SACRAMENTO STATE

Institutional Animal Care and Use Committee:

Occupational Health & Safety Program For Individuals with Frequent Animal Contact

Office of Research, Innovation, and Economic Development
Research Integrity and Compliance

&

Risk Management
Environmental Health & Safety

Last Revised: September 20, 2018

This information is based on the National Research Council publication *Occupational Health and Safety in the Care and Use of Research Animals*.

All personnel who work with live animals in the lab animal facility or in fieldwork must review this information. It provides general information and rules for safe animal research and species-specific information. It also explains what to do in the event of an injury or an animal-related health problem occurs.

A. REGULATORY OVERSIGHT

The Sacramento State Institutional Animal Care and Use Committee (IACUC) operates under an Assurance from the Public Health Service Office of Laboratory Animal Welfare. They base their evaluation of animal care and use programs on the requirements set forth in the Guide for the Care and Use of Laboratory Animals (http://www.nap.edu/readingroom/books/labrats/) and the National Research Council report, Occupational Health and Safety in the Care and Use of Laboratory Animals (http://www.nap.edu/books/0309052998/html).

B. HAZARD IDENTIFICATION AND NOTIFICATION

All individuals having contact on the Sacramento State campus with animals or unfixed animal tissues through any of the research and teaching programs or who may reasonably be expected to come into contact with animals/tissues during their work on campus (e.g., security, custodial, repair, facilities personnel) are included in this program. Individuals are identified through review of animal care and use protocols. Incidental visitors are informed of the hazards and the Occupational Health Program. Employees who require medical evaluation will be informed of the Occupational Health Program in the job description before hiring. Students who are only exposed to animals through observation in a classroom setting are not included in this program.

C. RISK ASSESSMENT/MEDICAL EVALUATION

The level of participation in the Occupational Health Program is based on an individual's potential risk as determined by risk assessment.

1. **Risk Assessments** consider a) the species involved and/or b) the frequency and duration of animal contact. All animal care facility personnel and faculty who support and regularly work in with animals require an initial risk assessment to be completed by the Principal Investigator and the Individual working with animals due to their potential for prolonged or frequent contact with animals. This risk assessment should be taken to the medical evaluation.

2. **Initial Medical Evaluations** must be completed by all personnel prior to their working

with animals at Sacramento State. The complete Risk Assessment and the Medical Evaluation sheets should be taken to the appointment. This medical screening focuses on an individual's medical history with regards to their proposed animal work, including average amount of contact per week, personal protection, immunizations, and the species being handled. This initial screening will be used to help determine the participant's level of risk to animal allergies, zoonoses, and other potential work exposures that might require additional health protections or job accommodation.

- Employees can complete their evaluation with Kaiser Permanente 2025 Morse Ave.
- Student Volunteers can complete their evaluation with the Student Health Center at The Well:

Confidentiality: This form will be kept by your medical examiner or will be returned to the individual. This form does not need to submitted to anyone or viewed by anyone other than the individual. Physicians will notify Environmental Health & Safety of the individual's approval to work with animals or whether additional precautions or evaluations will be necessary.

Special considerations may be appropriate for individuals who are immunocompromised due to treatment of certain diseases or as a result of chronic illness; pregnancy or family planning; have pre-existing allergies/asthma; or have contracted a serious illness from working with animals. *Individuals whose health status changes due to pregnancy, illness, or decreased immune-competence after receiving a medical evaluation should be re-evaluated to determine risk due to exposure.*

Students who are only exposed to animals through observation in a classroom setting are not included in this program.

D. PREVENTATIVE MEDICINE/RECOMMENDATIONS

General preventive strategies include:

Tetanus immunizations: All individuals with animal contact are required to be current regarding tetanus immunization status. This requires all personnel to be immunized within the last 10 years.

Personal hygiene: Persons working with animals are required to maintain a high standard for personal cleanliness to reduce the risk of contracting diseases transmitted by animals. Protective clothing suitable for use with laboratory animals is to be worn by all persons coming into direct contact with animals or used equipment. Protective clothing must not be worn outside of the facility and should be made available for users by the university. Disposable gear, such as gloves, hair covers, masks, and eye protection should be used where appropriate. Hands should be routinely washed after handling animals or cage accessories to reduce the risk of disease transmission.

Never eat, drink, smoke, or apply cosmetics or contacts when working with animals. Wash your hands after all procedures involving animals or animal equipment. Never touch your hands to your face before washing your hands. Hand to mouth contact is the most common means of zoonotic disease transmission.

Proper work practices: Cage-emptying practices that decrease the aerosolization of allergens or infectious particles and proper cleaning and disposal of soiled bedding should be employed. Access to animal rooms should be limited. Ventilation should be in accordance with the Guide for the Care and Use of Laboratory Animals.

Education and training: Persons working with animals should be fully informed as to the nature of possible risks associated with their potential animal contact. These include laboratory animal allergies and infections, and recognition of their new and progressive symptoms, and preventative measures. It is the responsibility of each principal investigator and facility supervisor to inform personnel of the specific risks involved and the applicable safety procedures and ensure appropriate training. All researchers must complete the online animal subjects course. Additional training for work with specific species may be required. If you feel uncomfortable handling the animals you are working with or are unsure of certain procedures or precautions, contact your supervisor.

All personnel are reminded to be knowledgeable regarding the safety policies and procedures outlined in the Sacramento State's Environmental Health & Safety policies. These include general information on biohazards, radiation safety and chemical hazards: https://www.csus.edu/aba/ehs/.

When visiting your health care providers: Tell them that you work with animals. Even if you do not think an illness is work related, it is essential that your physician be informed of all risks in your environment. If you become ill or are injured while working with animals, you should report it to your supervisor and seek medical attention immediately.

E. RISKS ASSOCIATED WITH ANIMAL CONTACT

Bites, Scratches and Contact: Bites and scratches pose a significant hazard to personnel working with laboratory animals. Effects of bites and scratches can include pain, anxiety, wound disfigurement, wound infection, and disease transmission. Wound infections can be caused by a number of pathogenic bacteria, which are indigenous in animals or your normal skin organisms. Most zoonotic diseases of importance in laboratory animal science are transmitted via animal bites or scratches.

The skin glands of some amphibians and reptiles secrete toxic substances. Protective clothing and gloves should be worn and good hygiene should be practiced when handling these species.

All animal bites and scratches and exposure to natural toxins should be reported immediately to the supervisor. All wounds require meticulous cleansing with soap and

water. It is also important to be up-to-date on tetanus immunization (every 10 years or within 5 years if severe and dirty wound). Every facilities should have urgent care information posted: https://www.csus.edu/research/researchintegritycompliance/links-accordions/HealthCareFlyer.pdf.

Physical Injury Risk: Supervisors must also ensure that all personnel are familiar with the procedures to follow in the case of a work related injury. Injuries can be reported here: https://www.csus.edu/aba/forms.html#Risk_Management_Services.

Laboratory Animal Allergies: One of the most common health hazards associated with working with lab animals, particularly rodents and rabbits, is the development of allergies. Exposure to animal allergens occurs by inhalation, skin or eye contact, needlesticks, cuts or bites. The symptoms of allergic reactions can range from runny nose, watery eyes, and sneezing to asthma and anaphylactic shock. Direct contact with animal hair or skin may result in hives or more serious skin rashes. Most allergies develop within the first three to four years of working with lab animals. Symptoms typically begin shortly after an exposure occurs, but may be delayed for hours in a few cases. A history of pre-existing allergies to animals (including pets) and multiple other allergens (dust, pollens, grasses) increases the chances that a lab animal allergy might develop without proper protection (such as a respirator).

Working in well-ventilated areas, using local exhaust systems and housing animals in filter-top cages will help minimize exposure to animal allergens. The use of gloves, lab coat or coveralls, and hair covers is also important to minimize exposure.

Reference link: Preventing Asthma in Animal Handlers - (NIOSH)
http://www.cdc.gov/niosh/docs/97-116/

Zoonotic Disease Risk: Zoonotic diseases are infectious diseases that can be passed from animals to humans. The risk of contracting a zoonotic disease can depend on many factors. Some of these include: personnel training, use of protective equipment, facilities maintenance, animal health status, and human health status.

If you work with rodents or rabbits: Practically all of the smaller laboratory animals (e.g., mice, rats, rabbits, hamsters, guinea pigs) are procured from vendors having animal colonies free of human and most animal pathogens. Thus the chance of contracting an infectious disease from a laboratory bred rodent or rabbit is very small. The most significant hazard associated with these animals is the possibility of developing or exacerbating an allergy or being bitten.

If you work with reptiles, amphibians, or fish: Reptiles, especially turtles, may be carriers of Salmonella sp. Amphibians and reptiles may also carry leptospirosis and atypical tuberculosis. Aquarium water can also transmit disease. Transmission can be avoided by the use of protective clothing (including gloves) and good hygiene.

The following web sites list information on zoonotic diseases:

http://www.absa.org/pdf/ZoonoticFactSheet.pdf - OSHA Alliance Program with ABSA
http://www.cdc.gov/healthypets - Centers for Disease Control and Prevention

Exposure to chemicals, medications, latex, feed or other materials used in animal husbandry or animal research: Exposure to these items may pose a risk for some individuals. All handlers should be aware of possible risks associated with these agents.

Refer to Occupational Health and Safety in the Care and Use of Research Animals book for additional information.

F. GENERAL HEALTH INFORMATION

1. **If you are immunocompromised** due to treatment of certain diseases or as a result of chronic viral illness, special considerations may need to be made for your safety. You are encouraged to confidentially discuss your condition with the occupational health physician or your personal physician.

2. **If you are pregnant or actively planning a family** while working with animals, certain precautions may need to be taken during your pregnancy. You are encouraged to discuss any concerns with the occupational health physician or your personal physician.

3. **Bites and scratches**: It is important that you report all bite wounds and scratches to your supervisor. Wounds should be cleansed immediately before seeking treatment. Appropriate care should be taken to prevent infection.

4. **Ergonomics**: Animal care is a physical job. It is important to perform tasks in a manner to prevent injury. When lifting, bend your knees, not your back, and get help with loads that are heavier than you can handle. If you are performing a repetitive task, take short breaks to allow yourself to stretch or perform some other activity that will use a different set of muscles. If you are concerned about a physical aspect of your job, consult with your supervisor. It may be possible to modify the work environment or provide equipment that will assist you.

SACRAMENTO STATE
Environmental Health and Safety

Appendix A: Zoonoses Fact Sheet

	Description	Animals Associated	Transmission Routes	Incubation Time	Symptoms	Prevention
Campylobacteriosis	Caused by the bacterium Campylobacter commonly found in the feces of infected humans and animals.	Rodents, Dogs, Cats, Birds, Ferrets	Ingestion of contaminated food, fecal to oral	3 – 5 days	Diarrhea with or without blood, fever, nausea, vomiting, abdominal pain, headache, muscle pain	Protective clothing, personal hygiene, sanitation
Erysipelothrix Rhusiopathiae	The major reservoir of E. Rhusiopathiae is generally believed to be domestic swine, but rodents and birds are also frequently infected. The organism causes no known disease in fish but can grow and persist for long periods of time in the mucoid exterior slime of these animals.	Pigs, rodents, birds, and fish	Contact: scratches, infected water, direct; Ingestion	1 – 7 days	severe pain (described as burning, throbbing, or itching) in region of infection, swelling and lesions at site of contact, ingestion may cause a systemic infection, fever, lymphangiitis and lymphadenopathy	Use PPE. Personal hygiene. Cover wounds while attending to animals.
Hantavirus	This virus can be found in infected mice's urine, droppings or saliva. The virus can get airborne and a person can get infected by simply inhaling the virus.	Rodents especially wild mice	Inhalation, Ingestion	1 – 6 weeks	Fever, chills, weakness, severe muscle aches, headaches, light headedness, dizziness, nausea, vomiting, and diarrhea. Severe cases: coughing with shortness of breath and low blood pressure	Isolation or elimination of infected rodents and tissues before introduction to lab animal population, PPE, avoiding places with mice nesting, etc
Leptospirosis	Caused by the bacterium Leptospira, it can be found in infected urine and can contaminate water, food or soil. In rare cases, death has occurred from infection.	Cattle, pigs, horses, dogs, rodents, wild animals	Exposure to infected urine, swallowing contaminated food	2 days to 4 weeks	Some may have no symptoms; others will have high fever, severe headache, chills, muscle aches, vomiting, jaundice, red eyes, abdominal pain, diarrhea, and rash. If not treated, may develop: kidney damage, meningitis, liver failure, respiratory distress.	Effective control of infection in the lab, use of gloves and wearing protective clothing
Lymphocytic Choriomeningitis Virus (LCMV)	This virus is carried by rodents and can be passed to humans	Rodents especially wild ones	Exposure to infected rodent urine, droppings saliva or nesting materials	1 – 2 weeks	Similar to the flu including, fever, stiff neck, malaise, lack of appetite, muscle aches, headache, nausea, vomiting	Serological surveillance, PPE, personal hygiene, etc
Mycobacterium Marinum	Commonly known as fish tank granuloma, infections of the skin from exposure to infected aquarium water may cause a skin lesion and can often cause deeper tissue damage in immunosupressed persons.	Fish and reptiles	Contact with infected aquarium water	2 – 3 weeks	Swelling of the site with tenderness and warmth	Use gloves while cleaning tanks, being careful of sharps and sharp parts of animals, cover wounds, wash hands
Plague	The plague is caused by a bacterium called Yersinia Pestis and known to transmit from rodents to humans by infected fleas. Bubonic and Pneumonic Plague is the most common forms. Pneumonic plague is much more rare then bubonic plague, but it is more deadly with a 50% survival rate.	Rodents	Transmission from flea bites, inhalation of pneumonic infected droplets	1 – 3 days (pneumonic) to 2 – 6 days (bubonic)	Typical sign: swollen and very tender lymph gland with pain.	Controlling of the introduction of wild animals into the lab
Rabies	Wildlife infections have increased in the US. Be aware of animals acting strangely. If bitten or scratched by a rabid animal, immediately cleanse the wound and go see a doctor	All mammals, especially bats and biting animals	Bites and scratches from infected animals	Usually within 90 days	Bubonic symptoms include: fever, chills, headache, and extreme exhaustion.	Animals brought back to the lab should have thorough history report with rabies vaccine. Pre-exposure immunization should be available to high risk personnel. When out in the field, stay away from animals acting odd. Do not pick up dead animals without proper protective equipment.
Rat Bite Fever (RBF)	Caused by Streptobacillus Moniliformis and Spirillum Minus. This disease is rare in the United States, but known to transfer from pet rats.	Rodents especially rats	Bites, scratches, direct handling of infected rodent, ingestion of contaminated food	2 – 10 days	Pneumonic symptoms include: high fever, cough, bloody sputum and difficulty breathing.	Proper animal handling techniques
Salmonellosis	A disease caused by the bacteria called Salmonella	Humans, Animals, Birds, Reptiles and Fish	Ingestion, direct contact with infected feces	12 – 72 hours	Diarrhea, fever, and abdominal cramps. Severe infections may occur and cause death.	Protective clothing, personal hygiene, sanitation

Get a bite, scratch, illness, or injury?

Health care during business hours

Employees:

Kaiser
2025 Morse Ave
(916) 973-6406

Student Volunteers:

Student Health Center (The Well)
Urgent Care

* * Please bring your OneCard, driver's license or state issued picture ID with you at the time of your visit * *

Health care during non-business hours

Employees:

Kaiser Emergency Care
2025 Morse Ave
(916) 973-6406

Student Volunteers:

Off-campus Urgent Care

- MDStat: 484 Howe Avenue, Sacramento, CA
  (916) 678-5280
- MED7: 4156 Manzanita Avenue, Carmichael, CA
  (916) 488-6337
- Sutter Express Care: 980 Florin Road, Sacramento, CA
  1-800-972-5547

Risk Assessment From

Occupational Health and Safety for Individuals with Animal Contact
Institutional Animal Care and Use Committee
Sacramento State

INSTRUCTIONS: Supervisor and employee should complete and sign the form; PI/Supervisor retains form.

Employee Name (last, first)	Job Title	Department
Status: Choose One	Facility Location (Bldg, rm. #)	PI/Supervisor Name
On Approved Protocol? No Yes, protocol #	Email/Phone	PI/Supervisor Email/Phone

A. Briefly describe employee's position as it relates to potential exposure to animals:

Click here to enter text.

B. Animal/Tissues/Body Fluids to Which Employee Might Be Exposed

Please identify the level of exposure for any animals that apply to employee's status:

Level 1: Enter animal use area, but no direct contact
Level 2: Handle "unfixed" animal tissues and fluids, but do not conduct procedures on live animals
Level 3: Provide food and water, clean cages, handle, restrain, collect specimens, provide veterinary care, or administer substances to live animals

Level	1	2	3	Level	1	2	3
Laboratory Animals. Specify:	☐	☐	☐	Amphibians (e.g. frog, salamander, etc.)	☐	☐	☐
Wild caught mammals. Specify:	☐	☐	☐	Reptiles	☐	☐	☐
Wild-caught birds. Specify:	☐	☐	☐	Fish	☐	☐	☐
Other. Specify:	☐	☐	☐	Other. Specify:	☐	☐	☐

☐ None of the above apply, go to section E.

C. Health Information: Certain health problems or concerns can increase the health risk associated with animal care/use. If employee has any of the following conditions, s/he should seek consultation from her/his primary health care provider: Environmental allergies, asthma, or chronic skin problems; current pregnancy or anticipated pregnancy in the next year (females only); chronic diseases such as cancer, lupus, rheumatoid arthritis, HIV; work related injury or illness in the past 12 months.

D. Tetanus immunization every 10 years is recommended for all animal care providers and users. If employee has not had a tetanus booster in the past 10 years, s/he should ensure that her/his immunization is current.

_____initial after reading statement

E. Additional Work-Related Health and Safety Information: Does your work involve any of the following?

☐ Heavy lifting (more than 50 lbs.)	☐ Repetitive motion	☐ High temperature equipment
☐ Loud noise(s)	☐ Sharps	☐ Hazardous chemicals
☐ Bio-hazardous agents	☐ Radioactive materials	☐ Zoonoses
☐ Field Study	☐ High concentration of particles (dust, feed)	☐ Other:

F. Employee Acknowledgement:

I have had the opportunity to review this risk assessment with my supervisor/PI. I also have reviewed the requirements of the University *Occupational Safety and Health for Personnel Involved in Animal Care and/or Use* program and agree to comply with the requirements.

Employee Signature_____Date_____

G. PI/Supervisor Signature_____Date_____

Medical Evaluation Form

Occupational Health and Safety for Individuals with Animal Contact
Institutional Animal Care and Use Committee
Sacramento State

This ***confidential*** questionnaire requests important work/training and medical information from persons who may come in direct contact with animals at Sacramento State. Please bring this form AND your Risk Assessment form to your medical evaluation.

Personnel Information

Name:	Email:
Job Title:	Supervisor/ Advisor or Instructor:

Laboratory Animal Use

Please describe your work/study tasks at SFSU with animals or their tissues. If not known please request this information from your hiring supervisor/instructor:		
How many years (total) have you worked with or around lab animals?		
Do you use or wear any of the following personal protection in your work with animals?	Yes	No
Safety glasses/goggles	☐	☐
Lab coat/coveralls	☐	☐
Gloves	☐	☐
Hair cover	☐	☐
Mask (surgical type)	☐	☐
Respirator (N95 type or other)	☐	☐

Animal Exposure Inventory (*Check ALL* that apply)

	Average Frequency of Contact			Types of Exposure			
Animal Exposure (Include work, home, hobby)	Daily	Weekly	Monthly	Hours per day or week	Live Animals	Dead Animals / Tissues	Dirty Bedding/ Cage Changing
RATS							
MICE							
RABBITS							
REPTILES (List):							
FROGS XENOPUS							
FISH							
OTHER (List):							

Immunizations

Check ALL previous immunizations you have had and give the year you last had them:

IMMUNIZATION	YEAR
Tetanus (recommended every ten years)	
Rabies (three shots required) Number of shots _____	
Other (list:_____)	

Environmental Allergies / Asthma

Do you have or have you EVER had:

	Yes	No	Don't Know
Seasonal allergies / Hayfever (Sneezing, runny nose, itchy eyes)	☐	☐	☐
Skin eczema/Hives (Allergic skin rash)	☐	☐	☐
Asthma (Attacks of wheezing, shortness of breath, cough)	☐	☐	☐
Anaphylaxis (Severe shock-like allergic reaction)	☐	☐	☐
An allergy to any animal(s)	☐	☐	☐
Allergy symptoms or asthma specifically related to animals that you may work with at Sacramento State?	☐	☐	☐
Allergy testing (skin or blood tests)	☐	☐	☐
Skin problems related to work, glove use (Reactions to latex; dry, cracked skin; rashes to animals)	☐	☐	☐
Allergy symptoms (e.g., sneezing, cough, rash) or illnesses (e.g., infections) as a result of any contact with or being around animals at work or home	☐	☐	☐
Animals at home (indoors)	☐	☐	☐
If Yes is marked above, please explain here:			
List any treatments that you receive to relieve your allergies, including over-the–counter or alternative therapies (e.g., medication, shots):			

Medical Conditions

	Yes	No
Diabetes	☐	☐
Chronic Kidney or Liver Disease	☐	☐
Other Chronic Infection or Immune Disorder	☐	☐
Pregnancy or attempting pregnancy	☐	☐

Other

Please list any other health or workplace concerns not covered by this questionnaire that you would like to confidentially discuss with the clinician:

The above information is true and complete to the best of my knowledge and I am aware that deliberate misrepresentation may jeopardize my health. I understand that this information is confidential and will not be released without my knowledge and written permission.

_____

Signature of Participant Date

FOR CLINICIAN USE ONLY.

1. Form reviewed by: _____ _____
   Clinician Date

2. Participant contacted: ☐ YES ☐ NO _____
   Date

Comments/Recommendations/Referral:

3. Steve Leland, EH&S Director, contacted to clear or not clear student for work with animals (916-278-5174):

   ☐ YES ☐ NO