



# **FLORIDA ATLANTIC UNIVERSITY**

## **Medical Monitoring Program for Animal Use**

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# Medical Monitoring Program for Animal Use

## Introduction

The National Institutes of Health (NIH) require that each university receiving federal support for research involving vertebrate animals have a Medical Monitoring Program for personnel with animal contact. Following the guidelines of the NIH and the National Research Council (NRC) publication, *Occupational Health and Safety in the Care and Use of Research Animals*, Florida Atlantic University (FAU) has developed a Medical Monitoring Program for Animal Use (MMPAU).

The purpose of the program is to prevent, monitor, and reduce diseases transmitted from animals to humans (zoonotic diseases). In addition, educational programs have been established to educate personnel about zoonotic diseases, personal hygiene, and other related issues.

The program is designed to meet or exceed health and safety requirements established by the NIH/NRC, and protect individuals working with animals. Such individuals are evaluated with respect to the type, and extent of their animal contact, and are advised on the inherent risks involved with animal research and the recommended medical procedures, in an effort to provide a healthy and safe work environment.

## Definitions

**Animal contact:** Defined as direct physical contact with one or more animals used for research or teaching at the University.

**Decontamination:** use of physical or chemical means to remove, inactivate or destroy pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the item or surface is rendered safe for handling, use, or disposal.

**Personal protective equipment (PPE):** special clothing worn by an employee to protect against a hazard. General work clothes (uniforms, pants, shirts, blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

**Zoonotic diseases:** diseases transmitted between animals and humans.

## Eligibility in the MMPAU

All faculty, staff, student and visiting researchers who are working with animals owned or used by FAU are required to be enrolled in the MMPAU. Maintenance and housekeeping staff who perform work in areas where animals are located are also required to be enrolled in the MMPAU.

*Note: Students participating in Directed Independent Study (DIS) and student volunteers are not eligible for medical cost coverage provided by MMPAU and should be covered under their student health plan.*

# **Responsibilities**

## **Environmental Health and Safety**

Environmental Health & Safety (EH&S) administers the MMPAU and establishes administering guidelines, coordinates the activities of the program, and maintains records generated by the program. Specific services provided by EH&S include, but are not limited to familiarizing FAU's departmental and laboratory contact representatives with the MMPAU, identifying eligible participants and assisting the medical provider in determining the type of medical monitoring that each participant should receive, providing the necessary forms used in the MMPAU to the departments, coordinating services provided by consulting physicians to participants, and informing participants of these services. EHS also conducts site visits, and assist the PI in conducting hazard assessments. Questions concerning administration of the MMPAU should be directed to the Environmental Health and Safety Office at 297-3129.

## **Departmental and/or Laboratory Contact**

Each department and/or laboratory will designate a contact person to coordinate between Principal Investigators or supervisors, individual workers, and EH&S. The contact person will notify EH&S of new individuals working with animals and those who have terminated their animal contact. Each department and/or laboratory will inform EH&S of any changes in the designated contact person, his or her phone number and mailing address at FAU.

## **Veterinarian Services**

Veterinarian Services 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 297-4233. When necessary, the question will be routed to the medical services provider or to experts in the field of animal research.

## **Medical Services Provider (MSP)**

MSP's offer professional medical support services for the MMPAU. EH&S has agreements with MSP's who will partner with EH&S to determine the risks associated with animal contact for each individual. The MSP's will provide physical examinations, administer appropriate immunizations, provide treatment for animal related illnesses or injuries, when appropriate, and follow-up services when authorized by the University. The MSP's will also provide a Clearance Form to EHS for each participant who was approved to work with animals.

## **Principal Investigators (PI), Supervisors or Designated Contact Person**

It is the Principal Investigator or supervisor's responsibility to ensure that all individuals working with animals are enrolled in the MMPAU. The Principal Investigator, supervisor, or designated contact person must inform EH&S of new individuals who will begin working with animals and those who no longer

work with animals. The PI will also ensure that a Hazard Assessment form is filled out for each participant in their project.

## **Identifying Participants in the MMPAU**

When an individual becomes associated with a Principal Investigator or supervisor and will have direct physical contact with laboratory animal(s), the Principal Investigator or supervisor must ensure that (1) A Hazard Assessment form is completed and sent to EHS, and (2) a Medical Monitoring Authorization Packet (MMAP) is completed and sent to the Medical service Provider (MSP). The MSP will review the packet and may request the employee come in for further evaluation if necessary. If the employee is cleared to work with animals, the MSP will generate a Clearance Form. Once this Clearance Form is received by the EHS, the individual is "enrolled" in the medical monitoring program. Division of Research will be notified about the participants who have been cleared by the MSP.

The MMAP can be found on the EH&S web site.. EH&S or the Principal Investigator can assist the individual working with animals in completing the MMAP if requested.

It is important to supply all requested information in the MMAP so that the appropriate tests and procedures are offered to the participants. For example, if you work in a room that houses two or more species, you will be exposed to all species. E-mail, mail, fax, or hand-deliver the completed MMAP to the MSP before the individual's initial association with animal(s). Please note, whenever a participant uses a different species, a new Hazard Assessment must be completed and sent to EH&S.

As an animal user, you are highly encouraged to participate in the medical monitoring program and to take advantage of the medical screenings offered. The medical screenings and vaccines are provided to University employees at no cost.

## **Medical Screening**

Individuals working with vertebrate animals will be sent a "Medical Monitoring Authorization Packet". The packet includes the following forms:

- Medical Referral Form
- Initial Health Assessment Questionnaire for Personnel Working with Research Animals and Other Hazards
- Waiver of Medical Services; and,
- Clearance Form.

The "Medical Monitoring Authorization Packet" authorizes the MSP to perform appropriate medical screening procedures. The individual working with animals should submit their MMAP to the MSP either by fax, e-mail or mail or make an in-person appointment with the MSP. The University will be billed directly for the services rendered, so there is no cost to University employees.

## Follow-up Medical Screenings

Certain medical screenings will be repeated on a periodic basis. For example, the TB screening could be done annually if deemed necessary, and a rabies titer may be taken every two years, depending upon the recommendation of the MSP. The individual working with vertebrate animals should make an appointment with the MSP to receive the appropriate medical screening(s). Additionally, every two years a medical reevaluation will be conducted for employees still in the program.

## Records

The MSP will maintain permanent medical records for each animal user. An individual may request a copy of their medical information by completing the necessary forms. Non-medical records will be maintained by EHS.

## Waiver of Medical Procedures

Individuals working with animals can choose to waive any or all medical screenings. The individual may selectively waive a particular medical procedure offered by the MSP or listed on "Waiver of Medical Screening" form found in the "Medical Monitoring Authorization Packet". The form(s) should be completed, and signed by the animal user, and will be maintained by the MSP.

Whether an individual working with animals chooses to waive medical screenings entirely or selectively, an animal user can later decide to participate in those medical services at any time. The animal user should notify EH&S immediately and the appropriate forms will be issued.

## Termination of Animal Use

The Principal Investigator, supervisor, or the designated contact person for MMPAU must notify EH&S whenever an individual working with vertebrate animals is about to terminate his or her association with the Principal Investigator, supervisor, or ceases vertebrate animal contact.

## Accident and Illness Related to Animal Users

Individuals should promptly report any illnesses, bite or scratch wounds that result from animal contact to the Principal Investigator, or supervisor. The Principal Investigator, supervisor, or injured employee must then inform the Workers' Compensation Administrator of this information. Medical services would then be provided as determined by the university's workers' compensation provider. Contact **Workers' Compensation Office** at 297-0319 or on the web at [FAU - Workers' Compensation](#) for procedures on reporting illnesses and injuries.

Where the injury or illness involves **a student** and is animal-use related, the student will be directed to Student Health Services and subsequently to the Occupational Medical Service Provider (MSP) for FAU for initial and follow-up care. Up to two visits (total) post-exposure are authorized at the MSP and subsequent care will be referred to the Students private healthcare provider.

## **Health History Questionnaire**

All individuals working with vertebrate animals who choose to participate in MMPAU will be asked to complete an "Initial Health Assessment Questionnaire for Personnel Working with Research Animals and Other Hazards" to facilitate the MSP's evaluation of the participant. The information generated will help to identify existing conditions that may influence the health of persons with animal contact. If necessary, additional supplemental health history forms may be used by the MSP.

In addition to the Health 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 are encouraged to seek help from a private physician. Individuals with work-related allergies are encouraged to seek advice from the MSP. 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.

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

Toxoplasmosis is a widespread disease of animals and humans. In both, the disease is usually asymptomatic and of no serious consequence. However, the fetus of a pregnant woman is at great risk. Infection during pregnancy may result in miscarriage, stillbirth, or severe disease in newborns. It is thought that an important mode of transmission is by human exposure to oocysts (a form of the infectious agent) in cat feces. There is no practical, simple test to determine which cats may be shedding the organism. As a result, the participant should consider exposure to any cat a potential threat to the pregnant woman. Pregnant researchers are advised to speak to their Principal Investigators or supervisors about working with cats during their pregnancies. All persons, regardless of sex, who normally work with cats, will be offered the opportunity to have their blood checked for antibodies against the disease.

### **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 for animal users to understand this and provide the MSP with any information related to such risk factors.

## **Medical Vaccinations, Screening and Examinations**

In order to ensure animal users' health and safety, the following medical vaccinations, screening and/or examinations may be offered. This list is not exclusive.

### **Tetanus Vaccination**

Tetanus is normally associated with wounds contaminated with dirt or the feces of some animals. All bite wounds carry the risk of tetanus and should be reported to EH&S (refer to Accident and Illness Related to Animal User). If a contaminated wound occurs (including all animal bites or cuts and/or scratches in contact with dirty surfaces) and it has been five or more years since vaccination, a booster may be administered at the time the person is seen for evaluation.

### **Physical Examination**

Individuals who have daily contact with any species located at the University will be offered a physical examination at the time of initial animal association. The physical examination is performed by the MSP. The examination includes obtaining a medical history; examination of the patient; laboratory tests which may be comprised of a dip urinalysis, complete blood count and multi-chemistry blood panel; and evaluation of test and exam results. Note that it is recommended that no eating or drinking occur within a twelve hour period before the examination for the purpose of an accurate analysis of the complete blood count. A physical examination needs to be performed only once unless the Medical Services Provider determines it should be done periodically.

### **Tuberculin Skin Test**

Individuals who have contact with non-human primates may receive a tuberculin skin test and/or a chest x-ray as clinically indicated. Testing is done with the Mantoux (PPD) technique that measures hypersensitivity to tuberculin. The appearance of inflammation at the site of injection is measured to indicate past or present tuberculosis infection.

### **Rabies Vaccination**

Individuals who have contact with any species that might be exposed to rabies or who work in wilderness areas will be offered the rabies vaccination. This is a pre-exposure vaccination consists of a series of three injections given on days 0, 7, and 28. Every two years a rabies titer may be drawn to check for immunity against rabies. A rabies booster will be administered if necessary.

### **Hepatitis B Virus Vaccination**

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. This is a pre-exposure vaccination which consists of a series of three injections given on days 0, 30, and 180. A titer performed after the series is complete can be used to gauge vaccine efficacy. If needed, the series can be performed again as indicated by the MSP.



## **Q-Fever**

Q-fever is a zoonosis caused by the rickettsia *Coxiella burnetti*. Domestic ungulates such as dogs, pigs, 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.

## **Preventive Measures**

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

### **Personal Hygiene**

There are a number of personal hygiene issues that apply to all workers who are exposed to animals. There must be no eating, drinking, or applying of cosmetics in areas where animals are housed. All work surfaces must 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. Personal protection must be used appropriately. Most importantly, thorough hand washing must be done after handling the animals and prior to leaving the laboratory.

### **Education and Training**

Initial training will be provided to all individuals who will use or be exposed to animals. Follow-up training will be provided as needed. For training, contact FAU Division of Research Veterinary Services. Instruction 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 for the MMPAU. EH&S will provide training on all other health and safety topics.

### **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, respirators, hearing protection, 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. Employees who are required to wear respirators must be enrolled in the respiratory protection program.

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 required.

# **APPENDICES**

## **Animal Contact Safety Links**

[Nat'l Academies Press, Occupational Health and Safety in the Care and Use of Research Animals \(1997\), Table of Contents](#)

[Centers for Disease Control and Prevention](#)

[BMBL 5th Edition - Table of Contents](#)

[Proceedings of the 4th National Symposium on Biosafety](#)

[Training Materials - OFFICE OF LABORATORY ANIMAL WELFARE](#)

[ILAR Journal Online, Volume 42\(1\) 2001 Laboratory Animal Allergy](#)

[NIOSH/Asthma in Animal Handlers Alert](#)