

UIC MANUAL OF ACADEMIC AND ADMINISTRATIVE POLICIES AND PROCEDURES

SECTION: Administration **NUMBER:**

SUBJECT: VISITORS TO UIC CAMPUS LABORATORIES PROCEDURES

APPROVED BY: Chancellor **EFFECTIVE DATE:** September 12, 2007

SUPERSEDES: N/A

PGP ADMINISTRATOR: Vice Chancellor for Administrative Services

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NUMBER OF PAGES: 9

OBJECTIVE To ensure that all visitors entering laboratories have been informed of potential hazards and receive appropriate training.

AUTHORITY

Occupational Health and Safety Administration 29 Code of Federal Regulations 1910.1450
Occupational Exposure to Hazardous Chemicals in Laboratories

http://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1910

Centers for Disease Control 42 CFR 73 Possession, Use and Transfer of Select Agents and Toxins
<http://www.cdc.gov/od/sap/docs/42cfr73.pdf>

420 Illinois Compiled Statutes 40/1 Title 32, Chapter II, Subchapter b: Radiation Protection
<http://www.ilga.gov/legislation/ilcs/ilcs2.asp?ChapterID=37>

The General Rules Concerning University Organization and Procedure, Article V, Section 1 (a)

APPLICABILITY

This procedure applies to all facilities involved in laboratory operations that fall under the requirements of the OSHA Laboratory Standard (29 CFR 1910.1450) or have biological, radiological, or physical hazards.

DEFINITIONS

Collaborator – any person employed by an outside company or research institution who has been given permission by their employer and the UIC department to perform laboratory work at UIC.

Guest – a participant in a special program or tour who is not a student of or employed by the UIC that enters a laboratory on campus to observe laboratory work.

Laboratory – an area where chemical, radioactive, biological, or physical (e.g. lasers) manipulations are carried out.

Minor – any person less than 18 years of age who is not a UIC student.

Responsible Person – any person approved by a Principal Investigator (PI)/lab manager to oversee and/or supervise the activities of a visitor/volunteer/contractor while in the research facility.

School-aged students - students from primary and secondary schools visiting laboratories as part of educational programs under carefully controlled and supervised conditions.

Visitor - a collaborator, guest or volunteer.

Volunteer – any person who is not a UIC student or employed by the UIC who enters a research facility or laboratory on campus to conduct laboratory work activities. This shall include interns working on a stipend, spouses, or unpaid post-doctoral researchers.

PROCEDURE

1. General

- 1.1. Colleagues, prospective students, and others may be invited into laboratories for academic and research purposes. Non-work related visitors are discouraged.
- 1.2. The laboratory must be in full compliance with all safety regulations and program (UIC Chemical Hygiene Plan, Biological Safety Program, Radiation Safety Program, Animal Care Committee, Institutional Biosafety Committee (IBC), etc). Violations found during internal laboratory audits or by external agencies must be corrected or resolved prior to visitors entering the lab.
- 1.3. Each individual working in a laboratory should prudently consider the risks of their work to visitors.
- 1.4. No visitors are allowed in a laboratory actively conducting work with infectious materials. Collaborators must consult with the EHSO Biosafety Specialist if an exception is necessary.
- 1.5. No visitors are permitted in a select agent laboratory or storage area, except Centers for Disease Control (CDC) inspectors or authorized facility maintenance individuals who would be identified by official ID badges.
- 1.6. Visitors must wear appropriate personal protective equipment as outlined in the UIC Chemical Hygiene Plan, based on the hazards and level of visitor's activities in the lab.

2. Process

- 2.1. The attached flow chart shall be followed to determine requirements for visitors in the lab.
- 2.2. Anyone wanting to bring a visitor into a laboratory must first obtain the approval of the PI/lab manager and Department. Unauthorized persons will be reported to the PI/lab manager.
- 2.3. If the area does not meet the definition of laboratory, general rules for visitors to campus apply.
- 2.4. The PI/lab manager is responsible for ensuring that a collaborator has appropriate training and is aware of emergency response, waste handling, and other relevant procedures.
 - 2.4.1. The collaborator should inform their employer of his/her planned activities prior to commencing work at UIC.
- 2.5. Laboratory observations and tours
 - 2.5.1. Guests are not allowed in laboratories unless accompanied by the PI/ lab manager or tour guide (only UIC lab personnel over the age of 18)
 - 2.5.2. School-aged students occasionally may enter laboratories as part of educational programs under carefully controlled and supervised conditions for a walk-through or tour. Approval for these programs must be obtained in writing from EHSO.
 - 2.5.3. Before bringing visitors into a lab, a briefing should be provided regarding the location of

eyewash stations and safety showers, activities currently underway in the lab, where not to touch, what to do in case of an emergency, and building exit routes.

2.6. Volunteers

- 2.6.1. An Acceptance of Risk, Waiver and Release must be signed by all volunteers. A signed copy of the form must be maintained by the department in charge of the laboratory or facility.
- 2.6.2. Volunteers must complete laboratory safety training that is equivalent to the EHSO program for employees available at www.uic.edu/depts/envh.
- 2.6.3. Volunteers working in labs must undergo activity/area specific training provided by PI/lab manager or Chemical Hygiene Officer.
- 2.6.4. Volunteers must be aware of basic institutional life safety policies and must be familiar with the UIC Chemical Hygiene Plan.
- 2.6.5. Volunteers who will use radioactive material or ionizing radiation must have approval from Radiation Safety (6-7429).

2.7. Minors

- 2.7.1. An Acceptance of Risk, Waiver and Release must be signed by the minor and parent/legal guardian prior to working in a laboratory. A signed copy of the form must be submitted to EHSO for approval prior to commencement of work and a second copy maintained by the department.
 - 2.7.2. Hours of participation shall be limited per Federal Regulation 29 CFR 570.35. Less than 20 hours per week is recommended.
 - 2.7.3. The minor must complete "Laboratory Safety and Hazardous Waste Management" training on-line at www.uic.edu/depts/envh or equivalent, documented in-house training prior to working in the lab. Hazard specific training must be provided to the minor by the PI/lab manager.
 - 2.7.4. No volunteer under the age of eighteen may handle radioactive materials, work with animals, or be alone in a laboratory.
 - 2.7.5. No volunteer under the age of eighteen can handle human blood, human cell lines, or other material defined as "other potentially infectious materials" by OSHA (Bloodborne Pathogens Standard 29 CFR 1910.1030).
- 2.8. No one under the age of sixteen shall be allowed in any University laboratory, except as per Section 2.5.2.
- 2.8.1. Children who are not UIC students, UIC employees, part of a program, or volunteers are not allowed in laboratories.

MINORITY IMPACT STATEMENT

This PGP will have no disproportionate impact on UIC's minority faculty, students or staff.

REFERENCES

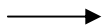
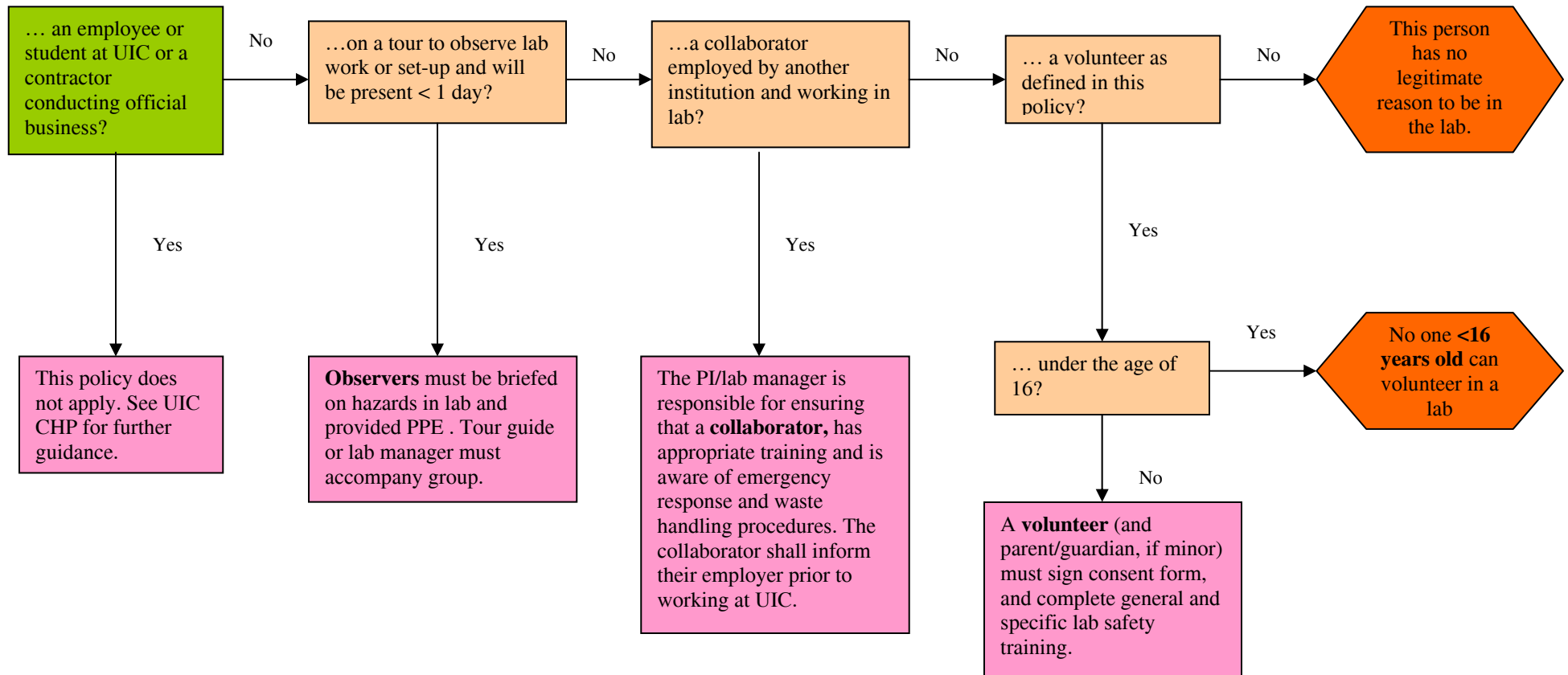
UIC Environmental Health and Safety Office, *Chemical Hygiene Plan* (Current Year)
29 CFR 1910.1450 Occupational Exposure to Hazardous Chemicals in Laboratories
42 CFR 73 Possession, Use and Transfer of Select Agents and Toxins
420 ILCS 40/1 Title 32, Chapter II, Subchapter b: Radiation Protection
UIC Environmental Health and Safety Office, *Biohazard Safety Program Manual* (Current Year)
29 CFR 1910.1030 Bloodborne Pathogens Standard

APPROVALS

Director, EHSO _____ Marilyn Hau _____ Date: _____ September 2007 _____

Vice Chancellor for Administrative Services _____ Joseph Muscarella _____
Date: _____ September 2007 _____

Is the person entering a lab...



ACCEPTANCE OF RISK, WAIVER AND RELEASE

***** ALL SPACES MUST BE FILLED COMPLETELY AND LEGIBLY *****

Date: _____ **Circle One > Fall Spr Sum 20** _____

Last Name: _____ **First Name:** _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

Phone #: _____ **E-mail:** _____

UIC Sponsor: _____ **Research Lab Bldg:** _____ **Room:** _____

Status (circle one): Volunteer Other – specify _____

I certify that I have read, understand and agree to follow the “Visitors to University of Illinois at Chicago (UIC) Campus Laboratories” Procedures (<http://www.uic.edu/depts/envh>), and any and all other rules, policies, and procedures applicable to laboratory research. I agree that prior to working in the lab I will complete on-line laboratory safety training, and any other required training, and will have read the UIC Chemical Hygiene Plan and Biosafety Manual. I also understand that failure to follow the Visitors to UIC Campus Laboratories procedures will result in suspension of my participation at any time.

I acknowledge and fully understand that research laboratories offer the use of dangerous hazardous materials, including but not limited to chemical, biological, and radioactive materials. I certify that I have read and understand the “Potential Hazards” sheet explaining the hazards involved in scientific research.

I acknowledge and fully understand that by working in a research laboratory, I will be engaging in activities that involve risks of severe and permanent disability, including but not limited to the loss of eyesight, respiratory difficulties, illness, and death, and that severe social and economic losses might result not only from my own actions, inaction or negligence, but the actions, inaction or negligence of others. I agree to wear protective equipment to minimize these risks.

I accept any and all risks of property damage, personal injury, permanent disability or death in connection with my visitation or work in the research lab.

I understand that The Board of Trustees of the University of Illinois (University) can neither eliminate all risk nor guarantee my personal health and safety while I am present in the research lab.

I acknowledge and fully understand that The Board of Trustees of the University of Illinois is not responsible, and assumes no liability, for any injuries to me, or damages that may result from my use of hazardous materials or presence in the lab; from my own negligence or misuse of the hazardous materials; or from another researcher’s actions.

In consideration for the University allowing me access to the research lab, I hereby release, indemnify and hold harmless The Board of Trustees of the University of Illinois, its trustees, officers, agents, employees, volunteers, and assigns of and from any and all claims arising out of or in any way connected with my access to the research lab, including but not limited to the risks outlined above. I understand that I have given up substantial rights by signing
ACCEPTANCE OF RISK, WAIVER AND RELEASE

this document, and sign it voluntarily. This waiver and release also binds my heirs and assignees.

I certify that I am over 18 years of age, and that I have read and fully understood the risks involved, my responsibilities, and the terms of this Acceptance of Risk, Waiver and Release. If I am under 18 years of age, I certify that my parent or legal guardian has been provided a copy of this release for review and has included his/her signature below.

Participant signature: _____

Printed name: _____ Date: _____

Consent and Release on Behalf of Minor

I am the parent or legal guardian of the above named minor. I certify that I carefully have read and understand the foregoing Acceptance of Risk, Waiver and Release and the "Potential Hazards" information sheet, and any other documents that I felt were necessary to giving my consent. I voluntarily agree to the terms of this document on behalf of my child or ward, a minor. Knowing the risks stated above, I consent to my child's/ward's presence and use of equipment and materials in the research lab.

Signature of parent or legal guardian: _____

Printed name: _____ Date: _____

Emergency Contact Information

Name: _____

Relationship: _____

Phone number: _____

POTENTIAL HAZARD INFORMATION SHEET

Scientific research involves exposure to various hazards. When deciding to allow your child to participate in research projects conducted in University of Illinois at Chicago laboratories, you need to be aware of the potential hazards he or she may encounter. The following information provides the most common potential hazards, but is not intended to be an exhaustive list of all potential hazards. Questions may be addressed to the minor's specific sponsor. If you have any further questions or concerns regarding this information please contact the Assistant Director of Chemical Safety (Cynthia Klein-Banai at cindy@uic.edu or 3-9706) or the Biosafety Specialist (Paul Umbeck at umbeck@uic.edu or 3-8732).

Definitions

Allergens - substances capable of producing an allergic reaction

Asphyxiant – a substance such as a gas or a toxin that causes a decrease in oxygen concentration or an increase of carbon dioxide concentration within the body

Carcinogens – substances capable of producing cancer

Mutagenic – agent (chemical or physical) capable of inducing genetic mutation

Pathogens – bacteria, viruses, prions, fungi, and parasites capable of causing diseases

Recombinant materials – DNA that has been genetically engineered (altered), usually incorporating DNA from more than one species of an organism

Transgenic – an organism that has had genes from another organism inserted into its genes

Toxins – poisonous substances produced by living organisms, plants and animals

Zoonotic diseases – diseases that can be passed from animals to humans

Potential Hazards

The research project may involve one or more of the following potential hazards. A table is attached with examples.

Chemicals – can be unstable, making them reactive and prone to explosion. Potential injuries include skin and eye burns, respiratory problems, allergic reactions, skin, eye, and mucous membrane irritation, and illnesses.

Pathogens – found in human, animal and plant tissue can cause infections and acute or chronic illnesses

Recombinant materials/technology – can interact with the human body and its cells and produce potentially hazardous results

Mechanical/electrical equipment and instrumentation – can cause electrocution, burns, cuts, scrapes and injuries from pinch points. High noise levels can cause hearing loss.

Radiation/irradiation – can cause skin and eye damage, cellular damage and long-term health problems.

Animals – can bite, scratch, transmit zoonotic diseases, such as rabies, toxoplasmosis, pox virus, cat bite fever, rat bite fever, and various parasitic infections, or release allergens.

Gas cylinders/compressed gases – gas cylinders with compressed gases can explode causing injury from high speed projectiles. Released gases can cause eye and skin irritations, respiratory problems, light-headedness, asphyxiation and fainting.

Definition	Hazards		Examples
Chemicals	Refined compound that could be in the form of a solid, liquid or gas. These may or may not be hazardous. Some compounds may have numerous hazard classifications (flammable, toxin & carcinogen)	Carcinogens: may cause some sort of cancer with long term exposure - usually many years in the future.	Benzene, acrylamide
		Teratogen: shown to affect the reproductive system of males & females. May cause birth defects in the developing fetus.	Alcohol, thalidomide, X-rays, acrylamide
		Neurotoxins: may affect the nervous system.	Ethidium Bromide, snake venom
		Flammables: will burn or explode	Alcohol, acetone, xylene
		Reactives: will react explosively	Peroxides, acrylamide
		Corrosives: will cause tissue damage with contact through inhalation, eye, skin, etc.	Acids & bases
		Toxins: may cause illness or death on exposure	Cyanide
Compressed gases	High-pressure cylinders that hold gases. These are usually large and heavy. Gas may be harmless, toxic, corrosive, flammable.	Physical hazard: Explosion hazard if they rupture. Asphyxiant hazard if they vent the gas to the workplace and it displaces oxygen.	Asphyxiant: nitrogen, helium, any other non-oxygen gas Flammable: hydrogen Toxic: Ammonia
Radiation/Radioactive materials	High energy particles (alpha and beta) or waves (X-rays)	Tissue and organ damage with high doses.	Uranium, Phosphorus32, Sodium35, X-rays
Physical hazards	Hazards from noise, machinery, heat, cold, broken glass etc.	Tissue damage and hearing loss	Scrapes, cuts Cold: liquid nitrogen, dry ice Heat: burners

Definition	Hazards		Examples
Biological Agents	Living organisms or products of living organisms such as viruses, bacteria, fungi, prions and parasites. Hazards from infection with these agents are organism dependent and can range from mild and treatable to severe and untreatable. Classification of hazard in four groups called biological safety levels with BSL1 as the least hazard and BSL4 as the extreme hazard.	BSL1 - No hazard	Baker's Yeast and E.coli K12
		BSL2 - Mild to severe illness	Influenza, Polio and Salmonella
		BSL3 - Severe illness and possible death	Tuberculosis and AIDS
		BSL4 - No such facilities are available at UIC	
Recombinant DNA	Genetically modified organisms with variations in genes within the organism	Often unknown consequences once introduced to the human body	Viral vectors like adeno and adeno-associated viruses used to transfect or express genes.
Toxins - microbial, plant, animal	Poisons produced by plants, living organisms or animals.	Tissue and organ damage or death	Plant - Ricin Animal - fish and snake venom Microbial - Staph, Tetanus