



MINORS IN RESEARCH LABORATORIES OR ANIMAL FACILITIES

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**FLORIDA ATLANTIC UNIVERSITY
EH&S POLICY**

**MINORS IN RESEARCH LABORATORIES
OR ANIMAL FACILITIES**

PURPOSE:

Florida Atlantic University (FAU) has a policy regarding Children in the Workplace (See http://www.fau.edu/policies/4.1.3_Children_in_the_Workplace.pdf). In keeping with FAU's mission of education and outreach, it may be appropriate for persons under the age of eighteen years to occasionally enter FAU research laboratories or animal facilities for educational purposes.

The purpose of this policy is to identify under what circumstances and/or conditions minors will be allowed to visit, work or conduct research in FAU research laboratories where hazardous materials are used or hazardous procedures are conducted, including animal facilities. These guidelines are necessary to help protect a minor's health and safety and to provide reasonable measures to prevent harm arising from potential exposure to hazardous agents or conditions.

DEFINITIONS:

"Minor" means any person who has not attained the age of 18 years.

"Laboratories" are rooms in which hazardous chemicals, radiation, or biological materials are handled or stored.

"Principal Investigator/Sponsor" means the person who is responsible for the research project or activity as well as the oversight of the participants in the research or activity, including any minors.

"Supervision" means management by overseeing the performance or operation of the person or group at all times in the laboratory or animal facility.

"Volunteer" means any person who provides services to FAU with no monetary or material compensation.

SCOPE:

This policy covers all FAU research laboratories where hazardous materials are used or hazardous procedures are conducted, animal facilities, animal procedure rooms, and animal housing areas.

This policy is directed to include all persons under age 18 whether students, employees or volunteers.

POLICY:

1. Minors who participated in a previously approved official FAU program are not allowed in FAU research facilities for any reason unless they have current approval. Approvals are based on specific projects and time frames of projects.

2. Minors are allowed to work or conduct research in laboratories (*except as prohibited in #3 below*) if the following requirements are met in full:

- a. **The minor is supervised by the Principal Investigator/Sponsor or his or her designee at all times while in the laboratory and never left alone.**
- b. The FAU EH&S Policy titled; MINORS IN RESEARCH LABORATORIES OR ANIMAL FACILITIES has been read and understood. THE POTENTIAL HAZARDS INFORMATION & SIGNATURE SHEET & RELEASE OF LIABILITY has been reviewed and signed by the parent/legal guardian and minor and returned to EH&S by mail or by fax.
- c. A MINORS RESEARCH PROPOSAL REGISTRATION FORM is submitted to and approved by EH&S and, if necessary, by the FAU Institutional Biosafety Committee and the Institutional Animal Care and Use Committee, if animals are involved.
- d. Hazard specific safety training is completed by the Principal Investigator/Sponsor with the minor as approved by EH&S.
- e. Personal protective equipment, specific to the hazard, is provided to the minor with instructions for use and disposal. **At a minimum, and without exception, minors must wear safety glasses, lab coat, long pants/slacks, and closed toed shoes at all times while in a laboratory.** Gloves must be worn when handling hazardous materials.
- f. The laboratory is in full compliance with all applicable FAU safety programs and regulations.

3. **All Minors are prohibited from working with the following:**

- a. Recombinant or infectious agents designated as BSL-3, ABSL-3 or higher.
- b. Select agents, controlled substances, or explosives.
- c. Radioactive materials or radiation (X-rays, gamma etc.), or lasers.
- d. Acute Toxins (i.e. mammalian LD50 of ≤ 100 ug/kg body weight).
- e. Animal work that involves any of the above materials or equipment.

ENFORCEMENT:

As with other policies affecting the use of hazardous materials, enforcement of this policy is the responsibility of the supervisor of the project or Principal Investigator.

**Parent/Legal Guardian Informed Consent and
Permission to Work in Florida Atlantic University Laboratories**
(Required for individuals under the age of eighteen)

Florida Atlantic University (FAU) conducts cutting edge scientific research and is dedicated to providing a healthy and safe environment for its faculty, staff, students and visitors, including minors participating in FAU programs. However, scientific research involves exposure to various hazards. When deciding to allow your child to participate in research projects conducted in FAU laboratories and animal facilities, 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.

Definitions

Allergens – substances capable of producing an allergic reaction.

Carcinogens – substances capable of producing cancer.

Pathogens – bacteria, viruses, Prions, fungi, parasites capable of causing diseases.

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

Your child's research project may involve one or more of the following potential hazards. A table is attached with examples. You can contact the lab manager or Environmental Health and Safety to obtain further information on specific hazards that may be used or encountered in the research laboratory.

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

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.

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

Lasers – device that emits light (electromagnetic radiation) and can cause eye and skin damage.

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

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.

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

**RELEASE OF LIABILITY, WAIVER OF CLAIMS, EXPRESS
ASSUMPTION OF RISKS, AND HOLD HARMLESS AGREEMENT**

I HAVE READ, UNDERSTAND, and INITIALED the Laboratory Rules and Potential Hazard Information Sheet describing the potential risks and dangers associated with my child's research project. I fully understand that there are potential risks and hazards associated with exposure to hazardous materials or substances.

I AGREE TO ALLOW my minor child to work in FAU laboratories and freely accept and assume all associated risks and hazards. I ALSO AGREE AND UNDERSTAND that my child's research project may be suspended at any time, at the discretion of Florida Atlantic University and its officers, agents, and employees, if the safety of my child, FAU employees and/or other volunteers at FAU become a concern.

I, for myself and my estate, heirs, administrators, executors, and assigns, hereby release and hold harmless the State of Florida, the Florida Atlantic University Board of Trustees, and their officers, directors, employees, representatives, agents, and volunteers (collectively, the "Releases"), from any and all liability and responsibility whatsoever, however caused, for any and all damages, claims, or causes of action that I, my estate, heirs, administrators, executors, or assigns may have for any loss, illness, personal injury, death, or property damage arising out of, connected with, or in any manner pertaining to my child's work in FAU laboratories, whether caused by the negligence of Releases or otherwise. I further hereby agree to defend, indemnify and hold harmless the Releases from any judgment, settlement, loss, liability, damage, or costs, including court costs and attorney fees that Releases may incur.

In signing this agreement, I acknowledge and represent that I have read and understand it and that I sign it voluntarily and for full and adequate consideration, fully intending to be bound by the same.

Printed Name of Minor Child

Signature of Parent/Legal Guardian

Printed Name of Parent/Legal Guardian

Date

I have read, understand, and will adhere to the FAU EH&S "Minors in Research Laboratories or Animal Facilities" Policy. I understand that failure to comply with this Policy is dangerous to my health and safety and that I may be removed from the facility immediately for any failures or deviations in compliance.

Signature of Minor

Date

**Please return the signed sheet by mail to
FAU Environmental Health & Safety
777 Glades Road, CO69, Room 112
Boca Raton, FL 33431
or by fax to 561-297-2210**

Potential Hazard Information Sheet

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
		Teratogen: shown to affect the reproductive system of males & females & may cause birth defects in the developing fetus.	Alcohol, thalidomide, X-rays
		Neurotoxins: may affect the nervous system.	Ethidium Bromide, snake venom
		Flammables: will burn or explode	Acetone, Xylene, Alcohol
		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 & 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 & it displaces oxygen	Asphyxiant: Nitrogen, helium, any other non-oxygen gas Flammable: Hydrogen Toxic: Ammonia
Radiation/Radioactive Materials	High energy particles (alpha & beta) or photon (X-rays, gamma)	Tissue & Organ damage with high doses	Uranium, Phosphorus32, Sodium35, X-rays
Physical hazards	Hazards from noise, machinery, heat, cold, etc.	Tissue damage, hearing loss	Scrapes, cuts Cold: liquid nitrogen, dry ice Heat: burners
Lasers	Light Amplification by Stimulated Emission of Radiation	Eye damage and possible skin damage	Class IIIB and IV, and open beam laser operation

P/LG Initials: _____ Date: _____

Potential Hazard Information Sheet

Definition	Hazards	Examples	
Biological Agents	Living organisms or products of living organisms such as Viruses, Bacteria, Fungi, Prions & Parasites. Hazards from infection with these agents are organism dependent & can range from mild treatable to severe untreatable. Classification of hazard in four groups called biological safety levels with level 1 as the least hazard & level 4 as the extreme hazard.	Level 1 - No hazard	Baker's Yeast & E. coli K12
		Level 2 - Mild to severe illness	Influenza, Polio & Salmonella
		Level 3 – Severe illness & possible death	Tuberculosis & AIDS
		Level 4 – Not allowed at FAU	Hemorrhagic fever
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 & Adeno-associated viruses used to transfect or express genes.
Toxins – Microbial, Plant, Animal	Poisons produced by plants, living organisms or animals.	Tissue & organ damage or death.	Plant – Ricin Animal – Fish & Snake venom Microbial – Staph, Tetanus

P/LG Initials: _____ Date: _____

RULES FOR MINORS WORKING IN LABORATORIES AND ANIMAL FACILITIES

- 1. Never work alone in any laboratory environment without direct, immediate adult supervision from the sponsor or someone designated by the sponsor.**
- 2. Always wear the personal protective equipment as directed and dispose of it appropriately. This personal protective equipment (PPE) includes goggles, gloves, coats/gowns, and other face/body protection as dictated by the hazard being worked with or around. Always remove PPE when leaving the work area.**
3. Always follow the instructions of the sponsor or laboratory supervisor.
4. Always report any accident (regardless of severity) immediately to the sponsor or laboratory supervisor.
5. Always keep your hands away from your face and wash them well with soap and water prior to leaving any laboratory area and after removing gloves.
6. Never eat, drink, chew gum, apply lip balm, or touch contact lenses while in any laboratory environment.
7. Always wear closed-toe shoes while in any laboratory.
8. Always tie back long hair to keep it out of all the hazards listed above.
9. Always wear clothing that reduces the amount of exposed skin.
10. Always ask questions if you don't understand the safety requirements.

P/LG Initials: _____ Date: _____

Minors Research Proposal Registration Form
(Please print, type or fill this form out on the computer)

EH&S Use Only
Minors Research Proposal
M

Proposals are due at the EH&S Office at least 2 weeks prior to beginning the work.

Principal Investigator/Sponsor: _____ Department: _____

Phone: _____ Email: _____

Student/Minor Name: _____ Date of birth: _____

School: _____

Is this project (check one)

- Student Intern Volunteering
 Employment Other (specify) _____

Part of a Florida Atlantic University Sponsored Program (which program?) _____

Other (explain) _____

This work will be performed in: BLDG _____, Room(s) _____

Project Title: _____

Project Start Date: _____ Project End Date: _____

Materials and Equipment to be Used - Check and List all that apply:

Chemicals

- Flammable
- Reactive
- Carcinogenic
- Toxic
- Corrosive
- Oxidizer
- Cryogen
- Pharmaceuticals
- Gasses

Biological Material

- Recombinant DNA
- Bacteria
- Viruses
- Fungi
- Parasites
- Human Source Material
- Insects
- Plants
- Animals

Equipment

- Fume Hood
- Biosafety Cabinet
- Laminar Clean Bench
- Autoclave
- Centrifuge
- Analytical Instruments
- Industrial Machinery
- Noise Producing Equip.
- Other Equipment

Project Description (attach separate sheet if necessary):

I AGREE TO SPONSOR (MINOR'S NAME) _____, AND BY MY SIGNATURE BELOW, AGREE THAT:

- I have read, understand, and will adhere to the FAU EH&S "Minors in Research Laboratories or Animal Facilities" Policy. The potential hazard information signature sheet is attached.
- I have completed this Minor's Hazard Specific Safety Training. Training was conducted by doing the following:

- Personal protective equipment appropriate for, and specific to, laboratory hazards will be provided.
- This individual will be supervised at all times while in the laboratory and never left alone.
- My laboratory is in full compliance with all applicable FAU safety programs and regulations.

Printed Name of PI/Sponsor

Signature of PI/Sponsor

Date

Institutional Biosafety Committee (IBC) Approval
(if required)

Initials _____
Date

Institutional Animal Care and Use Committee (IACUC) Approval
(if required)

Initials _____
Date

Environmental Health & Safety (EH&S) Approval

Initials _____
Date

**Please return this form by mail to
FAU Environmental Health & Safety
777 Glades Rd, CO 69, RM 112 Boca Raton, FL 33431
or by fax to 561-297-2210**