

## Medical Monitoring for Vertebrate Animal Users

The Public Health Service Policy on Humane Care and Use of Laboratory Animals (under authority of the Health Research Extension Act of 1985) requires that each university receiving federal support for research involving vertebrate animals have a Medical Monitoring Program for personnel who either work in animal facilities or have substantial animal contact. In accordance with the National Research Council's *Guide for the Care and Use of Laboratory Animals* and *Occupational Health and Safety in the Care and Use of Research Animals* as well as other documents, Florida State University (FSU) has developed a Medical Monitoring Program for Vertebrate Animal Exposure (MMPVAE).

The purpose of the program is to ensure individuals are aware of possible hazards while working with or in the presence of laboratory animals. The program is designed to prevent, monitor, and reduce diseases transmitted from animals to man (zoonotic diseases). In addition, educational programs have been established to educate personnel about zoonotic diseases, personal hygiene, and other related issues.

The University has implemented this medical monitoring program for vertebrate animal exposure. The program is a result of the University's desire to meet or exceed health and safety requirements established by the National Institutes of Health/National Research Council (NIH/NRC), and is designed to protect individuals working with vertebrate animals. Such individuals are evaluated by an occupational health physician with respect to the type and extent of his/her animal contact, and are advised on the inherent risks involved with the animal research and the recommended medical services in an effort to provide a healthy and safe work environment.

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### **Enrollment**

**Enrollment into the medical monitoring program is initiated by completing the "MMPVAE enrollment and risk assessment form [[doc](#)] [[pdf](#)]" and submitting it to EH&S. The information provided will be evaluated by the occupational health physician to determine possible medical monitoring services that may be recommended to the individual.**

Faculty, staff, students and researchers having animal contact are required to be enrolled in the FSU Medical Monitoring Program for Vertebrate Animal Exposure (MMPVAE). In addition, staff members that work in animal facilities are required to be enrolled. Departments with classroom projects or educational programs with vertebrate animal contact will need to submit a description of the type of contact associated with their projects or programs to the [Biological Safety](#) Office (BSO). Based on the information submitted, the BSO and the Occupational Health Physician will determine whether individuals participating in these programs and projects will be required to enroll in the MMPVAE.

Visiting faculty, staff, students and researchers that have vertebrate animal contact must provide proof of current participation in a similar program at their host institution. Should they be unable to provide such documentation, they will be required to enroll in the FSU MMPVAE. Medical monitoring procedures will be determined based on the provided information. Note that in order to avoid delays and access to animals at FSU, proof of other provisions or enrollment in the FSU MMPVAE should be accomplished in advance of the scheduled visiting dates at FSU.

Directed Individual Study Students and student volunteers should also enroll in the MMPVAE. Medical monitoring procedures for DIS and volunteers are covered under their University student health plan. Students should contact [University Health Services](#) to schedule an appointment to evaluate potential medical implications associated with their exposure to research animals.

**Individuals that have changes in health status, animal species contact, or type of animal contact should notify [Biological Safety](#) in order to update their MMPVAE assessment. All individuals will be required to re-enroll once every three years for an updated medical assessment.**

### **Function of Responsible Parties**

#### **Animal Care and Use Committee (ACUC)**

The FSU Animal Care and Use Committee (ACUC) assists in the identification of personnel with animal contact as well as with identification of potential hazards associated with proposed animal research. The ACUC interacts with other committees and FSU administrative personnel to ensure that all animal work is performed in a manner that will protect personnel working in or around animals at FSU. The ACUC also monitors compliance with established procedures during semi-annual inspections.

#### **The Biological Safety Office**

The [Biological Safety](#) Office (BSO) coordinates with the ACUC, Laboratory Animal Resources (LAR), individuals who have research animal contact, and the contracted occupational health physician. This office processes the "Enrollment and Risk Assessment Form" [[doc](#)] or [[pdf](#)], issues the "Medical Monitoring Packet", and maintains the medical monitoring database. Questions concerning administration of the Medical Monitoring Program for Vertebrate Animal Exposure (MMPVAE) should be directed to the [Biological Safety](#) Office.

#### **MMPVAE Enrollment and Risk Assessment Form**

This form is completed by individuals who will have contact with research animals. This form asks individuals about the type of animal contact that they have, duration of animal contact, and any additional information relating to animal contact. This form is returned to [Biological Safety](#) to be forwarded to the occupational health physician for a risk assessment. Copies of the form can be downloaded in [[doc](#)] or [[pdf](#)].

#### **Individuals with Animal Contact**

Individuals who will have contact with FSU research animals, will need to complete the "MMPVAE Enrollment and Risk Assessment Form" [[doc](#)] or [[pdf](#)] and forward it to the [Biological Safety](#) Office.

#### **Laboratory Animal Resources (LAR)**

LAR is responsible for the training in safe handling protocols for animals, provides technical support regarding medical and clinical directives, and interpretations. Questions regarding veterinary aspects of zoonotic diseases should be directed to the University Veterinarian at 644-4262. When necessary, the question will be routed to the occupational health physician or to experts in the field of animal research.

#### **Occupational Health Physician**

The occupational health physician is the person who establishes the risk assessment as well as providing any additional medical services that are needed for all individuals who will have contact with research animals.

#### **Principal Investigators or Supervisor**

It is the Principal Investigator or supervisor's responsibility to ensure that all individuals working with vertebrate animals are enrolled in the MMPVAE. The Principal Investigator or supervisor must inform the designated ACUC secretary or the [Biological Safety](#) Office of new individuals working with animals.

#### **Identifying Participants**

When an individual becomes associated with a Principal Investigator (PI) or supervisor and will have direct physical contact with laboratory animal(s), the PI or supervisor must notify the ACUC Secretary or the [Biological Safety](#) Office of the name of the individual, and have the individual complete the "[MMPVAE Enrollment and Risk Assessment Form](#)" and forward it to the [Biological Safety](#) Office.

The "MMPVAE Enrollment and Risk Assessment Form" [[doc](#)] or [[pdf](#)] can be found on the EH&S website: <http://www.safety.fsu.edu>. PIs or the individual can also get the form from the Biological Safety Office (BSO) or from the ACUC Secretary. It is important that individuals provide all requested information on the form so the occupational health physician can appropriately evaluate the risk assessment. The BSO can assist individuals working with vertebrate animals in completing the form.

An individual working with vertebrate animals must complete the form, then he/she and the PI/supervisor must both sign the form. Once the completed form is received by the BSO, the individual is "enrolled" in the medical monitoring program. In addition, custodial and maintenance staff working in animal facilities should be identified by zone supervisors to the [Biological Safety](#) Office and should complete the "MMPVAE Enrollment and Risk Assessment Form" [[doc](#)] or [[pdf](#)].

Mail, fax, or hand deliver the completed form to the BSO prior to the individual's initial association with animal(s) or animal facilities. Also note, that whenever a participant uses a different species or experiences changes in their medical status, a new risk assessment form will need to be completed and sent to the [Biological Safety](#) Office.

As a vertebrate animal user, you are required to enroll in the medical monitoring program. In addition, if you are a student, staff, or a researcher employed by the University, this medical screening is provided to you at no cost.

### **Risk Assessment**

The occupational health physician will conduct the risk assessment for individuals working with vertebrate animals. Based on this assessment, individuals will be notified of their risk of injury or illness related to their work with animals at FSU and provided recommendations. The individual may choose to accept or waive any or all recommendations at the time of notification. Enrollees are also afforded the opportunity to request further consultation with the occupational health physician at this time. If an individual declines additional medical assessments and services, he/she will be notified of his/her right for reassessment of risk at any time in the future and the enrollee will be advised to discuss the risks of animal contact when next seen by his/her personal physician.

If the occupational health physician determines that no additional assessments and services are necessary beyond baseline recommendations, any individual who wishes to consult with the occupational health physician about the risks of research animal contact will be authorized to do so.

**Additionally, individuals should contact the [Biological Safety](#) Office to request a reassessment by the occupational health physician if there are changes to animal contact or health status.**

### **Follow-Up Medical Services**

Certain medical services will be repeated on a periodic basis as deemed necessary by the occupational health physician. When an individual working with vertebrate animals is scheduled for such screenings, a "Medical Authorization" form will be sent to the individual working with vertebrate animals to review. The individual should work with the Biological Safety Office in order to schedule an appointment with the occupational health physician to receive any additional medical services recommended.

### **Medical Records**

The occupational health physician will maintain permanent medical records for each vertebrate animal user. Should medical services be necessary, the "The Florida State University Confidentiality of Medical Records of Individuals Participating in the Medical Monitoring Program for Vertebrate Animal Exposure", addressing the confidentiality of records, is included in the "Medical Monitoring Authorization Packet". An individual may request the release of medical information to his/her personal physician by completing an "Authorization to Release Medical Information" form. The form can be obtained by contacting the Biological Safety Office and should be completed, witnessed, and signed by the vertebrate animal user, and returned to occupational health physician for processing.

### **Waiver of Medical Services**

If additional services are advisable, individuals will be given the opportunity to see the occupational health physician. However, if an individual declines the additional medical services, he/she will be notified of his/her right for reassessment of risk at any time in the future and the enrollee will be advised to discuss the risks of animal contact when next seen by his/her personal physician.

### **Termination of Participation**

The Principal Investigator or supervisor must notify the [Biological Safety](#) Office whenever an individual working with vertebrate animals is about to terminate his/her association with the Principal Investigator/supervisor or ceases vertebrate animal contact.

### **Accidents and Illnesses Related to Animal Users**

Individuals should promptly report any allergy symptoms or illness that they believe is occupationally related or any bite or scratch wounds that might result from animal contact to the Principal Investigator/supervisor, LAR or the Biological Safety Office. The Principal Investigator/supervisor, LAR or the Biological Safety Office will then inform the EH&S Risk Management and Workers' Compensation Office of this information. Medical services would then be determined and authorization for treatment would be issued if a recommended by the Worker's Compensation medical provider.

Contact EH&S, Risk and Insurance Services at 644-7684 or 644-7683 or on the web at <http://www.safety.fsu.edu/sections/riskman.php> for procedures on reporting illnesses, bites or scratch wounds that might result from animal contact. A life-threatening injury or illness should be treated at the nearest emergency center, and Risk and Insurance Services should be contacted after the employee's condition is stable.

### **Health History Questionnaire**

If the risk assessment determines that additional assessments and services are necessary beyond baseline recommendations and the individual accepts the additional assessments and services; he/she will be asked to complete an "Occupational History and Health Questionnaire" to help facilitate the occupational health physician's evaluation of the participant. The information generated helps to identify existing conditions that may influence the health of persons with animal contact and, in certain cases, the existence of human disease that could adversely affect the health of certain species of animals. If necessary, additional supplemental health history forms may be used in conjunction with the questionnaire. In addition to the medical questionnaire, an individual's medical history may be requested as well as questions about the following:

#### **Allergies**

Animal care staff and others who handle animals may be sensitized to animal dander or other proteins. Individuals at risk of developing allergies or experiencing the onset of existing allergic reactions include those with preexisting allergies, asthma, seasonal rhinitis or eczema. Individuals with preexisting

allergies or a family history of allergies are encouraged to seek advice from a private physician. Individuals with work-related allergies are encouraged to seek advice from the occupational health physician. Preventing exposure to the allergies may require the use of personal protective equipment such as gowns, gloves, and respiratory protection.

Allergic reactions to animals are among the most common conditions that adversely affect the health of workers involved in the care and use of animals in research. Of the 90,000 laboratory animal workers in the United States, up to 46% develop allergies to laboratory animals. Of those who develop symptoms, more than 10% eventually develop occupational related asthma with symptoms that persist even after exposure ceases. The manifestations of animal allergies, which range from rhinitis and itchy eyes to respiratory distress, have caused more than one third of laboratory animal workers at the National Institutes of Health to lose time from work.

Vertebrate animal users are highly encouraged to review the information relating to animal allergies located at: <http://ilarjournal.oxfordjournals.org/content/42/1/47.abstract>.

### **Tuberculosis (TB)**

It is important that the physicians and the University be made aware of a history of any positive TB tests that one may have had in the past. Tuberculosis can be a serious problem in a nonhuman primate colony. Direct transmission to and from humans can occur. There are currently no studies at FSU involving nonhuman primates.

### **Pregnancy Status and Toxoplasmosis Screening**

Working with hazardous agents, in particular exposure to toxic chemicals, certain anesthetic vapors, and certain species should be avoided, especially during the first trimester of pregnancy. Safety Data Sheets are available at <https://www.safety.fsu.edu/sections/safetydatasheets.php>. All women who are considering pregnancy or who are pregnant should inform their physicians of their employment and agents of possible exposure.

Persons who work with cats should be checked for antibodies against the disease Toxoplasmosis. A "Health Precautions for Pregnant Personnel Working with Animals" information sheet is included with this medical screening packet. There are currently no studies at FSU involving cats.

### **Oral Herpes Simplex (Cold Sores)**

Humans who suffer periodically from cold sores represent a serious threat to some species of non-human primates that are housed from time to time in our facilities. The virus that causes the disease is lethal to some non-human primates. People with active cold sore lesions should avoid contact with non-human primates until their lesions have healed. It is the responsibility of the Principal Investigator to decide if a "no contact" order should be given to the vertebrate animal user with cold sores if he or she is working with non-human primates. This "no contact" order should not adversely affect the employee's terms or conditions of employment. There are currently no studies at FSU involving non-human primates.

### **Impairment of the Immune System**

The risk of contracting a disease from animals is minimal. However, individuals with an impaired immune system, due to medication or disease, may be at significantly greater risk. It is important that the University be apprised of factors such as this that could adversely influence human health.

### **Medical Vaccinations, Screenings, and Examinations**

In order to ensure the health and safety of our vertebrate animal user's, the following medical vaccinations, screening, and/or examinations may be offered based on the recommendation of the occupational health physician following their assessment:

### **Tetanus Vaccination**

Tetanus is caused by a toxin produced by bacteria that is frequently found on surfaces contaminated by dirt and/or the feces of some animals. The organism can gain entrance into the body through bite wounds; puncture wounds caused by sharp objects, or contamination of other deep wounds. Failure to be vaccinated against tetanus could result in severe illness or death.

### **Physical Examination**

The purpose of the physical exam is to detect evidence of disease that could adversely affect workers' ability or safety in carrying out the assignments of their job. A physical exam will help to ensure good health and avoid injury and disease.

### **Tuberculin Skin Test**

Personnel who will have contact to non-human primates should receive a tuberculin skin test and/or a chest x ray at annual intervals. Currently, there are no animals housed at the University that have a significant potential for having tuberculosis. The disease can be transmitted to and from non-human primates and man. The purpose of tuberculin testing is to detect the disease in humans. Undetected tuberculosis in humans can result in severe illness, and can be transmitted to others through close personal contact.

### **Rabies Vaccination**

The rabies vaccine may be given to individuals at a high risk of exposure of rabies to protect them, if exposed. Individuals at a high risk of rabies may include veterinarians, animal control personnel, rabies laboratory workers, cave scientists, and rabies biologics production workers.

### **HBV Screening**

Individuals, who have occupational exposure to human or simian blood, tissue or other potentially infectious materials while working on animal research, will be offered the Hepatitis B vaccination.

### **Q-Fever**

Q-fever is a zoonosis caused by the rickettsia *Coxiella burnetti*. Domestic ungulates such as sheep, cattle and goats usually serve as the reservoir of infection for humans and shed the organism in their urine, feces, and milk. Humans acquire the infection by inhaling infectious aerosols and dusts. A single inhaled organism can cause infection. The clinical features of Q-fever are diverse and may vary from subclinical infection to pneumonia, hepatitis or endocarditis. All enclosed sheep holdings and care facilities should be designated biohazard areas for Q-fever. No unauthorized personnel will be permitted in these restricted areas. There are currently no studies at FSU involving sheep.

### **Preventive Measures**

In order to ensure vertebrate animal users maintain their highest level of health and safety, the following preventive measures are highly encouraged.

### **Personal Hygiene**

There are a number of personal hygiene issues that apply to all workers who are exposed to animals. Eating, drinking, or applying of cosmetics in areas where animals are housed or used is prohibited. All work surfaces should be decontaminated daily and after any animal-related spills or contacts.

Laboratory coats must be worn over street clothes or employees can change into special designated clothing when working with animals. Gloves and masks are required when working with animals. Personal protection should be used appropriately. Most importantly, thorough hand washing must be done after handling the animals and prior to leaving the laboratory or animal facility.

### **Health/Education Information**

Periodic instruction and information about zoonotic diseases (those transmitted from animal to man) will be provided. Instructions will include precautionary procedures available to prevent accidents or contraction of any illness, the proper handling of animals and an overview of the administrative procedures.

Laboratory Animal Resources (LAR) has developed a small collection of materials relating to the diseases of animals that may be transmitted to man. The materials are available to everyone in the program, and those who have an interest in the subject. Contact LAR for a list of informative videos available.

### **Personal Protective Equipment (PPE)**

Appropriate PPE should be provided at no cost to the individual with vertebrate animal contact. Appropriate PPE includes gloves, face shields or masks, eye protection, scrubs, gowns, aprons, laboratory coats, or any other appropriate PPE. The department, laboratory, Principal Investigator, or supervisor is also responsible for cleaning, laundering, disposal and replacement of PPE at no cost to the individual with vertebrate animal contact.

PPE should be used accordingly whenever animals are handled, transported, or restrained, cages are cleaned, or whenever animal contact could occur. For more information on the proper use of PPE, consult the Occupational Health and Safety in the Care and Use of Research Animals guide and the Guide for the Care and Use of Laboratory Animals, published by the National Research Council. Both of these guides are available on line at: <http://www.nap.edu/books/0309052998/html> and [http://www.nap.edu/catalog.php?record\\_id=12910](http://www.nap.edu/catalog.php?record_id=12910).

Failure to use appropriate PPE may increase the chance of being exposed to potentially hazardous materials from animal contact, so the use of proper PPE is highly encouraged and recommended.

### **[Vertebrate Animal Medical Monitoring Flowchart](#)**