UC RIVERSIDE
Occupational Health

Information for Immune Compromised Researchers

Purpose

Immunocompromised researchers (including employees, students, and visiting scholars) may be at increased risk of infection from research activities that involve potential pathogens or potentially infectious materials. This may include work performed directly with infectious agents as well as work conducted in laboratory spaces where infectious agents are handled or procedures are performed that could generate aerosols or contamination. Individuals with chronic medical conditions or who receive immunosuppressive therapy may be at increased risk for a laboratory-acquired infection following an exposure.

Personnel who have concerns about working with biohazards while immunocompromised are encouraged to seek confidential occupational health counseling, and risk-based adaptations or accommodations may be considered as appropriate.

Immunocompromised researchers are not required to disclose a medical diagnosis to their PI, supervisor, or department. If you have concerns about immune compromise and workplace risk, you may contact: Environmental Health Safety and Risk Management (EHSRM) Research Safety or Occupational Health for confidential guidance and referral. Information shared with EHSRM Occupational Health is used to support risk assessment, exposure prevention planning, and referral coordination, and is handled confidentially in accordance with applicable privacy requirements.

What is immune compromise?

Immune compromise, also referred to as immunocompromise or immunosuppression, is a condition in which the immune system does not work as well as it does in normal healthy workers. Immune compromised personnel are at higher risk of illness and/or more serious side effects of illness caused by an infectious disease.

Information on this page regarding potential health considerations and risks is intended for immune compromised individuals who work in UC Riverside research laboratories and/or handle animals in these areas.

If you are immune compromised and your work includes any of the activities below, it may be appropriate to contact **EHSRM Research Safety or Occupational Health** for an individual risk review and recommendations.

Working with infectious agents or potentially infectious materials

- ☐Handling known or suspected infectious agents (including work conducted under BSL-2 or BSL-3 practices)
- ☐Working with human blood, tissues, primary human cell lines, or other human-derived materials (including specimens of unknown status)
- ☐Working with animal tissues, body fluids, or waste that may contain infectious agents

☐Working with environmental samples (soil, dust, water) that may contain infectious fungi or bacteria

Procedures that may generate aerosols or droplets

☐Centrifuging, vortexing, sonication, blending, homogenizing, or pipetting that may aerosolize materials

☐Opening tubes/containers after centrifugation or agitation

☐Performing procedures outside of a biosafety cabinet when containment is recommended

Sharps and high-consequence exposure scenarios

☐Use of needles, scalpels, glass pipettes, and other sharps

☐Animal injections, blood collection, necropsy, or surgical procedures

☐Any task with increased risk of needlestick, splash to eyes/mucous membranes, or broken skin exposure

Animal work

☐Handling live animals or animal bedding/cages (including cage changing and cage dumping)

☐Work with animals with known or suspected zoonotic risks (e.g., rodents, bats, nonhuman primates, livestock)

☐Bites, scratches, or contact with animal saliva, urine, feces, or ectoparasites (e.g., mites)

Work setting factors

☐Working in shared lab spaces where infectious agents are handled (even if you do not directly work with the agents)

☐Working alone or off-hours while performing higher-risk procedures

☐Inconsistent access to engineering controls (e.g., biosafety cabinet availability) or PPE needed for the task

What conditions cause immune compromise?

There are many medical conditions that cause immune compromise. In general, if you have a medical condition that causes problems with your immune system, your primary physician will have informed you. Some examples include:

Infection with Human Immunodeficiency Virus (HIV)

- Prolonged use of corticosteroid (cortisone) medications by mouth or by injection (these drugs are given for a variety of diseases including asthma, allergies and autoimmune disorders such as lupus and rheumatoid arthritis)
- Monoclonal antibody therapy
- Medications used by people who have received organ transplants
- Long term diabetes mellitus, kidney or liver disease
- Blood diseases (diseases that affect the bone marrow or white blood cells, for example, leukemia or lymphoma)
- Certain forms of cancer, leukemia and lymphoma

- Cancer chemotherapy and radiation therapy
- Chronic under nutrition (malnutrition)
- Spleen removal

If I am immune compromised, what infections am I at increased risk for?

Almost all of the infectious disease agents that can infect healthy people pose more of a risk of infection for people who are immune compromised. Bacterial, viral, parasitic and fungal agents may be present in research labs. A few examples include:

- Tuberculosis (TB)
- Human Immunodeficiency Virus (HIV)
- Streptococcus pneumonia
- Herpes viruses
- Leishmania
- Enteric infections such as salmonella, campylobacter and cryptosporidium

Many infectious agents that do not normally cause serious health problems in healthy people can cause problems in immune compromised individuals. A few examples include:

- Mycobacterium marinum (found in fish tanks)
- Mycobacterium avium (found in birds)
- Cryptosporidium (found in many animals in the research laboratory)
- Giardia (found in cats, dogs, and sheep)
- Salmonella (found in many different research animals, especially reptiles/rodents)
- Shigella and campylobacter (found in many mammalian research animals)
- Ectoparasites such as mites (found in many research animals including birds, rodents and other mammals)
- Bordetella species (dogs, cats, pigs and other mammals)
- Bartonella species (cats and cat fleas)

Which vaccines are not safe for immune compromised people?

Before receiving any live bacterial or viral vaccines, your personal physician/provider should be consulted since these medications may pose risks of severe side effects:

- MMR (mumps, measles and rubella)
- Yellow fever vaccine
- Varicella (chicken pox and shingles vaccines)

In general, other vaccines that do not contain live bacteria or viruses are safe, but may be less effective and supply less protection in the case of laboratory exposure:

- Hepatitis vaccines
- Inactivated polio vaccine

- Tetanus, diphtheria and pertussis vaccines

In general, the tuberculin skin test is considered safe for individuals with immune compromise but may be less accurate than in a healthy individual. Vaccine decisions are individualized; please consult your treating clinician before receiving live vaccines and before starting work that may involve infectious exposures.

If I am immune compromised, what can I do to reduce my risk of infection?

It is important to ask for help in evaluating your risks. The following resources are available:

- Know your workplace: EHSRM and the UCR Institutional Biosafety Committee (IBC) conduct risk assessments of research projects and procedures to identify and minimize the potential risk of exposure to research-related hazards for all employees. In addition to identifying possible hazards in the workplace, EHSRM Research Safety specialists can help evaluate engineering controls and safety practices to minimize your risk of exposure. In general, safety practices in the research setting are designed to minimize all personnel exposure to hazards.
- Talk to your provider: A primary care physician/provider who is aware of your medical condition and has a list of infectious agents present at your workplace can help you make important decisions regarding whether you should ask for work place accommodation. In addition to the infectious agents present in your workplace, discuss with your doctor your work activity, frequency and duration of contact with infectious agents, and the normal safety practices and equipment present in your workplace.
- Consult with EHSRM Occupational Health: After talking to your physician to discuss infectious agents present in your workplace and your health condition and if medical recommendations or restrictions are necessary to minimize exposure, the EHSRM Occupational Health team can assist in documenting medical recommendations and visiting an occupational health physician.
- For employees, please contact Workers' Compensation and Disability Management if job modifications or accommodations are needed to avoid possible workplace exposures, at workerscomp@ucr.edu.
    - For students, please contact the UCR Student Disability Resource Center if modifications or accommodations are needed to avoid possible exposures, at sdrc@ucr.edu.

Minimum baseline controls

The following baseline controls are recommended for all laboratory personnel and are especially important for immune compromised researchers:

☐Follow lab-specific procedures. Review and follow laboratory Standard Operating Procedures (SOPs), required training, and applicable biosafety guidance (including BMBL-based practices) for the agents and tasks you perform.

☐Use primary containment when indicated. Perform work in a biosafety cabinet (BSC) or other primary containment device when required or when procedures may generate aerosols, splashes, or droplets.

☐Practice strong hygiene and housekeeping. Wash hands after removing gloves, after handling animals or potentially infectious materials, and before leaving the lab. Do not store or consume food or beverages in work areas. Use established decontamination and disinfection routines for surfaces, equipment, and waste.

☐Use appropriate PPE for the task. At a minimum, wear gloves, a lab coat, and eye/face protection when working with potentially infectious materials. Upgrade PPE as needed based on the hazard and task (e.g., double-gloving, gowns, sleeve covers, respiratory protection, face shields).

☐Plan work to reduce avoidable exposure. Organize materials and workflow to minimize spills, sharps use, and unnecessary handling. Use safety-engineered sharps when available and follow sharps safety practices at all times.

☐Do not perform higher-risk tasks alone when feasible. For procedures with increased exposure risk (e.g., sharps work, animal procedures, aerosol-generating activities), avoid working alone or off-hours when possible and ensure you know the emergency response and reporting process.

What else can I do to reduce my risk?

☐Always use the recommended engineering controls (such as biosafety cabinets) and wear the recommended personal protective equipment for the task.
☐Practice good hygiene, including washing your hands after contact with animals or potential hazards and after removing gloves.
☐Ask for help if you need workplace accommodations or job modifications to avoid possible exposures.

☐**Be prepared before you begin work.** Know what to do if an incident occurs, keep a current contact list readily available, and follow the established reporting and response process.

What should I do if I have symptoms?

If you develop symptoms that you believe may be related to workplace exposure (including research, laboratory, or animal work), seek medical evaluation as soon as possible.

☐If you need urgent or emergency care, go to the nearest Emergency Department (or call 911).
☐Notify your supervisor and follow the UCR incident reporting process as soon as feasible.

☐Employees: Contact EHSRM Occupational Health and/or Workers' Compensation & Disability Management, for guidance, exposure documentation, and to coordinate evaluation and treatment as appropriate.
☐Work with EHRSM Occupational Health team and have post exposure plans in place for you if that is necessary with appropriate prophylaxis.

Training and counseling regarding risk

Counseling of immune compromised laboratory workers and trainees regarding risk occurs both at the time of hire and during the course of employment:

- All personnel will be advised during the initial UC Laboratory Safety Fundamentals training and/or Orientation to Animal Research training (e.g., Animal Handling classroom training, CITI Training and the submission of the Animal Occupational Health Program (AOHP) questionnaire) about the increased risk of illness in immune compromised workers as a result of infectious disease exposure in the workplace.
- Immune compromised personnel will be encouraged to contact the EHSRM Occupational Health to identify potential pathogens in their work area. An individual risk assessment will be completed based on the laboratory biohazardous use and/or research animal environment.
- All personnel who receive a risk assessment will be encouraged to discuss the results of the risk assessment with their primary care physician and/or with a physician from The Center for Occupational and Environmental Health (COEH) at UCI who review your animal health forms.
- In the event personnel have persistent concerns regarding risks of employment, they may be advised to make an appointment with COEH to assess risks and advise personnel regarding resources and options.
- Personnel will be advised of the UCR accommodation services available through Workers' Compensation (for employees) and/or UCR Student Disability Resource Center (for students).
- Employees are encouraged to seek advice regarding potential infectious hazards from the Biosafety Officer or EHSRM Occupational Health, in addition to a medical consultation with the Occupational Health Physician.

PI's Responsibility

The Principal Investigator (PI)/Laboratory Supervisor is responsible for the health and safety of all laboratory personnel working under their authority and within their research spaces. The PI/Laboratory Supervisor may delegate specific safety duties, but remains responsible for ensuring those duties are completed and all safety obligations are met. Laboratory personnel have the right to be informed about potential workplace hazards in their work areas and to receive appropriate training and resources to perform their work safely.

Supervisors should not request medical diagnoses; instead, they should focus on implementing recommended controls and any job modifications or accommodations when needed. If assistance is needed to evaluate hazards, determine appropriate controls, or coordinate next steps, PIs/Laboratory Supervisors should contact EHSRM Research Safety and/or EHSRM Occupational Health for guidance.

Who to Contact

UCR EHSRM Research Safety and EHSRM Occupational Health work together to support you. Our teams will coordinate as needed to help evaluate potential workplace hazards, review controls, and assist with referrals and next steps.

If you would like to speak with the Occupational Health Physician for a medical consultation regarding any issues discussed here, contact EHSRM Occupational Health at ehsocchealth@ucr.edu for referral instructions and next steps.

For a personalized evaluation of workplace hazards (biological, chemical, radiological, or physical), contact UCR EHSRM Research Safety:

- EH&S Main Line: (951) 827-5528
- EH&S Email: ehs@ucr.edu
- Biosafety Program Information: UCR EH&S Biosafety

For Occupational Health support (OHSS assistance, reproductive/medical surveillance questions, occupational health coordination) and for confidential medical assessment coordination or treatment routing for suspected occupational infectious disease exposures/illness (including exposure documentation and next steps), contact:

- EHSRM Occupational Health: ehsocchealth@ucr.edu

Acknowledgement of Information for Immune Compromised Researchers

By signing below, I acknowledge that I have reviewed, understood, and agree to comply with the *Information for Immune Compromised Researchers.* This includes but is not limited to; what to do if I have symptoms, training and counseling regarding risk, consulting with UCR EHSRM Occupational Health and the Occupational Health physician, understanding how to reduce my risk of infection.

Name (Print)	Identification*	Signature	Date	Supervisor / Principal Investigator

*Identification: Provide your UCR Student ID, Employee ID, UCR NetID, UCR Email, or Date of Birth.