

Biosafety Responsibilities of Principal Investigators at Rutgers University

The following checklist highlights the major biosafety responsibilities of the PI. This list is not exhaustive, and any questions or concerns should be directed to the REHS Biosafety team at biosafety@rutgers.edu

Safety

- Collaborate with REHS to help ensure the health and safety of staff/students/volunteers by complying with university policies and abiding by state and federal regulations and guidelines involving the use, handling, storage, disposal, inventory, security/access, and transportation of biological hazards.
- Read and adhere to the Rutgers University [Biological Safety Guide](#). Implementing all requirements into laboratory practices.
- Provide and maintain a safe work environment for all research personnel within the laboratory.
 - Purchase and provide appropriate safety equipment and PPE for all researchers within the laboratory sufficient for all biohazards being worked with.
 - Flush eye wash stations weekly and document testing date
 - Submit work orders to [Facilities Management](#) when building facilities (ex: fume hoods, eye wash stations, electrical outlets) appear to be broken or not working appropriately
 - Arrangements for annual certifications of chemical fume hoods fall under the responsibility of Rutgers Environmental Health and Safety
 - For more information, please refer to the [Laboratory Fume Hood Program](#)
- PI's are responsible for coordinating annual service and certification of biosafety cabinets (BSCs) by Technical Safety Services (TSS) through the REHS [BioSafety Cabinet Service Request](#)
- Contact 911 for all emergencies that require medical, fire, or police assistance.
- Report any safety related incidents or accidents to REHS using the online [Accident Reporting Database](#). Work related injuries must be submitted within 24 hours of the event.
- Immediately notify REHS via office phone (848) 445-2550 or for after hour emergencies contact RUPD at (732) 932-7211
 - Of any laboratory spills, accidents, containment failure or violations of biosafety practice which results in the release of biological hazards and/or the exposure of laboratory personnel (or the public).
 - If a laboratory-acquired infection is suspected or known in any lab personnel, staff, students, and/or visitors.

Administrative Controls

- Conduct thorough risk assessments and establish written Standard Operating Procedures for all research processes that incorporate biological hazardous materials, associated equipment,

and/or potentially hazardous biological conditions. Include the required personal protective equipment (PPE) and other safety controls in these SOPs.

- ❑ Establish and enforce general laboratory safety rules and procedures. Common topics include:
 - Working alone
 - Laboratory security
 - Appropriate lab attire
 - Housekeeping responsibilities
 - Activities that require prior PI approval
 - Ex: Scaling-up experiment, purchasing new reagents, new substitutions
 - Emergency preparedness
- ❑ Establish a research-specific laboratory exposure/spill response plan and ensure availability of emergency spill kits in laboratory spaces
 - Contain sufficient information/materials for appropriate agent-specific decontamination methods for biological materials in use
- ❑ Comply with all [shipping and permit regulations](#) for biological hazards
- ❑ Ensure there is a laboratory door Caution Sign on every assigned laboratory space.
 - Maintain accurate and up to date contact information using a non-office line phone number.
 - Ensure Biohazard stickers and all other appropriate warning stickers for work being conducted in laboratory space are present.
 - To request a laboratory door Caution Sign:
<https://half-life.rutgers.edu/forms/cautionsign.php>
- ❑ Before beginning work, register research as needed and be granted permission to start work from all appropriate institutional oversight bodies. Including but not limited to:
 - Institutional Biosafety Committee (IBC): Research involving human materials (including cell lines), potentially infectious, and/or recombinant material
 - Institutional Animal Care and Use Committee (IACUC): Research involving animals
 - Institutional Review Board (IRB): Research involving human subjects
 - Institutional Review Entity (IRE): Dual use research of concern
 - Human Embryo and Embryonic Stem Cell Research Oversight (ESCRO): Research involving human embryonic stem cells

Institutional Biosafety Committee

Rutgers University utilizes the [Biological Protocol Management System \(BPMS\)](#) to centrally manage Institutional Biosafety Committee (IBC) protocol submissions. All Rutgers University labs that involve research with human materials (including cell lines), *potentially* infectious materials, recombinant nucleic acids, and/or use of any Select Agent are required to register with the IBC. Protocols must be uploaded to BPMS and approved prior to start of work.

- ❑ Set up a protocol within the Biological Protocol Management System (BPMS)
 - Identify laboratory hazards, including all biological materials, being worked with
 - List all working and material storage locations as appropriate

- Identify all personal and hazards associated with job activities
- ❑ Update the existing protocol within BPMS to remove or add lab personal and/or locations as appropriate
- ❑ Make amendments to the existing protocol within BPMS and be granted permission prior to working when:
 - New biological material to be included in protocol/research
 - Including but not limited to: *potentially* infectious agents, recombinant or synthetic nucleic acids (including plasmids), or unfixed human or non-human materials
 - Addition of a transgenic animal or additional biological strain or tissue culture line
 - New experimental procedure is being added to the existing protocol
- ❑ Submit existing protocol within BPMS for renewal at least 90 days before protocol expiry date
- ❑ Create a new protocol within BPMS when the proposed changes to the protocol involve different risk assessments and biosafety needs or if it is a new research project
- ❑ Assess any potential biosafety risks when purchasing new equipment or altering experimental procedures and consult with REHS and/or the IBC or other oversight committees as required.
- ❑ Ensure all lab personnel, staff, students, and visitors are abiding by the IBC approved protocols

Regulated Medical Waste

Rutgers University utilizes a university wide vendor for regulated medical waste (RMW) disposal.

- ❑ Inquire with building manager, department office administrators, and/or department leadership to understand nuances for every assigned laboratory spaces' RMW pickup procedure
- ❑ Maintain RMW and sharp waste inside the laboratory space in a safe, properly segregated manner that adheres to all RMW and sharp regulations and policies

Biosafety Training

Safety training is conducted at multiple levels with the Institutional level awareness training being provided through REHS and other institutional bodies (ex: IACUC, IRB). Principal investigators develop laboratory-specific training to address specific biohazards and procedures used in their research processes and laboratories.

- ❑ Ensure laboratory personnel, staff, students, and visitors have completed all appropriate institutional trainings based on materials being working with and job expectations.
 - See the [REHS Training Website](#) for more information
 - Any overdue institutional training requirements by lab personal will result in a delay of IBC protocol processing
- ❑ Develop and implement a laboratory-specific training program on processes and procedures specific to the research being conducted in lab and the biohazards that are present.
- ❑ Notify all lab members, students, and visitors of any changes made to the lab protocols and how these changes will be implemented. Conduct new laboratory-specific training as needed.

- ❑ Maintain documentation of laboratory-specific proficiency training records conducted before work begins, when procedures change or a new procedure/equipment is introduced, and annual refresher of training and evaluations.
 - [Checklist for BSL-1 and BSL-2 Knowledge and Proficiency - RU Biosafety Guide v.6 \[Appendix B\]](#)

BioAudits

Depending on the type of work being conducted in the laboratory space, different types of inspections maybe performed in the lab at different times throughout the year both internally and/or by an external agency as needed.

- ❑ New PI's must schedule an initial BioAudit Inspection of laboratory space with REHS prior to starting work but after laboratory space is fully set up and ready.
- ❑ Acknowledge receipt of internal Rutgers lab findings sent via email
- ❑ Correct any findings and communicate corrective actions to the inspector. Contact inspector with any further questions
- ❑ If the laboratory works with a permitted material, notify REHS of any scheduled external agency (federal or state) inspections so a team member can be present

REHS Biosafety Team can provide consultations, arrange specialty training, review protocols and procedures, and provide guidance to Rutgers laboratory personnel on a case-by-case basis to integrate safety into Rutgers laboratory culture.

For more information and/or resources see the REHS Biosafety [Rutgers Biosafety Program | Institutional Planning and Operations](#) or email us directly at BIOSAFETY@IPO.RUTGERS.EDU