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To: New Yale Principal Investigators

From: Yale University Environmental Health & Safety (EHS)

Subject: Welcome and Orientation to Key EHS Laboratory Services

To view this document as a webpage go to ehs.yale.edu/sites/default/files/files/pi-welcome-letter.pdf

Welcome to Yale University! The EHS Office is pleased to serve as your partner in research lab safety and in regulatory compliance. This welcome letter outlines steps you can follow as a new Principal Investigator (PI) to assist you in this partnership. The State of Connecticut has a few unique regulatory requirements that you may not have had to deal with in your previous research location. Yale EHS will help you navigate these special rules and also specific Yale Policies and Procedures, in addition to other State and Federal regulatory requirements. As some of these regulatory requirements require review and authorization outside of EHS, the earlier you engage us for assistance, the earlier approvals can be put in place. We welcome registrations from new PIs before they arrive on campus and are willing to help you complete these registrations prior to your arrival. Please visit our website at http://ehs.yale.edu/ to learn more about our services.

There are 4 "Initial Steps to Safety" to help you get your research approved and in action as quickly as feasible.

STEP 1: Get to know your EHS Safety Advisor (SA)

STEP 2: Complete all applicable lab registrations

STEP 3: Complete all required EHS trainings

STEP 4: Participate in your EHS lab inspections with your EHS SA

Each of these steps is outlined in detail below.

STEP 1: Get to know your EHS Safety Advisor (SA)

First, please call EHS at 203-785-3550 (5-3550 if calling from a Yale phone) to get in touch with the EHS Safety Advisor (SA) assigned to your lab. A list of SAs is also provided on the EHS web page (http://ehs.yale.edu/safety-advisor) and you can contact them directly if you wish. An SA has been assigned to every building on campus.

An EHS SA is the:

- Main connection between labs and EHS. SAs are safety professionals who can help answer any safety-related questions.
- Safety liaison assigned to your lab to help you get your lab started from a safety and compliance standpoint and to continue to work with you during your time at Yale.
- Lead EHS representative of a team of three SAs that are assigned to your laboratory (your SA has two back-up SAs that may be called upon when your primary SA is unavailable).

We advise that you request a start-up meeting with your assigned SA as soon as feasible. Specifically, your SA will:

- Provide you with all applicable registrations you may need and assist where needed,
- Help assess all the required and recommended lab safety trainings for your proposed research activities,
- Conduct or schedule any lab orientations you may need, such as an onsite review of hazardous waste collection, storage and disposal,
- Schedule a variety of walk-through lab inspections with you or your designated contact for lab safety to reinforce safe lab practices and work with you to achieve regulatory compliance.

STEP 2: Complete all applicable lab registrations

The majority of your research will require registration with EHS. In addition, certain types of research will require formal authorization prior to initiation. The following tables outline the various EHS and other applicable required registrations that must be completed before the work is started. The tables are provided by EHS category.

Radiation Safety		
Registration		**Description**
☐	Radioactive Materials/Sources http://ehs.yale.edu/radioactive-authorization-registration	Online registration form to obtain authorization to perform experiments involving radioactive materials and/or radioactive sources. Research with radioactive materials cannot be initiated without authorization from the Radiation Safety Committee. Applicant must be a Yale faculty member with a minimum rank of Research Scientist and prior experience with radioactive materials.

☐	X-Ray Generating Equipment http://ehs.yale.edu/x-rays	All X-Ray Generating Equipment must be registered with the State of CT Department of Energy and Environmental Protection (CT DEEP) prior to its use. EHS maintains the CT DEEP registration of all Yale x-ray equipment.
☐	Lasers http://ehs.yale.edu/lasers	All class 3B and 4 lasers that are purchased or acquired and brought on campus must be registered with Yale's Laser Safety Officer.

Chemical Safety		
Registration		**Description**
☐	Chemicals Requiring EHS Pre-Approval http://ehs.yale.edu/sites/default/files/files/chemicals-ehs-approval.pdf	Some high hazard or highly regulated chemicals require approval by EHS prior to purchase.
☐	Research Protocol Chemical Safety Review https://ehsis.yale.edu/EHSIntegrator/Registration	This form is required to be completed for work involving highly hazardous chemicals as identified in the Chemical Hygiene Plan.
☐	Potassium or Sodium Cyanide SOP https://ehs.yale.edu/sites/default/files/files/potassium-sodium-cyanide-sop.pdf	This SOP must be followed prior to purchase or work with sodium or potassium cyanide.
☐	Registration Applications for Controlled Substances http://ehs.yale.edu/controlled-substances	All controlled substances must be registered and licensed by the State of CT and the federal DEA.

Biological Safety		
Registration		**Description**
☐	Biological General Registration https://ehsis.yale.edu/EHSIntegrator/Registration	Required for all PIs. The initial biosafety registration form serves as a trigger for other registrations. NetID and password required to access registration.
☐	Registration of Experiments Involving rDNA or Synthetic Nucleic Acids http://ehs.yale.edu/recombinant-dna http://ehs.yale.edu/sites/default/files/files/rdna-synthetic-nucleic-acid-molecules.pdf	Required if conducting non-exempt rDNA research. Non-exempt rDNA research may not be conducted until authorization is provided by the Yale Biological Safety Committee.

☐	Registration of a Human Gene Transfer Clinical Trial http://ehs.yale.edu/human-gene-transfer	Required for the use of recombinant or synthetic nucleic acids in human subjects. Will require authorization from the Yale Biological Safety Committee and the Yale Human Investigation Committee prior to authorization.
☐	Request to Use Infectious Agents http://ehs.yale.edu/human-pathogens https://ehsis.yale.edu/EHSIntegrator/Registration	The application for work with human pathogens at Yale University. Will require authorization by Yale EHS and the State of CT Department of Public Health prior to authorization.
☐	Request to use Risk Group 3 pathogens/Select Agents http://ehs.yale.edu/select-agents-bsl-three	In addition to the requirements for human pathogens as noted above, research with Risk Group 2 pathogens will also require authorization from the Yale BSL3 Subcommittee. Work with Select Agents will require authorization by the U.S Government prior to initiation.
☐	Purchase and Installation of Biosafety Cabinets http://ehs.yale.edu/sites/default/files/files/biosafety-cabinet-add-remove.pdf http://ehs.yale.edu/biological-safety-cabinets	Biological safety cabinets at Yale are certified annually through a contract with an accredited certification company. EHS will coordinate and schedule the annual certification for each cabinet on contract. In addition to the annual certification requirement, all biological safety cabinets must be certified after initial installation, after moving and following some repairs

EHS Integrator		
Link		**Description**
☐	EHS Integrator https://ehsis.yale.edu/EHSIntegrator/	Use EHS Integrator to: Update your lab and assistant data; Respond to survey findings; Request biomedical waste pickup services; Submit clean air device contract payment; and much more. Contact EHS if you need help using this web tool.

Personal Protective Equipment (PPE)		
Links		**Description**
☐	PPE On-line Assessment Tool https://ehsis.yale.edu/EHSIntegrator/Survey/Home/Index	A PPE hazard assessment is the evaluation of the personal protective equipment requirements for a specific activity or work environment, so that the individual is protected from exposure to a hazardous material, condition or process.
☐	PPE Policy http://ehs.yale.edu/sites/default/files/files/ppe-policy.pdf	This Policy applies to all faculty, staff, students, affiliates and visitors where PPE is required based on their job duties, other activities, potential exposures or work environment. This Policy does not preclude the addition of more stringent PPE requirements for a specific activities or work environment.
☐	PPE Procedure http://ehs.yale.edu/sites/default/files/files/ppe-procedure-labs.pdf	This Procedure describes how to implement Yale University's Personal Protective Equipment Policy in a laboratory.

STEP 3: Complete all required EHS trainings

Ensure that you and your staff complete all required lab safety training prior to handling hazardous or regulated materials. In many circumstances, completion of required training is part of the lab and individual authorization for the use of hazardous materials. All EHS courses are found in Workday Learning. Direct links are provided below. More info can be accessed from the EHS web page ehs.yale.edu/training.

Radiation Safety		
Training		**Description**
☐	Radiation Safety for Unsealed Sources	Mandatory two (2) part training: Basic and Applied, for personnel working with radioactive material or frequenting an area where radioactive materials are stored or used.
☐	Radiation Safety for X-Ray Equipment	Anyone who wishes to use X-Ray Generating Equipment must take the "Radiation Safety for X-Ray Equipment" training class. All users of X-Ray Generating Equipment are required to wear dosimetry badges.

☐	Laser Safety Training	Laser Safety Awareness training reviews basic laser safety information for all four classifications of lasers. The training information should be viewed prior to using any class 3b or 4 lasers at Yale.
☐	Radiation Safety Awareness	Designed for researchers who don't work directly with radioactive materials, but who frequent or share lab space with individuals that do.

Chemical Safety		
Training		**Description**
☐	Laboratory Chemical Safety	Required for all researchers working in laboratories at Yale for conformity with the OSHA Laboratory Standard.
☐	Non-Laboratory Chemical Safety	Required for all others with exposure to chemicals in a non-laboratory setting (i.e. healthcare, animal care and use staff, police, office staff)
☐	Hazardous Chemical Waste Management	Required for those individuals who will be handling hazardous chemicals and packaging them for collection by Yale EHS for disposal.
☐	Formaldehyde Safety Training	Required for staff handling Formaldehyde with potential exposures.
☐	Organolithium Compounds Training	Required for all laboratory personnel who may work with organolithium compounds
☐	Universal Waste Training	On how to properly recycle used electronics or other universal wastes.

Biological Safety		
Training		**Description**
☐	Biosafety Part I and II Orientation	Required for researchers handling biological materials in the laboratory, including rDNA research materials, defective pathogen vectors, Risk Group1 and 2 research materials, toxins, and human pathogens. Satisfies compliance with Yale, State of CT, NIH, and CDC requirements and recommendations.

☐	Bloodborne Pathogens for Lab Employees Or Bloodborne Pathogens for Clinical Employees	Required for those with workplace exposure to human blood, body fluids, tissues, including primary or continuous human cell lines. Also extended to those who utilize equipment potentially contaminated with these materials. This course satisfies the Occupational Safety and Health Administration's requirements for compliance with the OSHA Bloodborne Pathogens Standard.
☐	Biosafety Level 3 Training	Required only for those researchers who will work with Risk Group 3 pathogens, or work in Biosafety Level 3 (BSL3) laboratories, or work on protocols utilizing BSL3 work practices. Trainees must be nominated for the course by an existing approved Yale PI conducting BSL3 research and meet have completed all other applicable Biosafety training courses.
☐	PI Orientation to the Yale Biological Safety Manual	Required for all PIs of Yale Laboratories, this training provides an overview of all of the biosafety program regulatory and Yale Biosafety program requirements.
☐	Shipping Infectious Substances - Category A Shipping Biological Substances - Category B	Online training classes to assist shippers of hazardous biological materials (Category A and B Infectious Substances) and Exempt Biological Specimens document their required US Department of Transportation and International Air Transport Association training prior to shipping in commerce.
☐	Tuberculosis Awareness, Infection Control	An infection control course designed for those with clinical responsibilities with patient contact. It raises awareness of the signs and symptoms of TB and reviews initial response and exposure control procedures for potential or known TB cases.
☐	Safe Use of Biological Safety Cabinets	The course will describe the different type of biological safety cabinets, review how they are tested and certified, and outline safe working practices to minimize risk of spreading contaminants and maximize worker protection against biohazards. This course is recommended for anyone who must use a biological safety cabinet as part of their research.
☐	DOT Biomedical Waste Packaging	General awareness and function specific training of Department of Transportation requirements for staff or students who package biomedical waste Stericycle (vendor) boxes for shipment and disposal off-site.

☐	Lab Biomedical Waste Training Medical School Campus http://ehs.yale.edu/sites/default/files/files/biomedical-waste-procedures-medschool.pdf Science Hill Campus http://ehs.yale.edu/sites/default/files/files/biomedical-waste-procedures-sciencehill.pdf	Additional information regarding the proper handling procedures for biologically contaminated waste for the Medical School and Science Hill campuses

STEP 4: Participate in lab inspections with the EHS SA

Safety		
Inspection		**Description**
☐	Quarterly Radiation Safety Inspection	Confirms that radioactive materials are handled safely. Verifies that procedures are conducted in conformity with the authorized procedures approved by the Radiation Safety Committee. Documents compliance with Yale, State and Nuclear Regulatory Commission requirements.
☐	Annual Chemical Safety Inspection	Reviews the handling procedures and storage of hazardous chemicals. Checks that appropriate personal protective equipment is used for the level of risk involved. Verifies conformity with the University's Chemical Hygiene Plan.
☐	Annual Biosafety Inspection	Examines the laboratory facility and work practices used for handling biohazards to ensure compliance with Yale, State of CT, OSHA, CDC and NIH biosafety regulations, standards and guidelines.
☐	Hazardous Waste Satellite Area Accumulation Audit	Reviews waste handling and storage procedures for evaluation with US Environmental Protection Agency and State of CT Department of Energy & Environmental Protection.

We hope that this welcome and orientation letter is helpful in getting your lab off to a positive start. We also appreciate any feedback on the orientation information and encourage any comments you have that will help us improve the form or any aspect of our services. We look forward to working with you as your partner in safety and compliance. We wish you success in your research aims and efforts and look forward to greeting you upon your arrival. If you have any questions, please do not hesitate to contact us at 203-785-3550 and ask to speak with your EHS Safety Advisor.