**Occupational Health and Safety Program**

**for Animal Users (OHSA)**

1. **Introduction**

Federal Regulations mandate that all persons having contact with animals in research be enrolled in the Occupational Health and Safety Program for Animal Users (OHSA). The OHSA is administrated under JSU’s HAZMAT and IACUC Office. The goal of OHSA is to eliminate or control hazards by identifying risks, implementing safety controls and providing training to prevent adverse health effects due to animal contact.

This plan is written in accordance with the *Jackson State University Assurance of Compliance with Public Health Service Policy on Humane Care and Use of Laboratory Animals*. They are fashioned after the guidelines set forth in the *Guide for the Care and Use of Laboratory Animals* (National Research Council) and the *Occupational Health and Safety in the Care and Use of Research Animals* guidebook.

Many unique risks are associated with exposure to research and teaching animals including animal allergies, scratches, bites, zoonoses, as well as chemical, biological, and radiological hazards. Health and safety professionals from across campus work together to provide participants with a comprehensive OHSA program which address these risks.

1. **Program Requirements**

To comply with the Public Health Service Policy on Humane Care and Use of Laboratory Animals, all persons with direct or indirect exposure to research and teaching animals **must** be enrolled in the Occupational Health and Safety Program.

**III. Participants Include**:

* Principal Investigators
* Research Staff
* Animal Care Staff
* Student Employees using or caring for animals
* Veterinarians

**IV. Principal Investigators Responsibilities**

* Ensure all employees, students, and visitors under their supervision who have animal related exposures complete the web based occupational health and safety training program for personnel with animal related exposure.
* Ensure all individuals under their supervision who have direct animal contact complete and submit the medical surveillance questionnaire prior to animal related exposures.
* Ensure health assessments and safety risks associated with their research projects and implementing appropriate standard operating procedures, equipment, and safety training
* Ensure all individuals under their supervision attend all scheduled medical appointments.
* Investigate all accidents, injuries, illnesses, or near-misses (including, but not limited to, animal bites and scratches) and ensure the completion and submission of the university Injury/Illness & Incident Report Form.
* Ensure all individuals under their supervision wear proper PPE and have been trained on all the potential hazards of the duties they are asked to perform.
* Inform EHS when commissioning new research or when there are changes in materials, processes, equipment, laboratory design, or when a job duty changes such that a new animal related exposure exists.
* Inform individuals under their supervision when process, facility, or equipment changes occur.
* Ensure, through their department, division, unit, or college, that all medical service expenses incurred as a result of this policy by individuals under their supervision are paid.

**V. Research Staff, Animal Care Staff and Students Responsibilities**

* Attend all required training as directed by their manager, supervisor, or Principal Investigator.
* If performing tasks resulting in direct animal contact complete and submit the Medical Surveillance Questionnaire and update it as changes occur relating to any medical condition or history.
* Report to their supervisor and EHS any health conditions or symptoms that may be the result of an animal related exposure, or any illnesses/injuries, or near miss (including, but not limited to, animal bites and scratches) occurring while performing their duties.
* Compliance with all animal related and laboratory safety policies, including, but not limited to, the wearing and proper use of PPE.
* Become familiar with all standard operating procedures for safety, health, emergency situations.

**VI. Attending Veterinarian Responsibilities**

* Aids PIs in the formulation of their research projects, helping to identify potential risks and hazards
* Suggests alternatives to dangerous procedures, where possible
* Refers PIs to other committees for protocol review
* Alerts PIs to training requirements
* Maintains a copy of emergency contact list for animal facilities

**VII. Hazard and Risk Assessment (Identification of Hazards)**

**Hazard Categories**

The general hazards associated with the care and use of animals can be divided into five broad categories.

**a. Bites and Scratches**

Bites and scratches are hazards that are ever-present for personnel who work directly with laboratory animals and related equipment. Employees must be properly trained in animal handling and general restraint techniques as they relate to the particular animal(s) being used. In addition, personnel should be made aware of environmental factors, as well as factors intrinsic to the animal that can lead to a traumatic event in a research animal facility. Such factors include sounds, smells, and entrance into an animal’s flight zone by a human or another animal.

**b. Allergens**

Allergic reactions to animals are among the most common conditions affecting the health of workers involved in the care and use of research animals. The risk of developing allergy depends on parameters such as species, facility, ventilation and the employee’s “base-line” health status. Personnel must be informed upon employment or upon visiting the animal facility of the symptoms, the routes of exposure, the risk factors, and the preventative measures to be taken as they relate to laboratory animal allergy (LAA).

**c. Zoonoses**

Zoonotic diseases (infectious agents known to cause human health concerns when transferred from animals to man) are most commonly acquired through a bite, a scratch, through contact or inhalation of aerosols droplets, or through exposure to mucosal secretions, blood, feces or urine from infected animals. Zoonotic diseases can be prevented through a variety of means, including use of protective clothing, prevention of bites and scratches, proper sharps handling procedures, medical surveillance and occupational medicine programs and treatment. In addition, personnel should be familiar with zoonotic diseases present in the species they work with and the means of

preventing them.

**d. Protocol Related Hazards**

If specific hazards are associated with the particular animal use protocol affected personnel must be made aware of them before the project begins. Such hazards include but are not limited to: biological hazards, chemical hazards, ionizing radiation, and non-ionizing radiation.

**e. Laboratory Inherent Hazards**

Laboratory inherent hazards include ergonomic hazards, slips and falls, electrical safety hazards, etc. Personnel must be made aware of these hazards prior to the initiation of a particular duty or when the work conditions change.

**VIII. Laboratory Safety Information**

**A. Exposure Control**

There are many methods that should be utilized to reduce or eliminate personnel exposure to hazards when working with laboratory animals.

**B. Universal Precautions**

Universal precautions shall be observed at JSU in order to prevent contact with zoonotic diseases or biological hazards that are protocol-related. This includes providing barriers between the individual and infectious material. All animals and their tissues, blood, and other potentially infectious material shall be considered as if infectious and individuals covered under this plan shall adhere to infectious-control precautions to minimize the risk of zoonotic disease and biological hazards that are protocol related.

**C. Engineering controls and equipment**

Engineering controls and equipment shall be utilized to eliminate or minimize exposure to employees at the university’s facilities. Where potential for occupational exposure still exists after implementation of these controls, personal protective equipment (PPE) shall be utilized. General controls are applicable to all work areas and include: accessible hand washing facilities, controlled disposal of contaminated sharps, separate storage for food/drink and infectious material and protected transport of properly labeled animal specimens. Specific controls will be determined by EHS or individual university departments or centers.

**1. General Controls**

* *Hand washing facilities*: Facilities shall be available to employees who could incur exposure to animals and other potentially infectious materials (OPIM). These facilities must be readily accessible after exposure. Hand washing facilities must be located in or near the room where the potential for exposure exists. After removal of personal protective gloves, employees shall wash hands and any other potentially contaminated skin area immediately, or as soon as feasible, with soap and water.
* *Sharps containers*: Individuals disposing of sharps are responsible to monitor the capacity of the container and ensure that it is replaced when it is two-thirds full. The container is to be closed when not in use and securely closed for final disposal as biohazardous waste. Only approved sharps containers as determined by EHS are to be utilized.
* *First Aid Kits*: First aid kits shall be available to employees who could incur exposure to animals and OPIM. These kits must be readily accessible after exposure. First aid kits must be located in or near the room or suite where the potential for exposure exists.

**2. Specific Controls**

*Substitution of Bedding Materials*: Substituting conventional bedding materials with alternative materials can greatly reduce allergen exposure, especially during cage dumping and cleaning. Absorbent noncontact pads as well as corncob bedding have been shown to reduce airborne allergen concentrations and should be used as an alternative to replace conventional bedding materials when possible.

**3. Work Practices and Procedures**

Work practices and procedures should be designed to eliminate or minimize potential exposure to zoonotic agents, and/or protocol related hazards at the university’s facilities. Where potential for occupational exposure still exists after implementation of these controls and procedures, personal protective equipment (PPE) shall also be utilized.

**4. Work Area Restrictions:**

In work areas where there is a reasonable likelihood of exposure to animals, employees should comply with the following restrictions.

***General*:**

* No eating, drinking, applying cosmetics or lip balm, smoking, or handling contact lenses
* No storing personal food and beverages in refrigerators, freezers, shelves, cabinets, or on counter tops or bench tops where animal blood or OPIM are present. All areas of storage for biohazards shall be labeled with the universal biohazard symbol.
* No mouth pipetting. Automatic or manual pipetting devices shall be provided by the department or center.
* Conduct all procedures in a manner that minimizes splashing, spraying, splattering, and aerosolizing of blood or OPIM.

***Research Laboratories*:**

* All laboratory areas possessing naturally or experimentally infected animals, their tissue or OPIM will have biohazard signs at the entrance to the work area. The sign will have the universal biohazard symbol with the following information: (1) risk group of the infectious agent, (2) special requirements for entering the area, (3) name and telephone number of a responsible person.
* Laboratory doors that open to corridors or public areas shall be kept closed when work with animals, their tissue or OPIM are in progress
* Contact with animals within the work area shall be restricted to authorized personnel. Only personnel trained on the potential hazards of animal use and who comply with the entry and exit procedures shall have contact with animals within the work area.
* Vacuum lines used to aspirate biological material shall be protected with liquid disinfectant traps and HEPA filters or antisiphon devices. The department or center should check these protective devices twice a year and replace them as necessary.
* Each laboratory shall contain an eye wash station.

***Needles*:**

* Contaminated needles and other contaminated sharps shall not be bent, recapped, removed, sheared or purposely broken. If no alternative is feasible, then the recapping or removal of the needle must be accomplished using a mechanical device or the one-handed technique.

***Containers for Reusable Sharps*:**

* Immediately, or as soon as feasible, place contaminated sharps into appropriate containers. Appropriate containers are puncture resistant, labeled with a biohazard symbol, and are leak proof on the sides and bottom. Containers should be placed at the point where the sharp will be used.

***Specimen Containers*:**

* Specimens of blood or OPIM will be placed in a container that prevents leakage during collection, handling, processing, storage, and transport of the specimens. The container used for this purpose will be labeled in accordance with requirements of the OSHA standard as follows: ***A fluorescent orange or orange-red biohazard label shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal***. Any specimens that could puncture a primary container will be placed within a secondary container that is puncture resistant. If outside contamination of the primary container occurs, the primary container shall be placed within a secondary container that prevents leakage during the handling, processing, storage, and transport of the specimen.

***Contaminated Equipment*:**

* Equipment that has become potentially contaminated with blood or OPIM shall be decontaminated as necessary unless the decontamination of the equipment is not feasible. If decontamination of equipment or portions thereof is not feasible, then readily observable labels shall be attached to the equipment which remains contaminated. The labels shall state the location where contamination remains. The equipment should be wrapped or contained to prevent exposure to contaminants.

***Personal Protective Equipment*:**

* All personal protective equipment shall be removed before leaving the work area and stored near the entrance to the work area. All garments that are penetrated by blood or OPIM shall be removed immediately or as soon as feasible. It shall then be placed in an appropriately designated container or area for storage, washing, decontamination, or disposal. Employees must not wear or take home personal protective clothing that is visibly contaminated or thought to be contaminated with blood or OPIM. After removal of personal protective equipment, employees shall wash hands and any other potentially contaminated skin area immediately or as soon as feasible with soap and water.

***Housekeeping*:**

* All work areas shall be maintained in a clean and sanitary condition.

***Disinfection:***

* All contaminated work surfaces will be decontaminated after completion of procedures and immediately or as soon as feasible after any spill of blood or OPIM, as well as at the end of the work shift if the surface may have been contaminated since the last cleaning. The disinfecting agent is selected based on the area or substance to be decontaminated as well as the suspected agent to be destroyed. Information concerning utility and selection of disinfectants may be obtained by visiting the EPA Pesticides: Regulating pesticides at: <http://www.epa.gov/pesticides/about/index.htm>. The department or center shall ensure that all bins, pails, and similar receptacles are inspected and decontaminated on at least a monthly basis.

***Broken Glassware*:**

* Broken glassware which may be contaminated will not be picked up directly with the hands. A mechanical means will be used to pick up glassware. Large pieces are to be picked up with tongs or forceps and small pieces are to be swept into a dust pan with a dust broom designated for this use only. Broken glassware shall be disposed of into an appropriately labeled sharps container or an appropriate puncture-resistant alterative.

***Infectious Waste Determination*:**

The following are deemed to be regulated infectious waste likely to be generated at the university:

* *Cultures and stocks of infectious agents*: includes (1) waste from the production of biological agents, (2) discarded live and attenuated vaccines, and (3) culture dishes and devices used to inoculate and mix cultures
* *Pathological wastes*: includes animal carcasses and tissues or body parts removed during minor surgical procedures.
* *Animal blood, blood products and body fluid waste*: includes (1) items saturated or wet with animal blood, (2) items caked with dried animal blood, (3) wastes contaminated by body fluids, (4) specimens of body fluids and their containers.
* *Used sharps*: includes (1) sharps used in animal care or treatment, including hypodermic needles, syringes (with or without attached needle), (2) Pasteur pipettes, (3) scalpel blades, (4) glass blood vials, (5) needles with attached tubing and glass culture plates, (6) broken or unbroken glassware which were in contact with body fluids, including slides and cover slips, (7) unused sharps, including hypodermic, suture needles, syringes, and scalpel blades.
* *All materials contaminated with blood, excretion, exudates, or secretions*: includes (1) gloves, (2) dressings, (3) Q-tips, and (4) cytobrushes
* *Discarded medical equipment and parts that were in contact with infectious agents.*

***Infectious Waste Disposal*:**

* Jackson State University generates solid and liquid animal and infectious waste. Prior to the commencement of the generation of animal and infectious waste, generators must request proper biohazard storage and disposal containers from EHS as well as training in the proper disposal of these materials. Please refer to the university Biological Safety Plan for more information.

***Laundry Procedures*:**

* Laundry contaminated with blood or OPIM will be handled as little as possible. Such laundry will be placed in 3-mil red polyethylene biohazard bags at the location where it was used or directly in the washing machine. Such laundry will not be sorted or rinsed in the area of use. All employees who handle contaminated laundry will utilize personal protective equipment to prevent contact with blood or OPIM.

**2. Personal Protective Equipment:**

Personal protective equipment shall be provided by the department or center and should be utilized. The equipment will be cleaned, laundered, and disposed of by the department or center at no cost to the employees. Examples of such equipment includes, yet is not limited to, gloves, gowns, face shields or protective eyewear with side shields. Appropriate protective equipment functionally must:

* *Prevent passage* of blood or OPIM through to employee’s clothing, skin, eyes, mouth, or mucous membranes under normal conditions of use and for the duration of time that the protective equipment will be used. *Be available in appropriate sizes that are readily accessible* at the work area or issued to the employees. Hypoallergenic gloves or other similar alternate shall be readily accessible to employees who are allergic to the gloves normally provided by the department or center.
* *Be in working condition* with repair or replacement as needed to maintain equipment effectiveness at no cost to the employee. Respiratory protection may be indicated if it is warranted by a risk assessment and/or if employees develop or are at risk of developing a laboratory animal allergy.

**IX. Medical Evaluation and Preventive Medicine for Personnel**

**a.** **Program Enrollment**

Program enrollment is done by completing the [OHSA Training](http://portal.research.illinois.edu/)  and the [Animal Care and Use Risk Assessment Form](http://portal.research.illinois.edu/). The risk assessment form will help evaluate the possible health risks due to animal exposures and occupational hazards. Risk Assessments Forms must be updated if exposures have changed due to change in research and/or employment. Persons whom have not completed these requirements will not be allowed to use or care for animals or perform work in animal facilities.

**X. Facilities, Procedure and Monitoring (Surveillance)**

**Responsibilities**

Research staff with animal contact is responsible to submit updated enrollment forms anytime there is a change in work exposures, animal contact, or health status. Principal investigators (PIs) are responsible for ensuring that faculty, staff, and students working in their research space enroll in the OHSA as required, complete required medical evaluations, recommend immunizations and implement work restrictions, if applicable.

**PIs are responsible** for assessing health and safety risks associated with their research projects and implementing appropriate standard operating procedures, equipment, and safety training. Consult with HAZMAT (601) 979-4315, regarding:

* Facilities design and maintenance
* Research design and procedures
* Hazardous materials involved

**Surveillance Program**

The requirements of the Medical Surveillance Program are grouped into two basic categories described below:

1. Preventive

The key requirements and the primary responsible parties are summarized below:

* 1. Policies and provisions for identifying and evaluating individuals at risk. The risk assessment is performed by the IACUC and IBC during the review of the proposed research projects.
  2. Provide results and comprehensive summaries of findings, clearances and recommendations to persons at risk as necessary.
  3. Training and consultation of individuals at risk, which is conducted by Environmental Health and Safety (EHS).
  4. Maintaining vigilance for the recognition of potential exposures and identifying potentially exposed individuals which is done by the at risk individuals.

2. Post-Exposure

The post-exposure program is intended to rapidly provide the necessary care for any potentially exposed (presumptive or actual) individuals. Provide immediate and appropriate medical response to an accidental occupational exposure or presumptive Laboratory-Acquired Infection (LAI) are important in preventing the onset of disease and providing timely therapeutics if appropriate**.**

**XI. Emergency Procedures**

Reporting Work Place Incidents, Injuries, Illnesses, or Near Misses

To promote a safe work environment, all work related near misses, incidents, injuries, illnesses and exposures will be *reported immediately or within 24 hours by the employee to their immediate* *supervisor or next person in charge at the time of injury, and the Safety Office*.

When a work related incident/injury/illness/exposure occurs, whether medical attention is needed or not, the following steps must be followed:

1. Assess the injury. Is medical treatment needed, or is first aid adequate? If it is an

emergency, call Campus Police 601-979-2580.

1. If non-emergency medical care during regular business hours is required, seek treatment at the Jackson State University Health Center. If it is after hours or if you are out of town, seek medical attention at the nearest medical facility.
2. Immediately after you have received medical treatment, or within 24 hours, you must bring the Workers’ Compensation First Report of Injury form (which you would have completed at the Designated Medical Provider’s office) to the Risk Manager. All other Workers’ Compensation forms required for your injury will also need to be completed at this time.
3. Complete the JSU incident report for every incident and fax this report to the Safety Office (601-979-2526) within 24 hours. It is a requirement that incident reports be completed and submitted to the Safety Office immediately, no matter if the incident requires medical attention or not.
4. The Supervisor is required to assess the event/incident for immediate hazards and conduct an investigation. The Supervisor must identify and document corrective actions to prevent similar incidents from occurring again.
5. The injured individual is required to follow all medical restrictions, 24 hours a day, 7 days a week.
6. It is the responsibility of the injured worker to communicate with the Risk Manager (979-1860) and his or her Supervisor, so as to keep them informed of any referrals, restrictions and medical visits.