Summer Research Internship

Student Handbook

2012
Congratulations Summer Research Internship Participants!

Welcome to the 2012 Summer Research Internship Program. We are thrilled to have you join us and want you to be very proud of the accomplishment of being invited to participate; the selection process is highly competitive!

The committee wishes to recognize and acknowledge the degree of excellence and motivation you have demonstrated. This program is specifically focused on providing medical students, undergraduates, and high school students with research opportunities at Louisiana State University Health Sciences Center, Tulane Health Sciences Center, Pennington Biomedical Research Center, Children’s Hospital of New Orleans, and Ochsner Hospital. We are currently working to identify faculty members that best meet your research interests and goals. The faculty will be contacting you soon.

You should begin working with your mentor on June 1, 2012. You will receive three stipend checks during the summer. As part of this program, you are expected to do a literature search on your research topic and to participate in the weekly seminar series. You are required to attend Research Ethics training sessions (part of the weekly seminar series) and to present a poster of what you have learned at the Poster Day on July 30, 2012.

Thank you again for submitting such an outstanding application. We are looking forward to a fun and productive summer with you!

Sincerely,

Fern Tsien, Ph.D. Paula Gregory, Ph.D.
Instructor Associate Professor
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About the Program

LSUHSC has a number of summer research opportunities for student’s at all educational levels. The Summer Research Internship Program was started by Dr. Paula Gregory to provide research experiences for medical students, undergraduates, and high school students in Louisiana. The program works to cultivate students’ interest in pursuing research careers in either the basic or clinical sciences. Students usually spend 8-weeks in the program during the summer. Interns are matched with mentors in laboratories or clinics at Tulane University Health Sciences Center, Louisiana State University Health Sciences Center, Pennington Biomedical Research Center in Baton Rouge, Ochsner Hospital, or Children’s Hospital of New Orleans.

Dr. Fern Tsien co-directs the program and matches students with a research mentor, based on their individual research interests. Students learn laboratory techniques used in medical research and attend weekly seminars. All students present their research results at the end of the summer at a poster session. In addition, they receive training in presentation skills, including how to prepare and present a poster at a scientific meeting.

This program has succeeded in providing over 200 students with a meaningful research experience. Because of this program, some of Louisiana’s best and brightest undergraduates, who attend school elsewhere; have been introduced to the opportunities available in their home state. After completing their internship, many student interns present their data at scientific conferences, or have their research published in scientific journals.

This program is funded by the LSU School of Medicine, the Tulane School of Medicine, the Louisiana Vaccine Center, the National Institutes of Health, and the Patrick F. Taylor Foundation.

Expectations

As a participant you are required to meet the following expectations:

- To be present during scheduled hours, as determined by mentor and work on the research project according to the mentor’s instructions
- Attend the weekly seminar series
- High School, Undergraduate and Tulane Medical Students will present poster on July 30, 2012 and LSU Medical Student will present at Medical Student Research Day in the fall 2012.

Getting off to a Good Start: Settling in to your New Lab

Fitting comfortably into your lab or group, figuring out how things are done, and developing good relationships with your coworkers should be your first priorities. Each research unit has its own way of doing things. You will have to determine for yourself what the unwritten “rules” are for yours. What hours do most people work? Is there a laboratory standard for maintaining the lab notebooks? When and where are lab meetings held? Are reagents shared? If so, what is the system for ensuring that stocks are replaced when they get low? What training courses do you
need to complete? What computer programs are used in the lab? What is the dress code? How much chatting goes on? Are iPods and cell phones in use?

You can learn some from being a careful observer. Others you will have to ask about explicitly. In all cases, be courteous and enthusiastic. Write down any all directions. Make certain to do more than your share of the mundane work rather than less.

**If Problems Arise**

Where there are people, there is conflict. Sometimes conflicts are minor irritations forgotten after a short walk or a few hours away from the lab. Others are more serious, requiring you to talk to and negotiate outcomes with your lab mates and/or mentor. We hope that the conflict and tensions you experience in your lab will be settled by your mentor and that you view them as opportunities to improve your interpersonal skills. However, even with the best of intentions, you may find yourself embroiled in serious and complicated situations. Remember: You are not alone. There are resources to help you deal with any interpersonal issues that may come up. If you are experiencing conflict with someone in your lab, speak with him or her directly. If that does not resolve the issue, speak with your Principal Investigator (PI) mentor. If you are not comfortable doing that or if the situation is not easily resolved please contact Dr. Paula Gregory (pgrego@lsuhsc.edu; 504-568-6153) or Fern Tsien (fmille@lsuhsc.edu; 504-568-2080) to discuss confidentially any issues that arise.

**Dress Code**

To ensure the safety of our students, we require interns to follow Occupational Safety and Health Administration (OSHA) dress standards. This includes:

- No shorts, exposed midriffs, or open toed shoes
- Alternate appropriate dress code will be up to the discretion of your mentor
Important Information & Deadlines:

Abstracts are due July 16, 2012

Posters are due July 23, 2012

Poster Presentations and Award Ceremony will be 10:00 am- 2:00 pm, Monday, July 30, 2012

Medical Student Research Day will be in the fall 2012, exact date to be determined

Please note: High School Students, Undergraduate Students & Tulane Medical Students will present at Poster Presentation on July 30, 2012. LSU Medical Students will present at Medical Student Research Day in the fall of 2012.

Abstracts: An abstract is a one page long summary of your project. Include a title, your name, and your co-authors. We will send you a template form for you to populate. Please only use the template that we provide, it has all necessary information we need to include in a booklet that will be distributed during the poster session.

Posters: We will email you a poster template, with the correct logos to use for your poster- please only use the template and logos that we assign. Once you have finished your poster you will email the finished document to Heather Shields (hshie1@lsuhsc.edu) and we will print the poster.

Poster Guidelines:

- First, be sure your mentor approves of the information that you will be presenting in the poster
- Be sure you understand all information on your poster; you will be required to explain and answer questions.
- Only use the poster template we distribute
- Use at least a 24-point font size so the text will be visible from 3 to 5 feet away.
- Feel free to adjust the box sizes depending on the amount of text or figures you have.
- We encourage you to express yourself by using any color scheme you like!
- Posters are to be emailed as an attachment file to Heather Shields (hshie1@lsuhsc.edu)
- You are responsible for hanging your poster on the July 30, 2012. Plan to arrive on location at 9:00 am with your poster to hang.
- You are responsible for taking your poster down and the poster should be given to your mentor to hang.
Internet Usage Policy

Policy Statement

Use of the LSUHSC IT infrastructure is a revocable privilege granted to those with an official affiliation with LSUHSC. Access to specific services on the IT infrastructure is based on a business need. Access to the IT infrastructure, and any components on the infrastructure, requires authorization. The LSUHSC IT infrastructure must be used in a manner consistent with protecting patient care and the critical business functions of the organization. No one should perform any activity on the IT infrastructure that undermines the public’s confidence in LSUHSC to fulfill its mission.

Online Privacy Statement

Authorized LSUHSC staff may, at any time, for any reason, or without reason, access any device connected to the LSUHSC network such as a computer, its hard drives and component parts, monitor all contents, copy (download) any and all contents and use any such contents, for any purpose it deems necessary. All users are advised that they should have no expectation whatsoever of privacy as to any transmission/communication or image generated, received by, sent by, or stored in a computer. All users are advised that by using a computer on the LSUHSC IT infrastructure, they acknowledge that they are subject to the terms of this policy and that they give their unrestricted consent to the monitoring, copying, and unrestricted distribution of any transmission/communication or image generated, received by, sent by, or stored in the computer.

Acceptable Use Statement

All users of the IT infrastructure are expected to exhibit responsible behavior and shall:

- Comply with all federal and state laws, LSUHSC rules and policies, terms of Computing contracts, and software licensing rules.
- Obtain authorization to use LSUHSC computing resources.
- Be held responsible for the use of their assigned user ID. Sharing of user IDs and Passwords is prohibited.
- Obtain the proper authorization prior to accessing or sharing LSUHSC data.
- Actively participate and cooperate with ECS in the protection of the IT infrastructure against threats. For example, not opening E-mail from an unknown source, safeguarding passwords, reporting any violations of the acceptable use statement to the local support staff, and cooperating with the local support staff to keep security patches up to date on applications and computers.
- Take reasonable precaution to avoid introducing computer viruses into the LSUHSC network. For example, files downloaded from the Internet, received from E-mail, or brought in from outside LSUHSC must be scanned with ECS approved virus-scanning software. Anyone suspecting they may have a computer virus should contact their local support staff immediately.
All users of the IT infrastructure shall NOT:

- Engage in any activity that jeopardizes the availability, performance, integrity, or security of the IT infrastructure. Examples would be not installing FTP servers or web servers without consultation with ECS; not using peer-to-peer (P2P) applications that take up bandwidth for the downloading of music, games, and video; not releasing computer viruses or worms; and not deliberately or recklessly overloading access links or switching equipment through the use of streaming media such as web radio and other mechanisms.
- Use computing resources in a wasteful manner that creates a direct cost to LSUHSC. Some examples of waste are unnecessary backgrounds on E-mail taking up valuable storage space, spending time on the Internet for personal use, playing computer games, engaging in non-business related online chat groups, or printing multiple copies of documents.
- Use LSUHSC IT resources for personal monetary gain or commercial purposes not directly related to LSUHSC business or for functions that are not related to one’s job.
- Install, copy, or use any software in violation of licensing agreements, copyrights, or contracts.
- Send copies of documents or include the work of others that are in violation of copyright law in electronic communications.
- Obtain or attempt to access the files or electronic mail of others unless authorized by the owner or as required for legitimate business need, security issues, or investigative purposes. Disclosure of any information obtained must abide by existing policy, laws, and regulations.
- Harass, intimidate, or threaten others through electronic messages.
- Construct a false communication that appears to be from someone else.
- Send or forward unsolicited E-mail to lists of people you do not know. It places considerable strain on the E-mail system. Bulk mailing of information can be selectively used for business-related communication but must be approved at a level appropriate to the scope and content of the information. Contact ECS for help with bulk mailings.
- Send, forward, or reply to E-mail chain letters.
- “Reply to all” to mass E-mail mailings.
- Retransmit virus hoaxes.
- Create or transmit (other than for properly supervised and lawful research purposes) any offensive, obscene or indecent images, data or other material, or any data capable of being resolved into obscene or indecent images.

Amendments and Revisions

This policy shall be amended or revised as the need arises.

Enforcement of Policy

Noncompliance with this policy could result in disciplinary action up to and including
termination of employment, dismissal from an academic program, and civil or criminal liability.

**Laboratory Safety**

As part of the orientation process you will be required to attend Laboratory Safety training. Below is the outline for Laboratory Safety Class which will be presented by Jim Davis, Safety Officer, on June 1, 2012.

**Personal Protective Equipment (PPE)**

Below is the University policy on personal protective equipment (PPE), please familiarize yourself and adhere to these policies for your own personal safety.
Personal Protective Equipment

1.0 PURPOSE:

In order to protect the health of employees and students, and to maintain compliance with local, state, and federal guidelines, appropriate personal protective equipment (PPE) is required in areas where there is a risk of injury or exposure to hazardous substances.

The PPE program provides the LSU Health Sciences Center community (LSUHSC) with the necessary information to identify work situations that require the use of PPE, and information on the procurement, use, maintenance, and disposal of PPE.

2.0 SCOPE:

The use of appropriate PPE applies to all faculty, staff, students, visitors, contractors and volunteers. PPE includes all clothing and work accessories designed to protect employees from workplace hazards. Where possible, all personnel should work to develop engineering and/or administrative controls to reduce dependency on PPE.

3.0 RESPONSIBILITIES:

3.1 Environmental Health and Safety Department shall:
- Provide technical support and assist departments in implementing an effective PPE program.
- Provide training for PPE instruction as needed.
- Review/revise the PPE program for compliance with applicable regulations.

3.2 Supervisors/Principal Investigators (PI) shall:
- Conduct job safety analyses (JSA) in their work areas and maintain records. For more information on JSAs, refer to the Job Safety Analysis Procedures Policy, EHS200.10.
- Determine required PPE and order adequate supplies.
- Ensure proper disposal of PPE. Refer to the LSUHSC radiation safety manual, biological safety manual, and chemical safety manual for specific disposal information on PPE.
- Train employees on the proper use, care and cleaning of PPE. Maintain records of this training.
- Ensure employees wear the correct PPE for each job.
- Replace defective or damaged PPE immediately.
- Keep an adequate supply of PPE on hand.

3.3 Faculty, Staff, Students, Visitors and Volunteers shall:
- Wear required PPE.
• Maintain and store PPE in a clean and sanitary condition.
• Ensure PPE is in good operating condition at all times; never wear defective PPE.
• Report unsafe or unhealthy work conditions and job related injuries/illnesses immediately.

4.0 IMPLEMENTATION REQUIREMENTS:

4.1 General
There are three general methods for controlling exposure to hazardous substances: engineering controls, administrative controls, and PPE. These methods can be used to keep exposure below permissible exposure limits. The use of engineering controls is the preferred method for reducing employee exposure. When engineering controls are not sufficient to minimize exposure, PPE shall be used.

Protective equipment, including PPE for eyes, face, head, and extremities; protective clothing; respiratory devices; and protective shields and barriers shall be provided and used in the following circumstances:
• Where determined by a Supervisor/PI or Safety Specialist that PPE is necessary to protect the health and safety of employees from hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation, or physical contact.
• Where determined by a Supervisor/PI that engineering and/or supervisory controls do not reduce exposure potential to a safe level.
• Where development or installation of engineering controls are pending.
• During short term, non-routine operations where engineering controls are not practical.
• During emergency situations such as spills, ventilation malfunctions, etc.

4.2 Job Safety Analysis (JSA)
Supervisor/PI will assess jobs and evaluate engineering controls using Appendix A, JSA Form 1-00. If it is determined that hazards are present or are likely to be present which necessitate the use of PPE, then the supervisor/PI shall:
• Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the JSA.
• Communicate selection decisions to each affected employee.
• Provide PPE that properly fits each affected employee.

4.3 PPE Selection
Selection of PPE shall be based upon the body part that needs protection and on provision of a level of protection greater than the minimum required to protect the exposed employee from the potential or observed hazards. Defective or damaged personal protective equipment shall not be used at any time, and will be repaired or disposed of immediately.

4.3.1 Eye and Face Protection
The Supervisor/PI shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, bioaerosols, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious radiation.

4.3.2 Head Protection
The Supervisor/PI shall ensure that each affected employee wears a protective helmet when working in areas with a potential for injury to the head from falling objects, penetration, overhead beams/pipes, and overhead loads. Other head hazards that would require the use of protective headwear include extreme cold, chemicals, and electrical shock.

4.3.3 Foot Protection
The Supervisor/PI shall ensure that each affected employee uses protective footwear when working in areas with a danger of foot injuries due to falling or rolling objects, objects piercing the sole, and where employee’s feet are exposed to electrical hazards. Wet conditions and chemicals are hazards that should also be considered when choosing protective footwear.

4.3.4 Hand Protection
The Supervisor/PI shall select and require employees to use appropriate hand protection when employee hands are exposed to hazards such as those from skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burn, thermal burn, and harmful temperature extremes.

The Supervisor/PI shall base the selection of the appropriate hand protection on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration or use, and the hazards and potential hazards identified.

4.3.5 Hearing Protection
The Supervisor/PI will ensure that all employees assigned to work areas where noise levels exceed 85 decibels averaged over eight hours are enrolled in the LSUHSC Hearing Conservation program. For more information, refer to the LSUHSC Hearing Conservation Program Policy.

4.3.6 Respiratory Protection
The Supervisor/PI will ensure that all employees are provided with respirators when such equipment is necessary to protect the health of the employees. The Environmental Health and Safety Department provides respirator fit tests.

4.4.1 Payment for Protective Equipment
LSUHSC will provide all PPE at no cost to employees. LSUHSC must pay for replacement PPE, except when the employee has lost or intentionally damaged the PPE. LSUHSC is not required to pay for:

- Non-specialty PPE (e.g., safety-toe protective footwear and non-specialty prescription...
safety eyewear) if the employee wears such items off the job-site.

- Everyday clothing, such as long-sleeve shirts, long pants, street shoes, normal work boots or ordinary clothing.
- Items used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.
- Where an employee voluntarily provides adequate protective equipment he or she owns, LSUHC may allow the employee to use it and is not required to reimburse the employee for that equipment, or pay to replace the equipment. However, the Supervisor/PI must ensure the equipment is properly maintained.

**5.0 EMPLOYEE TRAINING AND EDUCATION:**

**5.1 Initial Training**
Prior to conducting work requiring the use of personal protective equipment, employees must be trained on the basics of PPE use. Any training format may be used as long as a hands-on session is incorporated.

**5.2 Refresher Training**
When a Supervisor/PI has a reason to believe that an affected employee who has already been trained does not have the understanding and skill required, the employee shall be retrained. Circumstances where retraining is required include, but are not limited to the below circumstances:

- Changes in the workplace render previous training obsolete.
- Changes in the types of PPE to be used render previous training obsolete.
- Inadequacies in an affected employee’s knowledge or use of assigned PPE.

**5.3 Training Elements**
Initial training shall include the following:

- When PPE is necessary.
- What type of PPE is necessary.
- How to properly don, doff adjust and wear the PPE.
- Limitations of the particular PPE.
- The proper care, maintenance, useful life and disposal of the PPE.

All training must be documented using Appendix B, PPE Training Certification Form.

**6.0 RECORDKEEPING:**

**6.1 Supervisor/Principle Investigator**
Supervisor/PI shall maintain a copy of employee training records for a minimum of six years.

**6.2 Environmental Health and Safety Department**
The EH&S Office shall maintain a copy of all training records for a minimum of six years.
7.0 INSPECTIONS AND PROGRAM REVIEW:
Program effectiveness will be assessed annually by the Environmental Health and Safety Department. Furthermore, program compliance will be evaluated at the General Safety Committee meetings and during routine laboratory inspections.

8.0 REFERENCES:
OSHA Regulation 29 CFR 1910 Subpart I - Personal Protective Equipment
1910.132- General Requirements
1910.133- Eye and Face Protection
1910.135- Head Protection
1910.136- Occupational Foot Protection
1910.137- Electrical Protective Devices
1910.138- Hand Protection

9.0 DEFINITIONS:
- **Administrative Controls** (work practice controls) are changes in work procedures, such as written safety policies, rules, supervision schedules, and training, with the goal of reducing the duration, frequency, and severity of exposure to hazardous chemicals or situations.
- **Engineering Controls** eliminate or reduce exposure to a chemical or physical hazard through the use or substitution of engineered machinery or equipment. Examples include: self-capping syringe needles, ventilation systems such as fume hoods, sound dampening materials to reduce noise levels, safety interlocks, and radiation shielding.
- **Job Safety Analysis (JSA)** is a systematic method of identifying hazards and control measures to safely perform a specific task. For more information, refer to the Job Safety Analysis Procedure Policy, EHS200.10.

ANIMAL SAFETY

For students working with animals, it is essential to understand animal safety. Prior to beginning any animal work, you are required to undergo animal safety training.