Medical Surveillance for Working with Biological Materials

All employees in research laboratories working with, or who may be exposed to, potentially infectious agents, including recombinant viral vectors, must be aware of signs or symptoms consistent with diseases caused by these agents and their parental strains. In some cases medical evaluations, vaccinations and/or other medical surveillance is required.

### General Awareness

All employees in research laboratories must be aware of signs or symptoms consistent with diseases caused by the agents and materials present in their lab. For example personnel working with recombinant lentiviral vectors should be aware of the signs and symptoms of human immunodeficiency virus (HIV) infection. Personnel exposed to these agents may or may not become sick; however, they may have the potential to transmit them to others outside the laboratory if proper biosafety practices have not been followed. Laboratory-specific training must include hazard communication related to the risks of these agents, anticipated signs/symptoms associated with these agents to facilitate recognition of potential occupational illnesses, and procedures to follow if a potential exposure has occurred.

For certain activities, medical surveillance must be undertaken prior to working with biological agents as designated by the Institutional Biosafety Committee (IBC). Examples include laboratories working with human pathogens, such as HIV or Zika virus, or with agents for which vaccination may offer protection, such as pertussis toxin (PT). In addition, all personnel must be made aware by their supervisors that certain medical conditions increase their risk of potential health problems when working with pathogenic microorganisms and/or animals. These conditions include pregnancy, immunosuppression, animal related allergies, and chronic skin conditions.

All personnel should discuss their work with an Occupational Health physician or their personal physician/health care professional if any of these conditions apply.

Certain types of work may require the use of a respirator to protect against aerosol exposures. In such cases, personnel must get medical clearance from the Department of Occupational Medicine: for most personnel this can be achieved by completing and submitting an OSHA Respirator Medical Evaluation form that can be downloaded [here](#). Once Occupational Medicine has provided clearance, call the Biosafety Officer (801-581-6590) to arrange an appointment for Respirator Fit Testing. A Respiratory Protection Plan must also be submitted to the Biosafety Officer: a template can be found on the OEHS website. Fit testing must be repeated on an annual basis.

### Vaccinations

Personnel may be required by the IBC to be offered vaccinations to protect them from workplace hazards. Examples include the Hepatitis B vaccine for all workers with reasonable expectation of exposure to human blood or other potentially infectious materials (OPIM), which includes human and non-human primate cell lines, including those acquired from commercial sources.
Tdap vaccination, which is highly effective for the prevention of diphtheria, tetanus and pertussis, should be offered to personnel working with PT or handling animals dosed with PT. Vaccine recommendations can be found at [http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/index.html](http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/index.html) and [http://www.cdc.gov/vaccines/hcp/vis/index.html?scid=cs_748](http://www.cdc.gov/vaccines/hcp/vis/index.html?scid=cs_748).

Protective vaccines, if available and appropriate based on workplace hazards, will be provided by the University of Utah at no cost to the employee. In most cases, if there is limited public health concern, employees may choose to decline the recommended vaccinations after understanding their risks. In these circumstances, the University of Utah is obligated to document the offer and obtain a signed declination by the employee that they understand the risks, yet chose to decline the vaccination. If the employee changes his/her mind, the vaccination will be made available to them upon request.

**Post Exposure Surveillance**

Exposures or potential exposures should be reported to the supervisor and the Biosafety Officer (801-581-6590), and affected individuals should report to the Occupational Medicine Clinic at the Redwood Health Center or to the RedMed Clinic at the Student Union building. In the event of a life threatening event call 911 immediately. Information about the University of Utah Health Care Occupational Medicine Clinics can be found here: [http://healthcare.utah.edu/occmed/](http://healthcare.utah.edu/occmed/)

Employees must also follow the Incident Reporting Policy described in their laboratory Exposure Control Plan or Biosafety Manual. The medical professionals at Occupational Medicine will determine the need for post-exposure prophylaxis, treatment, and continued medical surveillance at that time. Employees must notify the medical professionals if the agent involved is modified in any way to allow the medical professionals to treat the agent appropriately.

The Principal Investigator (PI) or Biosafety Officer may be required to provide additional information about agent modifications and their potential effects on treatment. PI’s should make available to all personnel post-exposure procedures for all agents used in the laboratory: a template can be found on the OEHS website (oehs.utah.edu).

The University of Utah IBC requires plans to address how a biological exposure incident be developed by the PI: details must be incorporated into the laboratory IBC registration and should be part of the laboratory-specific exposure control plan and/or Biosafety Manual. The IBC has developed a template for a post exposure SOP that can be downloaded [here](http://www.cdc.gov/vaccines/hcp/vis/index.html?scid=cs_748). This should include identification of any post-exposure prophylaxis options and/or medical monitoring plans for those who may have been exposed to the agents, documentation of important aspects of the experimental design and procedures, such as changes in drug sensitivity and/or genetic modifications, which may modify the risks of exposure of these agents.

In the event of an exposure it is recommended that laboratory personnel reporting to the Occupational Medicine clinic after an exposure should bring completed post exposure SOPs with them to the health care provider to ensure proper communication to those who may be providing care, particularly for agents which are genetically modified agents.

For more information contact:

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