



Vanderbilt Office of Clinical & Research Safety

How can we help YOU with your research?

Radiation Safety

Contact: Christopher Helstern 615-343-8502

- All research use of radioactive materials (including experimental human medical applications) must be performed under the direction of a Principal Investigator authorized by the VU or VUMC Radiation Safety Committee.
- Radioactive material shipments to and from Vanderbilt need to go through Radiation Safety.
- Any devices or supplies marked with the radiation symbol need to be surveyed and cleared by Radiation Safety before they can be “unmarked” and passed on for other uses or disposed of.



Chemical Safety

Contact: Mark Bogard 615-936-8461

- Research activities involving the use of chemicals meeting the OSHA definition of “particularly hazardous substances” (PHS) have specific requirements for safe handling procedures, inventory/security, area designation and exposure response evaluation in some cases. PHS materials typically include select carcinogens, reproductive toxins, and acutely toxic materials. OCCRS Chemical Safety can assist in evaluating materials and procedural pre-planning in order to minimize personnel exposure risk.
- This group provides chemical safety training for all Vanderbilt personnel, and also provides radioactive and hazardous chemical waste disposal services.
- When moving, relocating, or setting up a new lab space, this group should be contacted to update door signage information and to provide any guidance for space turnover.



Biological Safety

Contacts: Bettye Ridley 615-322-0243

Richard DiTullio 615-322-1988

- This team coordinates all registration/approval activities for the VU and VUMC Institutional Biosafety Committees (IBC). All research involving the use of the following materials in a viable state requires review and approval by the IBC:
 - Recombinant DNA molecules, including those used in human clinical trials or on animal studies
 - Microbiological agents infectious to humans, animals or plants
 - Human- derived materials including cells, tissues and body fluids
 - Nonhuman primate-derived materials including cells, tissues and body fluids
 - Toxins of biological origin
- This team reviews animal protocols for research-related hazards and coordinates hazard assessment when needed. If planning a protocol and you have questions about listing of agents to be administered, please contact us ahead of time to address safety practice needs and assure timely hazard approvals.
- This team provides guidance regarding the shipment of biological materials (including international dangerous goods requirements, permits, and other logistical considerations). They can also provide training for those who frequently ship such materials.
- This team provides biosafety training for all personnel working in research labs with biological materials.



Road Map for Managing Research Hazards at Vanderbilt

Will your research require the use of any of the following?

1. **Radioactive materials**; if YES:
 - You will need to obtain a Radioactive Material Permit. The use of radioactive materials falls under the Rules of Tennessee Department of Environment and Conservation Division of Radiological Health that require approval from the Radiation Safety Committee before work can begin. Please contact the [Radiation Safety Team](#) at 615-322-2057 to acquire the Radioactive Material Principal Investigator Application.
 - Laboratory members will need to complete [Initial Radiation Safety Training](#) as this is required for all radioactive material use in research.
 - Please review the [Radiation Safety Manual](#) to familiarize yourself with Vanderbilt's radiation safety policies.
2. **Radiation producing machines** (e.g., X-ray devices and/or lasers); if YES:
 - Once X-ray devices are on Vanderbilt's campus, they will need to be registered with the State of Tennessee Department of Environment and Conservation Division of Radiological Health within 10 days.
 - Class 3b and 4 lasers must be registered with the Radiation Safety Department.
 - Please contact the [Radiation Safety Team](#) at 615-322-2057 to begin the device registration process.
3. **Recombinant DNA** materials or techniques (e.g., viral vectors, organisms or microorganisms containing foreign DNA); if YES:
 - Your laboratory will need to get registered with the Institutional Biosafety Committee. Some, but not all, activities/materials fall under NIH Guidelines categories that require IBC approval before work can begin. Please contact any member of the [Biosafety Team](#) at 615-322-2057 to acquire the latest IBC registration form for completion.
 - Lab members will need to complete [Biosafety 101: Standard Microbiological Practices](#) in the Learning Exchange as this is the prerequisite module for all biological material use in research.
 - Please consider the [Lab Set-Up pointers for New Researchers with Biological Materials](#) when planning lab layout.
4. **Microbiological agents** infectious to humans, animals or plants; if YES:
 - Your laboratory will need to get registered with the Institutional Biosafety Committee. Depending on the agent, proposed activities, and applicability of permit requirements, actions may be required before agents are transferred. Please contact any member of the [Biosafety Team](#) at 615-322-2057 to acquire the latest IBC registration form for completion and to begin discussions about your particular situation.
 - Because this work may require some activities to be carried out in a biological safety cabinet (BSC), you should also be aware of this [biosafety cabinet move, maintenance and transfer guidance](#) when planning your lab setup.
 - Lab members will need to complete [Biosafety 101: Standard Microbiological Practices](#) in the Learning Exchange as this is the prerequisite module for all biological material use in research. (Additional educational modules will apply.)
 - Please consider the [Lab Set-Up pointers for New Researchers with Biological Materials](#) when planning lab layout.

Human-derived cells, body fluids or viable tissues; if YES:

- Your laboratory will need to get registered with the Institutional Biosafety Committee. The provisions of the [Best Practices for Use of Human-derived Materials and Bloodborne Pathogens in Basic Research Applications](#) will apply. Please contact any member of the [Biosafety Team](#) at 615-322-2057 to acquire the latest IBC registration form for completion.
- Because this work may require some activities to be carried out in a biological safety cabinet (BSC), you should also be aware of this [biosafety cabinet move, maintenance and transfer guidance](#) when planning your lab setup.
- Lab members will need to complete [Biosafety 101: Standard Microbiological Practices](#) in the Learning Exchange as this is the prerequisite module for all biological material use in research. (Additional educational modules will apply.)
- Please consider the [Lab Set-Up pointers for New Researchers with Biological Materials](#) when planning lab layout.

5. Nonhuman primate-derived cells, body fluids or viable tissues; if YES:

- Your laboratory will need to get registered with the Institutional Biosafety Committee. Please contact any member of the [Biosafety Team](#) at 615-322-2057 to acquire the latest IBC registration form for completion.
- Because this work may require some activities to be carried out in a biological safety cabinet (BSC), you should also be aware of this [biosafety cabinet move, maintenance and transfer guidance](#) when planning your lab setup.
- If macaque-derived materials will be received or handled, the provisions of the [Best Practices for Use of Macaque Tissues, Body Fluids and Cells in Basic Research Application](#) will apply.
- Lab members will need to complete [Biosafety 101: Standard Microbiological Practices](#) in the Learning Exchange as this is the prerequisite module for all biological material use in research. (Additional educational modules will apply.)
- Please consider the [Lab Set-Up pointers for New Researchers with Biological Materials](#) when planning lab layout.

6. Any biological agent or toxin currently listed on the DHHS/USDA select agent list; if YES,

- You must contact [Kevin Warren](#), who serves as the select agent Institutional Responsible Official (RO) before transferring or ordering these materials. While IBC registration applies to these agents, it is most important to fully disclose intended receipt or use of these materials before they are brought to Vanderbilt to avoid violating federal laws.
- Lab members will need to complete [Biosafety 101: Standard Microbiological Practices](#) in the Learning Exchange as this is the prerequisite module for all biological material use in research. (Additional educational modules will apply.)
- Please consider the [Lab Set-Up pointers for New Researchers with Biological Materials](#) when planning lab layout.

7. Hazardous chemicals and/or compressed gases (carcinogens, mutagens, reprotoxins, highly acute toxins, sensitizers, highly reactive, highly flammable) and/or instrumentation that requires the use of personal protective equipment due to safety concerns (cutting tools, equipment that produces hazardous dust, exhaust, or extreme temperatures); if YES:

- Lab members should enroll in [Safety and Environmental Protection in the Chemical Laboratory](#) course.
- Lab members should become familiar with and obtain a copy of Vanderbilt's [Chemical Hygiene Plan](#)
- Send a copy of your chemical inventory to [Stephen Hopkins](#) to assist with uploading into Chemtracker
- Contact [Mark Bogard](#) to assist with setting up your lab for chemical waste collection.
- Obtain a copy of Vanderbilt's [Laboratory Guide for Managing Chemical Waste](#)

www.vumc.org/safety

Lab safety training guide: www.vumc.org/safety/training/what-you-do/lab-safety-training-guide