

## UAB Biosafety Manual Appendix B

### UAB EMPLOYEE OCCUPATIONAL HEALTH PROGRAM

The UAB Employee Occupational Health Program (Program) is designed to focus on anticipating, recognizing, evaluating, and controlling potential health and safety hazards and environmental factors that may affect the health, comfort, or productivity of the entire research campus community. The program accomplishes these goals through risk assessment, risk management, risk education, and preventive medicine (health maintenance). Medical surveillance is a critical component of effective occupational health programs and involves the evaluation of health risks associated with an individual's exposure to animals and hazardous agents. The initial evaluation establishes a baseline of an individual's health and potential exposure risks and health status. Subsequent biennial periodic reviews and updates are then performed to assess an individual's changing risks. In many cases, an initial evaluation and risk assessment is all that is necessary until an update is required. For some individuals, however, a clinical examination and vaccination(s) may be required as well.

#### A. Eligibility

This program is designed for UAB Employees who:

- Have direct contact with animals, their viable tissues, body fluids, wastes or living quarters. This includes, but is not limited to, Animal Care Staff, Investigators, laboratory staff, and some Maintenance and Environmental Services personnel.
- Work in the laboratory and have direct contact with material of human origin.
- Have direct contact with material capable of causing disease or injury in humans.
- Have direct contact with raw sewage through plumbing activities.
- Are exposed to excessive levels of noise (>85 db).

Individuals not employed by UAB, but who will be conducting work with animals at UAB, must provide proof that their proposed work/potential exposure at UAB along with their medical history has been reviewed by their personal physician. A clearance document indicating the above, along with any work restrictions, must be signed by the physician on his/her office letterhead and provided to UAB Employee Occupational Health along with a copy of the Health Screening Questionnaire prior to being granted access to the animals or the animal facility. Examples of those not included in this UAB Employee Occupational Health program include:

- Non-paid students
- Volunteers
- Individuals from private companies conducting work at UAB
- Visiting Scientists
- UAB Hospital Employees (should be covered by the Hospital Employee Health Program)

#### B. Enrollment

Enrollment is initiated when an individual completes the Initial Health Screening Questionnaire ([http://www.healthsafe.uab.edu/pages/home/occupational\\_health/default.html](http://www.healthsafe.uab.edu/pages/home/occupational_health/default.html)) and submits this form to the Occupational Health Program for review. An individual has successfully met the requirement when s/he is enrolled in the UAB Occupational Health Program and has received either:

- An Employee Health risk assessment notification that indicates no further medical evaluation is necessary or
- An Employee Health risk assessment notification that indicates further medical evaluation is necessary and s/he has received the evaluation and any required interventions such as immunizations.

Individuals are required to update their information whenever they experience a change in health status and whenever their job responsibilities and/or potential exposures change, but at least every other year. This is accomplished by completing and submitting the Health Screening Update Form ([http://www.healthsafe.uab.edu/pages/home/occupational\\_health/default.html](http://www.healthsafe.uab.edu/pages/home/occupational_health/default.html)). An individual has

successfully met the requirement for annual or semi-annual update when s/he has completed and submitted the update form in the UAB Occupational Health Program and has received either:

- A risk assessment notification that indicates no further medical evaluation is necessary or
- A risk assessment notification that indicates further medical evaluation is necessary and s/he has received the evaluation and any required interventions such as immunizations.

### **C. Health Services**

A variety of health services are provided by the UAB Occupational Health Program. Access to and recommendation for these services is based on the health history of the individual and the exposure to any job-related potential hazards.

#### **C.I. Vaccination Programs:**

Depending upon work activities and potential exposures, vaccinations may either be required or recommended for individuals. All required vaccinations must be accepted in order to perform the associated job duties. Employees have the right to refuse any recommended vaccines, but must complete a declination form (INSERT LINK HERE) and return it to the UAB Employee Occupational Health Program for their Occupational Health file.

##### **C.I.a. Hepatitis A Virus (Hep A) Vaccine**

The hepatitis A vaccine is recommended for individuals whose work activities place them in contact with sewage or feces (e.g., plumbers) and those who work with nonhuman primates. A two dose series of injections is recommended for pre-exposure prophylaxis to develop adequate antibodies to hepatitis A infection.

##### **C.I.b. Hepatitis B Virus (Hep B) Vaccine**

The hepatitis B vaccine is highly recommended for individuals whose work activities potentially expose them to infectious materials such as human and non-human primate blood, blood products, body fluids, cells, (established) cell lines, or tissues. This includes lab staff, animal care staff, plumbers, and some facilities and environmental services personnel. A three dose series of injections (0, 1-2, and 4-6 months) is recommended for pre-exposure prophylaxis to develop adequate antibodies to hepatitis B infection.

##### **C.I.c. Hepatitis A/B Vaccine**

If it is recommended that an individual receive both Hep A and Hep B vaccines, a combination vaccine is available and may be recommended. The combination vaccine is a three dose series of injections (0, 1-2, and 4-6 months).

##### **C.I.d. Tetanus Vaccine**

Tetanus (lockjaw, painful spasms of all muscles) is a serious disease caused by a bacterium that enters the body through a cut or wound. All individuals should have knowledge of the date of their most recent tetanus immunizations. It is recommended that all individuals receive a booster dose once every 10 years to maintain protective antibodies against tetanus. Tetanus toxoid injection is often combined with Diphtheria vaccine (Td).

##### **C.I.e. Measles Vaccine**

The measles vaccine (rubeola) is required for individuals born after 1958 (who cannot document evidence of immunization ) who work with non-human primates.

##### **C.I.f. Streptococcus pneumonia Vaccine**

The pneumonia vaccine may be recommended for individuals working with certain strains of *Streptococcus pneumoniae*.

##### **C.I.g. Neisseria meningitidis Vaccine**

It is recommended that employees who work with *Neisseria meningitidis* receive booster vaccinations every five years.

### **C.I.h. Influenza Vaccine**

Since influenza virus can be transmitted to and from non-human primates and ferrets, it is recommended that individuals working with these animals receive annual influenza vaccinations.

### **C.I.i. Other Vaccines**

Other agent-specific vaccines may be required or recommended depending upon proposed work.

## **C.II. Medical Surveillance**

Depending upon work activities and potential exposures, medical surveillance may either be required or recommended for individuals. All required medical surveillance must be accepted in order to perform the associated job duties. Employees have the right to refuse any recommended medical surveillance, but must complete a declination form and return it to the UAB Employee Occupational Health Program for their Occupational Health file.

### **C.II.a. Tuberculosis (TB) Screening**

Certain individuals must provide evidence of a negative TB status annually. This includes those working with or who have exposure to non-human primates as well as individuals conducting research with the organism. Based upon the individual medical history, one of the following methods of surveillance will be recommended or required:

- Screen by administration of the Tuberculin Skin Test (TST) under the skin,
- QuantiFERON-TB blood test
- Chest X-Ray, or
- Completion and submission of an Annual Tuberculosis Screening Questionnaire.

An annual TB screen with TST administered under the skin is the primary method of screening. Once the skin test is performed, employees must return to have TB tests read by designated trained personnel between 48 and 72 hours. *Tests not read within this period must be repeated.*

Employees previously immunized with the BCG vaccine must obtain a baseline PPD skin test.

Individuals who have not previously been screened will initially require a 2-step PPD test. This 2-Step method of testing will help prevent future misinterpretation of a subsequent skin test as a newly acquired TB infection. This “boost phenomenon” can result, because the ability of some people (those who have had a previous TB infection or BCG vaccine) to react to PPD may gradually wane. Individuals requiring a 2-Step screen will be asked to return in 1 to 3 weeks for a second PPD test.

#### Negative results

If a skin test is read as negative, TB infection is not indicated.

#### Positive results

A positive skin test and no symptoms of TB can be interpreted to mean a person has been exposed to the agent that causes TB sometime during his/her life (latent TB infection). It does not indicate that a person has active TB or is contagious. If a skin test is read as positive, the individual will be sent to the Jefferson County Health Department for a chest x-ray to evaluate whether or not TB infection is active.

If the chest x-ray is read as negative (clear), subsequent annual chest x-rays are not routinely needed unless symptoms develop that could be attributed to TB. The employee must complete and submit an Annual Tuberculosis Screening Questionnaire (INSERT LINK) to UAB Employee Occupational Health to screen for active TB symptoms.

Once a positive PPD is determined, annual screening via PPD will no longer be an effective means for determining TB status. Alternative screening via chest X-ray and/or QuantiFERON-TB blood test and the Annual Tuberculosis Screening Questionnaire will thenceforth be used to determine TB status.

**C.II b. Allergy Screening and Evaluation**

The Occupational Health Medical Staff may contact the employee if the individual's medical history and current work description indicate the potential need for allergy evaluation and screening. In certain circumstances, it may be recommended that the individual be referred to an allergist for evaluation.

**C.II c. Measles (Rubeola) Titer**

In certain instances, an employee may be asked to submit for a measles antibody titer.

**C.II d. Hepatitis B Titer**

In certain instances, an employee may be asked to submit for a hepatitis B antibody titer.

**C.III. Additional Components**

**C.III.a Hearing Conservation Program**

The purpose of the UAB Hearing Conservation Program is to help protect UAB employees from hearing loss due to occupational noise exposure. Although UAB attempts to control noise exposures on campus, certain operations and workstations may expose faculty and staff to significant noise levels. All personnel who are regularly exposed to occupational noise levels at or exceeding an 8-hour time-weighted average of 85 dBA will be included in the Hearing Conservation Program. ***This program is currently under development.***

**C.III.b. HAZMAT Physicals**

Employees whose job responsibilities include the role of HAZMAT First Responder will be required to complete a HAZMAT physical. This physical includes examination and testing to:

- Assess changes in the fitness status of the individual,
- Ensure that the individual is "drug free",
- Ensure that the individual is capable of wearing proper personal protective equipment, and
- Determine exposure levels of certain substances.

**D. Cost**

The UAB Employee Occupational Health Program is provided to UAB employees at no cost to the employee. All expenses (vaccinations, examinations, screenings, allergy evaluations, etc.) are covered by UAB.

**E. Compliance**

The Public Health Service (PHS) requires that an animal care and use program include an occupational health program for personnel with substantial animal contact. The UAB Employee Occupational Health Program has been approved by the UAB Institutional Biosafety Committee and the UAB Institutional Animal Care and Use Committee (IACUC) in conjunction with the UAB Department of Occupational Health and Safety and legal counsel. The Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC) will evaluate the program periodically to ensure it is functional.

Personnel should be cognizant of the disease hazards associated with using animals for teaching and research. Measures are taken to ensure that the animals brought into UAB are free of disease. Every effort must be taken to prevent the possible transfer of disease from animals to humans and from humans to animals.

All individuals employed by UAB and listed on protocols involving the use of animals for research purposes must enroll in the UAB Occupational Health Program and must satisfy all mandatory requirements in order to gain access to animals and facilities housing animals. For example, individuals working with non-human

primates must provide documented annual evidence of a negative TB status. All such employees will receive annual notification that they are due for screening. If the employee fails to provide documented evidence, access to the animals and the facilities housing animals will be denied until the status of the individual is known. Refer to Table 1 for a listing of requirements and recommendations based on potential exposures.

For all UAB employees, vaccinations and screenings will be offered based upon job duties and medical history outlined in the Health Screening Questionnaire and Update Forms. If the vaccination or screening is deemed mandatory, the employee must comply with the requirement in order to perform the associated job duties. If the vaccination or screening is recommended, it will be offered to the employee. The employee must either accept or formerly decline in writing (the appropriate form will be supplied by UAB Employee Occupational Health). Costs associated with routine vaccination and/or screening will be covered by the UAB Employee Occupational Health Program. PIs may need to budget within their department or grant funds for special vaccinations not routinely available. If the employee is referred to an allergist for evaluation, the evaluation will be covered by the Program. Any cost associated with medications or treatments recommended by the allergist, however, will be the responsibility of the employee.

All individuals not employed by UAB (students, volunteers, visiting scientists, outside companies) listed on protocols involving the use of animals for research purposes must provide documented evidence of participation in an equivalent plan. The individual must provide the UAB Employee Occupational Health Program proof that their proposed work/potential exposure at UAB along with their medical history has been reviewed by their private physician. A clearance document indicating the above, along with any work restrictions, must be signed by the physician on his/her office letterhead and provided to UAB Employee Occupational Health along with a copy of the Health Screening Questionnaire prior to being granted access to the animals or the animal facility. All non-UAB personnel must comply with all mandatory requirements for access to animals and facilities housing animals. Refer to Table 1 for a listing of requirements and recommendations based on potential exposures.

**Table 1: Vaccination and Screening Requirements and Recommendations**

<b>Work Involves Exposure to</b>	<b>Recommended</b>	<b>Required</b>
Non-Human Primates	Hepatitis A Hepatitis B Current Tetanus Annual Influenza	Annual TB Screen Measles Status
Ferrets	Current Tetanus Annual Influenza	
Cats	Current Tetanus	All women of childbearing age must receive counseling on the inherent hazards associated with toxoplasmosis.
All other animals	Current Tetanus	
Noise above 85 dBA	Current Tetanus	Hearing Conservation Program
HAZMAT First Responders	Current Tetanus	HAZMAT Physical Respiratory Protection Program Drug Screen Applicable Screening Assays
Plumbers	Current Tetanus Hepatitis A Hepatitis B	
Material of Human or Non-Human Primate Origin	Current Tetanus Hepatitis B	
<i>Mycobacterium tuberculosis</i> Research	Current Tetanus	Annual TB Screen
<i>Neisseria meningitidis</i>	Current Tetanus Meningitidis booster every 5 years	
Risk Group 3 Biologic Agents		Entrance to room evaluated on a case-by-case basis