures

Institutional Animal Care and Use Committee (IACUC)
Program for Humane Care and Use of Animals
University of San Diego
Revised, 2010

HISTORY

Members of the biology and psychology faculty of the University of San Diego, sharing common interests in the use of non-human animals for teaching and research, and common concerns for the humane treatment of those animals, formalized their commitments by making explicit the principles that they have followed, by establishing an Institutional Animal Care and Use Committee. Official status as a Committee of the College of Arts and Sciences was granted in 1984 by the Dean of that College.

APPLICABILITY

For purpose of this document:

1. An animal is defined as a member of any non-human, vertebrate species.

2. The Responsible Institutional Official is the Dean of the College of Arts and Sciences.

3. The term "research facility" shall include reference to the facility's functions in providing research and teaching.

4. The provisions of this document are applicable to all research, testing, and teaching involving the use of animals in programs of the University of San Diego.

GENERAL POLICY

It is our past and continuing policy that:

1. The use of animals in research is indispensable to the scientific enterprise, and to the betterment of humans and animals. The use of animals in teaching provides essential experiences to science students and presents the opportunity to make students aware of our responsibility towards animal life both in terms of humane treatment of research animals and concern for the welfare of domestic and wild species.

2. The establishment and maintenance of ethical practice in the use of animals is the responsibility of the individual instructor/researcher, who is also responsible for collaborators, assistants, employees, and students, all of whom incur obligations consistent with their competence, training, and experience.

3. The procurement, care, use, and disposal of animals conforms to all applicable provisions of the Animal Welfare Act, Guide for the Care and Use of Laboratory Animals, other federal statutes, and state, and local regulations.

4. Individual instructors/researchers are familiar with, and conform to the aforementioned animal care and use laws and guidelines and with those established by the professional organizations to which they belong.

5. Research is undertaken with a clear purpose which outweighs the potential distress to the animal by a) increasing knowledge of life processes or behavior, b) increasing understanding of the species under study, or c) providing information that can potentially benefit human or nonhuman species.

6. Observation and collection of free-living animals is done after weighing the potentially adverse consequences for the animals involved and for the ecosystem of which they are a part. When feasible, collected animals are returned to the site of collection.

7. When animals are used for educational purposes, instructors discuss and demonstrate proper care for the animals, and give students explicit instruction in all applicable procedures. Instructors carefully monitor student activity.

8. When animals are no longer needed, alternatives to euthanasia are considered. When euthanasia is the most humane form of disposition, it is accomplished in an acceptable manner, appropriate for the species, and under anesthesia or in such a way as to insure immediate death.

9. Alleged violations of these principles and/or procedures will be reported to the Chair of the IACUC. If substantiated, the Chair will bring the matter to the IACUC which will make recommendations to the instructor/researcher regarding its resolution, and will report the matter to the Dean. In the case of repeated and/or flagrant violation, the Dean will report the situation to the Vice President for Academic Affairs/Provost, along with his/her recommendations.

The following documents the manner in which the Institutional Animal Care and Use Committee conforms to the University of San Diego Animal Welfare Assurance (AWA), and the PHS Policy for Humane Care and Use of Laboratory Animals.

THE INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE MEMBERSHIP (AWA III.C-D)

The Institutional Animal Care and Use Committee (IACUC) consists of at least five members, and its membership meets the composition requirements set forth in the PHS Policy, Section IV.A.3.b. Members were initially nominated by the Chairs of the Biology and Psychology Departments to serve either a one or a two year term, and confirmed by the Dean. Hereafter, vacancies on the committee will be filled by nominations from the remaining members of the IACUC and be confirmed by the Dean.

With respect to activities involving animals, the IACUC shall:

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

2. Inspect at least once every six months all of the Institution's animal facilities, including satellite facilities, using the “Guide” as a basis for evaluation; except that field sites where free-living wild animals are studied, and licensed facilities (e.g. zoos) where captive wild animals are studied are exempt from inspection.

3. Prepare reports of the IACUC evaluations as set forth in the PHS Policy IV.B.3 and submit the reports to the Institutional Official.

4. Review concerns involving the care and use of animals at the Institution.

5. Make written recommendations to the Institutional Official regarding any aspect of the Institution's animal program, facilities, or personnel training.

6. In accord with the PHS Policy IV.C.1-3, the IACUC shall review and approve, require modifications in (to secure approval), or withhold approval of PHS-supported activities related to the care and use of animals.

7. Review and approve or withhold approval of proposed significant changes regarding the use of animals in ongoing activities as set forth in the PHS Policy IV.C.

8. Notify investigators and the Institution 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 as set forth in the PHS Policy IV.C.4.

9. Conduct continuing review of each previously approved, ongoing activity covered by PHS Policy at appropriate intervals as determined by the IACUC, including a complete review in accordance with the PHS Policy IV.C.1-4 at least once every three years.

10. Be authorized to suspend an activity involving animals as set forth in the PHS Policy IV.C.6.

APPROVAL OF PROPOSED ACTIVITIES FOR THE USE OF ANIMALS (PHS Policy IV.C.1)

In order to approve proposed activities for the use of animals, the IACUC shall conduct a review of proposed use to determine that it meets the following requirements:

1. Procedures involving animals will avoid or minimize discomfort, distress, and pain to the animals;

a. The principal investigator has considered alternatives to the procedures that may cause more than momentary or slight pain or distress to the animal and has provided a written narrative description of the method and sources, e.g., the Animal Welfare Information Center
b. The principal investigator has provided written assurance that the activities do not unnecessarily duplicate previous experiments;

2. Procedures that may cause more than momentary or slight pain or distress to the animals will:

    a. Be performed with appropriate sedatives, analgesics or anesthetics, unless withholding such agents is justified for scientific reasons, in writing, by the principal investigator and will continue for only the necessary period of time;
    b. Involve, in their planning, the attending veterinarian or his or her designee;
    c. Not include the use of paralytic without anesthesia;

3. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end, or if appropriate, during the procedure;

4. The living conditions of animals will be appropriate for their species and contribute to their health and comfort. The housing, feeding, and nonmedical 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;

5. Medical care for animals will be available and provided as necessary by a qualified veterinarian;

6. Anyone conducting procedures on the species being maintained or studied will be appropriately qualified and trained in these procedures;

7. Activities that involve surgery include appropriate provisions for preoperative and post-operative care of the animals in accordance with established veterinary medical and nursing practices. All survival surgery will be performed using aseptic procedures, including surgical gloves, masks, sterile instruments, and aseptic techniques;

8. No animal will be used in more than one major operative procedure from which it is allowed to recover unless;

    a. Justified for scientific reasons by the principal investigator, in writing;
    b. Required as routine veterinary procedure or to protect the health or well- being of the animal as determined by the attending veterinarian;
    c. In other special circumstances as determined by the Administrator on an individual basis

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

IACUC REVIEW OF PROPOSALS FOR USE OF ANIMALS (PHS policy IV.C)

1. Procedures involving the use of animals in teaching or research will be reviewed by the IACUC prior to their implementation and once every three years thereafter, except that:

    a. field studies conducted with fee-living wild animals in their natural habitat, which do not involve invasive procedures capture, or handling of the animals, and which do not harm or materially alter the behavior of the animals under study, are exempt from review,
    b. observational studies of captive wild animals held at licensed facilities, which do not involve invasive procedures or handling of the animals, and which do not harm or materially alter the behavior of the animals under study, are exempt from review

2. Prior to using animals, instructors/researchers will submit a proposal to the Chair of the IACUC, stating the following:

    a. Identification of the species and the approximate number of animals to be used;
    b. A rationale for involving animals, and for the appropriateness of the species and numbers of animals to be used;
    c. A complete description of the proposed use of the animals;
    d. A description of procedures designed to assure that discomfort and pain to animals will be limited to that which is unavoidable for the conduct of scientifically valuable research or teaching, including provision for the use of analgesic, anesthetic, and tranquilizing drugs where indicated and appropriate to minimize discomfort and pain to animals; and
    e. A description of any euthanasia method to be used.
    f. In the case of field studies in which animals will be captured or handled, or in which invasive procedures will be employed, instructors/ researchers must assure IACUC that they will comply with all state and federal regulations regarding the animals, and that the health and safety of other animals or persons working in the field will not be compromised.

3. Prior to the review, each IACUC member shall be provided with a list of proposed research projects to be reviewed. Written descriptions of research projects that involve the care and use of animals shall be available to all IACUC members, and any member of the IACUC may obtain, upon request, full committee review of those research projects. If full committee review is not requested, at least one member of the IACUC, designated by the chairperson and qualified to conduct the review, shall review those research projects and have the authority to approve, require modifications in (to secure approval) or request full committee review of those research projects. If full committee review is requested, approval of those research 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 research project in which the member has a conflicting interest (e.g., is personally involved in the project) except to provide information requested by the IACUC; nor may a member who has a conflicting interest contribute to the constitution of a quorum.

4. 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.

5. The IACUC shall notify principal investigators and research facility 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.

6. The IACUC may suspend an activity that it previously approved if it determines that the activity is not being conducted in accordance with the description of that activity provided by the principal investigator and approved by the Committee. The IACUC may suspend an activity only after review of the matter at a convened meeting of a quorum of the IACUC and with the suspension vote of a majority of the quorum present.

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

QUALIFICATIONS OF PEOPLE WHO WORK WITH ANIMALS (AWA III.G)

1. This research facility will ensure that all scientists, research technicians, animal technicians, and other people involved in animal care, treatment, and use are qualified to perform their duties.

2. Training and instruction shall be made available, and the qualifications of individuals will be reviewed to ensure that proper and humane handling and care of each species of animal is being maintained.

Training of Animal Technicians and other People Involved in Animal Care

The training or instruction available to scientists, animal technicians, and other personnel involved in animal care, treatment, or use is as follows:

1. Persons using animals at this institution will be qualified to do so by experience and training in the care and use of animals, including methods to minimize pain and distress and to minimize the numbers of animals used.

2. Training programs at the institution will be derived from the publication "US Government Principles for the Utilization of and Care of Vertebrate Animals Use in Testing, Research, and Training" and/or the publication "Education and Training in the Care and Use of Laboratory Animals: A Guide for Developing Institutional Programs". To that end, the Lab Animal Welfare Program developed by the Collaborative Institutional Training Initiative (CITI) has been adopted by this institution.

3. Researchers are required to complete the CITI module on "Conducting Research With Laboratory Animals." Since different species are used by different researchers in the various facilities at the institution, additional CITI modules that match the situation are used. Certifications of completion of the required modules must accompany proposals submitted to the IACUC for review.

4. Additional handouts covering zoonoses precautions and information for pregnant women will be supplied.

5. Members of the IACUC complete the CITI module "Essentials for IACUC Members" within 30 days of their appointment to the committee.

6. Refresher courses for IACUC members and for researchers are required every three years.

ATTENDING VETERINARIAN AND ADEQUATE VETERINARY CARE (AWA III.B)

1. This research facility shall have an attending veterinarian who shall provide adequate veterinary care to its animals in compliance with governmental regulations and act as a voting member of the IACUC.

2. This research facility shall establish and maintain a program of veterinary care that shall include the following:

    a. Appropriate facilities to provide for the welfare of animas being used;
    b. Appropriate methods to prevent, control, and diagnose injuries and disease, and to provide for emergency and weekend care;
    c. Daily observations by staff of animals covered under the Animal Welfare Act to assess their health and wellbeing;
    d. Guidance to principal investigators and other personnel involved in care and use of animals; and
    e. Adequate pre-procedural and post-procedural care in accordance with current established veterinary medical and nursing procedures.

RECORD KEEPING (AWA V)

A. This Institution will maintain for at least three years:

1. A copy of the Assurance and any modifications thereto, as approved by the PHS.

2. Minutes of IACUC meetings, including records of attendance, activities of the committee, and committee deliberations.

3. Records of applications, proposals, and proposed significant changes in the care and use of animals and whether IACUC approval was given or withheld.

4. Records of semiannual IACUC reports and recommendations (including minority views) as forwarded to the Institutional Official.

5. Records of accrediting body determinations.

B. This Institution will maintain records that relate directly to applications, proposals, and proposed changes in ongoing activities reviewed and approved by the IACUC for the duration of the activity and for an additional three years after completion of the activity.

C All records shall be accessible for inspection and copying by authorized OLAW or other PHS representatives at reasonable times and in a reasonable manner.

ANNUAL REPORT (AWA VI)

A. This Institution's reporting period is January 1 – December 31. The IACUC, through the Institutional Official, will submit an annual report to OLAW January 31 of each year. The report will include:

1. Any change in the accreditation status of the Institution (e.g,. if the Institution obtains accreditation by AAALAC or AAALAC accreditation is revoked), any change in the description of the Institution's program for animal care and use as described in the Assurance, or any change in the IACUC membership. If there are no changes to report, this Institution will provide written notification that there are no changes.

2. Notification of the dates that the IACUC conducted its semiannual evaluations of the Institution's program and facilities (including satellite facilities) and submitted the evaluations to the Institutional Official.

B. The IACUC, through the Institutional Official, will promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to:

1. Any serious or continuing noncompliance with the PHS Policy.

2. Any serious deviations from the provisions of the "Guide."

3. Any suspension of an activity by the IACUC.

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

LABORATORY HEALTH PROGRAM

1. The University maintains an Injury and Illness Prevention Program that is designed to assure a safe and healthy workplace for its employees. The Program is coordinated through the Office of Environmental Health and Safety and implemented through the joint efforts of that office and the University community. The Environmental Health & Safety Manager has authority for program compliance.

2. The Institution bases its occupational health and safety program on risk assessment and hazard identification. Each department conducts an initial inspection to identify any unsafe condition, equipment, or work practice. Subsequent inspections are conducted to identify and evaluate hazards whenever new substances, processes, procedures, or equipment that may represent a new occupational safety and/or health hazard are introduced to the work place and whenever the Department or the Office of Environmental Health and Safety is made aware of a new or previously unrecognized hazard. Annual inspections for safety and health hazards are conducted by each department. The inspection team consists of the Office of Environmental Health and Safety, the building safety representative and the manager(s) of the area involved. A copy of the inspection report is retained in the Office of Environmental Health and Safety and a copy is sent to each department.

3. The occupational health and safety program applies to all departments at the Institution, including but not limited to those in which researchers, employees and/or students engage in research involving animals. The specific procedures in place in each facility are determined by the animals used in that facility which at this Institution currently include rats, birds, fish, and amphibians.

4. Personnel using chemical agents must understand the hazards and dangers associated with the agents and the safeguards that should be instituted for safe use and proper storage and disposal. The Institution maintains a hazards communication program to transmit information about chemicals used by personnel. Under the program, employees are to be trained at the time of their initial job assignment and then whenever a new hazard is introduced to the job.

5. All personnel who will work regularly with lab animals will complete a risk assessment questionnaire to assess and address occupational risk. Following the completion of the risk assessment questionnaire, personnel may be required to submit certification of their ability or any limitations on their ability to work regularly with lab animals.

6. Personnel employed to care for animals on a regular basis are required to have a tetanus booster within the last 10 years before first contact with animals.

7. When a work-related injury or illness occurs (i.e. injuries and illnesses that arise out of, or are incurred in the course of job related activities on behalf of the University), the University provides appropriate medical care and treatment to the injured worker through its Workers' Compensation program. All work-related injuries or illnesses are to be reported by the employee to the employee's supervisor, who in turn is to provide notice to the University's Department of Public Safety and Risk Management.

8. If an animal has bitten or scratched a person, the veterinarian will be consulted and may recommend quarantining the animal for two weeks post-injury. The veterinarian will be notified of any signs or symptoms of illness in the animal during the quarantine period. If indicated, the veterinarian will carry out appropriate diagnostic tests on the animal and report

results to the IACUC, the Public Safety Department, and the University's Environmental Health and Safety Officer.

9. Dust masks, gloves, and laboratory coats will be worn when changing animal bedding. Allergic reactions to the environment of the animal facility will be reported to the laboratory supervisor. If measures to circumvent these reactions are not feasible, the affected individual will be assigned other duties.

10. Eating, drinking, and smoking are prohibited in all animal facilities.

11. All those working with animals will wear laboratory coats and other appropriate protective apparel which will remain in the facility except when removed for cleaning.

12. All those working with animals will wash their hands with an appropriate cleaner before and after handling animals.

13. All employees who will work regularly with laboratory animals will be provided with and are expected to read brief handouts on zoonotic diseases and allergies to laboratory animals as well as precautions to be taken during pregnancy, illness, or decreased immunocompetence. The IACUC is responsible for providing the Laboratory Supervisors with the handouts while the supervisors are responsible for providing them to each employee upon hire.

REGULATIONS FOR ALL PEOPLE WHO WORK WITH LABORATORY ANIMALS

1. No eating, drinking, or smoking is allowed in the animal facility.

2. Dust masks and laboratory coats must be worn by all personnel when changing animal bedding.

3. Allergic reactions to the environment of the animal facility are to be reported to the Animal Safety Supervisor. If measures to circumvent these reactions are not feasible, you will be assigned to other duties.

4. Laboratory coats worn in the animal facility are to remain in that facility except when removed for cleaning.

5. Hands must be washed with soap prior to leaving the facility.

6. Any injury caused by a laboratory animal to a person is to be reported immediately to Public Safety (ext. 2222) and to the Animal Safety Supervisor (Dr. Norman Switzer 858-748-4412).

I have read and I understand the regulations for working with laboratory animals as established by the USD Institutional Animal Care and Use Committee.

_____ _____

Signature Date

Appendix 1

University of San Diego

Institutional Animal Care and Use Committee

Risk Assessment Questionnaire for Persons Working with Animals

The University of San Diego's Animal Welfare Assurance with the federal Public Health Service requires all personnel who will work regularly with lab animals to complete a risk assessment questionnaire to assess and address occupational risk. Following the completion of the risk assessment questionnaire, personnel may be required to submit certification of their ability or any limitations on their ability to work regularly with lab animals. This Risk Assessment Questionnaire will be used to determine your level of risk and your ability to work regularly with lab animals. Your responses to this questionnaire will be kept confidential and will be provided only to those university officials who have a legitimate reason to be aware of the information in order to assess your ability to work regularly with lab animals.

1. Personal Information

Name: _____

Department: _____

Phone: _____

USD Email: _____

Name of P.I. _____

2. Animal Contact at the University of San Diego

A. Identify all species you will come into contact with within the animal facility. (This includes direct contact with animals, animal tissues, animal wastes and/or animal enclosures.)

□ Mice or rats □ Birds

□ Fish □ Rabbits

□ Other (list): _____

B. Activities (Check all that apply.)

□ Direct hands on work with animals

□ Work with animal tissues or fluids

□ No direct contact

C. Identify the frequency of your direct contact with animals.

□ Over 8 hours per week

□ 1-8 hours per week

□ Less than 1 hour per week

3. **Tetanus**. Have you had a tetanus booster within the last 10 years?

□ No

□ Yes. Date of last tetanus booster: _____

4. **Allergies/Medical Conditions**. Do you have any allergies or medical conditions that would limit your ability to regularly work with lab animals?

□ No

□ Yes. (If this box is checked, please provide information from your health care provider that identifies any limitations on your ability to regularly work with lab animals.)

The statements contained in this Risk Assessment Questionnaire are true and correct. If I have any questions regarding my contact with lab animals at the University of San Diego, I understand that it is my responsibility to contact my supervisor or the Chair of the Institutional Animal Care and Use Committee.

_____ _____

Signature Date

_____

Name (Printed)

Appendix 2

Diseases Communicable From Animals to Humans-Zoonoses

General Information:

Humans may be susceptible to infectious diseases suffered by animals. Infectious diseases transmitted from animals to humans are called zoonotic diseases. In many cases the animal shows little, if any, sign of illness. A bacterium from the normal flora of a healthy animal may cause a serious disorder in a person exposed to it.

While the animals have developed a "resistance" to these microorganisms, humans with no previous exposure to the agent may lack this protective immunity. Therefore, one should always be aware of the possible consequences of working with animals and take appropriate precautions to minimize the risk of infection. In the event that an individual becomes ill, it is important that they inform their personal physician that they work with animals.

Some common sense steps can be taken to decrease the risk of infection. These include cleanliness in routine tasks around animals and hand washing after completion of each animal-related task. You can protect yourself against contact exposure by wearing gloves; taking enough time to give injections properly; never recapping, clipping or breaking needles; discarding syringes and needles in containers designed for proper disposal; and inoculation of animals in teams of two. Eating and drinking are not allowed in animal rooms. Break rooms are provided for these activities.

Procedures such as necropsy, bedding changes, inoculations with certain agents and tissue and fluid sampling may require using physical containment devices, respirators or other personal safety gear as indicated.

If You Work with Rodents (e.g. Guinea Pigs, Hamsters, Mice and /or Rats):

If you work with rodents (e.g. guinea pigs, hamsters, mice and /or rats) you should be aware that contact with rodents or rodent tissue requires precautions against some diseases such as lymphocytic choriomeningitis (LCM). LCM is a rodent neurological virus that can be transmitted to humans. Attention should also be paid to the possibility of allergic reactions. An additional concern for investigators coming in contact with wild rodents is hantavirus. Wearing gloves and good thorough hand washing after handling the animals and /or their bedding, feces, etc. protects against exposure to infectious agents.

If You Work with Birds, Rabbits or Reptiles and Amphibians:

Birds can carry diseases such as psittacosis. Only inspected and properly quarantined birds should be used in research or teaching. Individuals can also be allergic to birds or avian feathers.

Individuals working with rabbits should be aware of possible allergic reactions.

Salmonella is frequently harbored in turtles and other reptiles and amphibians. The use of gloves and good hand-washing is always recommended after contact with reptiles and amphibians.

The animal care program will not maintain or have access to any medical records. The University's occupational health program recommends tetanus vaccinations for all animal users. During training animal users are provided information on tetanus and where to go for vaccination. Animal users are instructed, both in the Occupational Health Brochure and via signs posted throughout the animal facilities, that there is an official reporting system for all injuries which may occur on the job.

All personnel should also be aware that laboratory animals (particularly rats, rabbits, guinea pigs, hamsters) are sources of potential allergens to sensitized persons.

Information on Some Additional Zoonotic Diseases:

1. **Rat Bite Fever (RBF)**

   The disease may be caused by Streptobacillus moniliformis or Spirillum minus. The usual source of infection is the bite of a rodent. RBF may occur in humans one day to six weeks following a bite. Signs include regional inflammation and lymphadenopathy, headache, fever, chills, and a macular rash. If untreated, further complications may ensue.

2. **Lymphocytic Choriomeningitis (LCM)**

   LCM occurs as a latent virus in the mouse which is easily transmitted from animals to humans. Mice and hamsters are asymptomatic carriers. Human infections have resulted from improper handling of infected tissues, e.g., directly from feces, urine or inhaling aerosolized dust from animal rooms. LCM often presents as a mild influenza like syndrome with or without central nervous system involvement.

3. **Leptospirosis**

   Leptospira are found in a wide variety of mammals and reptiles. Hamsters, young guinea pigs and gerbils are especially susceptible. Rodents can shed leptospiras throughout their life without clinical signs. L. ballum is the most common serovar in rats, mice, and rabbits. All excrement and secretions of infected animal should be considered infective. Leptospirosis in humans may range from unapparent disease to death.

4. **Tuberculosis**

   The natural reservoir hosts include M. avian (birds), M. tuberculosis (humans), and various species in fish (M. marincum, M. pisicum, M. fortuitum). Transmission occurs via aerosol from infected animals or by exposure to their dust bedding. Symptoms in man include anorexia, weight loss, fatigue, fever, chills and cachexia and other symptoms dependent upon the organ system involved. Tuberculosis contracted from fish have been largely integumentary.

5. **Chlamydiosis or Psittacosis**

Avian species are the main reservoir of C. psittaci infection although the organism has a broad host range including rabbits, mice, guinea pigs, cats, lambs, calves, and frogs. Transmission may occur by aerosolization of dried fecal materials which contain organisms from enteric shedding. Control should be maintained by introduction of animals know to be free of the disease. Animals of unknown background should undergo chlorotetracycline chemoprophylaxis. Staff should wear protective clothing such as masks, gloves and lab coats. Psittacosis in humans may occur acutely or have an insidious onset. Signs include fever, chills, anorexia, headache and a respiratory component. A toxic or septic form of the disease also exists.

6. **Salmonella**

Salmonella inhabits the intestinal tract of many animals. As many as 94% of all reptiles harbor Salmonella sp. Endemic salmonellosis in commercial raised guinea pigs has also been a source of infection. Environmental contamination, feeds of animal by-products and the house mouse all serve as reservoirs of infection. Both humans and animals are carriers and periodic shedders of salmonella. Clinically, salmonellosis in humans presents as gastroenteritis with sudden onset, diarrhea, nausea, abdominal pain and fever.

7. **Dermatomycoses (Ringworm)**

Trichophyton mentagrophytes is the organism most frequently isolated with rodent associated infections. It may be asymptomatic in rodents and only recognized when laboratory personnel become infected. Transmission occurs by direct or indirect contact with visibly infected animals, asymptomatic carriers, bedding or fungi present in the air or dust. Control is by regular cleaning of cages and rooms. Clinically, the infection may manifest as skin lesions with erythema, scaling, and occasionally vesicles or as nail thickening and discoloration.

8. **Allergies**

Many laboratory animals have been shown to be responsible for allergic skin and respiratory reactions in numerous laboratory personnel. Methods to reduce exposure to offending allergens include reduced animal contact time and increased room ventilation and cleaning schedule. The use of filter caps on animal cages, exhaust hoods, protective clothing and masks have also been implemented.

Prevention of Zoonotic Diseases:

A. **Proper Personal Hygiene**

1. Wash hands before and after animal handling.
2. Do not eat or drink in the animal rooms.
3. Avoid any unnecessary work time in the animal rooms.
4. Wear laboratory coat or coveralls when handling animals.

5. Avoid handling sick animals or animals with lesions unless gloved, or unless other protective wear is utilized.
6. Wear a mask if you are allergic or if dust is present (note environment maintenance).
7. If you are sick, **DO NOT** enter lab animal facilities.
8. Routinely wear gloves when cleaning animal rooms.
9. Note progression of any illness and your current history relevant to animal work.
10. Inform physician of your animal related activities.

B. Environmental Maintenance

1. Keep animal rooms clean.
    a. Avoid urine and fecal build-up. Dry feces result in fecal dust which may be inhaled.
    b. Clean rooms have a lower likelihood of horizontal or zoonotic transfer.
    c. Proper ventilation protects the animal and workers. Use hood or cage filters when necessary.
    d. Clean litter from floors. Litter attracts vermin which may introduce a zoonotic disease into the facility.

C. Colony Maintenance

1. Observe animals for health status on a daily basis.
2. Report sick or dead animals.
    a. Note health problems.
    b. Take extra precautions in cleaning, etc.
    c. Isolate affected animals.
    d. Record history or progression of animal disease.
    e. Bring only healthy animals with a known history into an existing colony.

Other Potential Zoonotic Diseases:

Pox Viruses	Shigellosis	Contagious Ecthyma
Erysipeloid	Hemorrhagic Fever	Streptococci
Yellow Fever	Tularemia	Measles
Pseudomonas	Hepatitis	Staphylococcus
Herpesvirus B	Toxoplasmosis	Marburg Virus (African Hemorrhagic Fever)
Disease Amebiasis	Cat Scratch Disease	Rabies
Balantidiasis	Q Fever	Giardiasis
Rocky Mountain Spotted Fever	Cryptosporidiosis	Helminths
Brucellosis	Murine Typhus	Cestodiasis

Plague	Listeriosis	Campylobacteriosis

Appendix 3

PROPOSAL FORM FOR USE OF ANIMALS
University of San Diego

NOTES:

1. Proposals must be submitted electronically to the IACUC Chair via e-mail or on disk in MSWord, WordPerfect, or PDF Format.

2. Certificates of Completion for the appropriate CITI lab animal training modules must be attached to the proposal for it to be considered by IACUC.

COVER SHEET

Title:

Principal Investigator:

Faculty Advisor If PI is a student:

In your proposal, please address and number your responses to each of the following, then attach this cover to your proposal.

1. Approximate start and end dates of the project in which the animals will be used,

2. a) Identification of the species and the approximate number of animals used,

b) A rationale for involving animals, and for the appropriateness of the species and numbers of animals used,

c) A complete description of the proposed use of the animals,

d) A description of procedures designed to assure that discomfort and pain to animal will be limited to that which is unavoidable for the conduct of scientifically valuable research or teaching, including provision for the use of analgesic anesthetic, and tranquilizing drugs where indicated and appropriate to minimize discomfort and pain to animals,

e) A description of any euthanasia method to be used and how animals will be disposed of at the conclusion of the project,

3. Assurance that the animals' living conditions will be appropriate for the species and contribute to their health and comfort,

4. Assurance that individuals conducting the research on the species being maintained or studied will be appropriately qualified and trained in those procedures,

* When proposal involves more than momentary pain/distress to animals, address additional requirements under approval of proposed activities for the use of animals (9 CFR section 2.31 (d1)), attached.

Your proposal for animal use has been

___ approved

___approved pending modifications (see attached)

___disapproved (see attached)

IACUC Chair_____ Date:_____