

Developing A Safety Culture in the Laboratory Environment

Presented by:
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Objectives

- Impact of injuries
- Safety at the UO
- Lab specific safety
- How to report hazards
- How to report injuries
- Resources for building safety culture



Impact of Injuries

- Employee impacts
 - Health (physical & mental)
- Financial impacts
 - Direct & indirect costs
- Operational impacts
 - Loss of key personnel
- Cultural impacts
 - Morale



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UO Safety - 2018

Total Injuries Reported = 440

Injury claims = 169

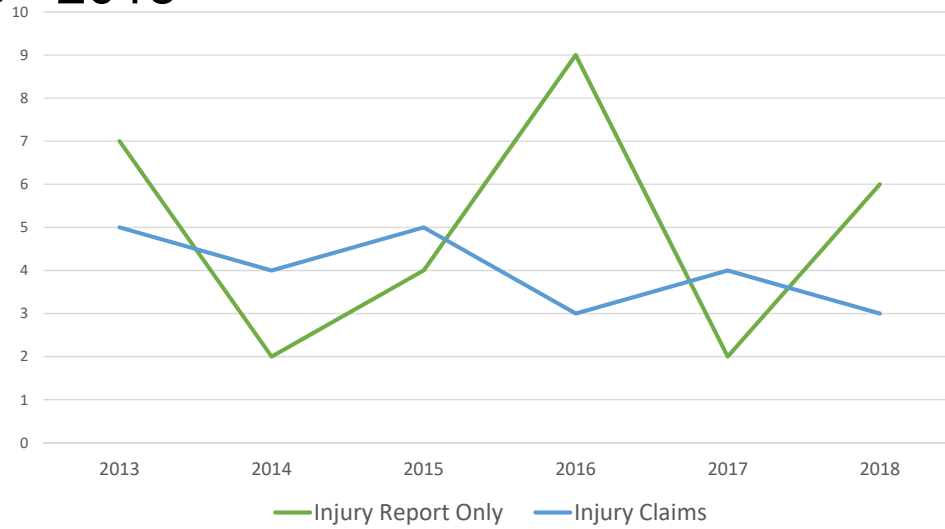
Injury claims without missing work = 119

Injury claims with lost work = 50

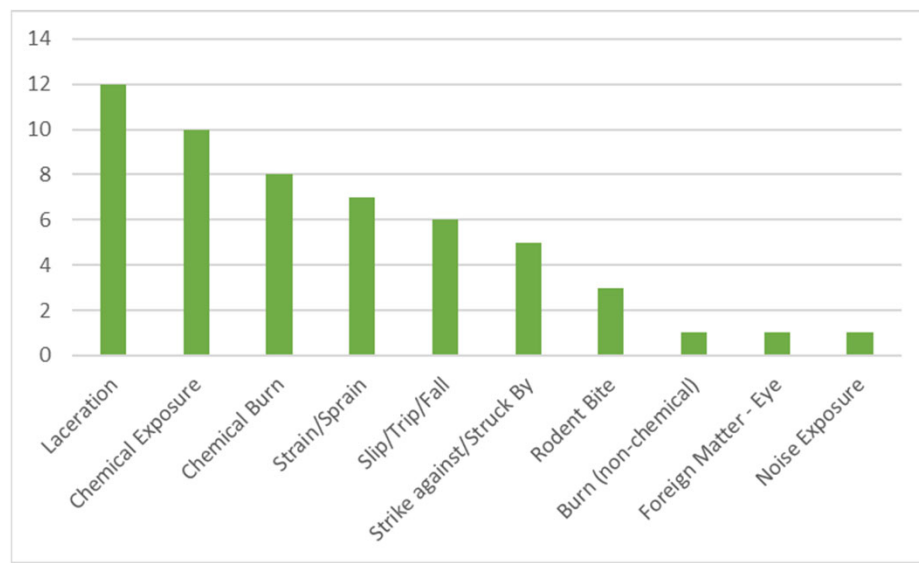


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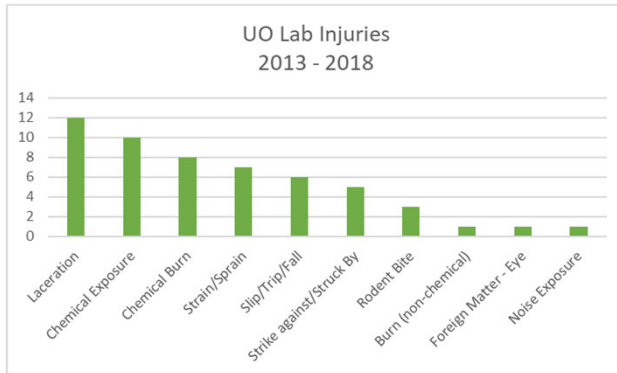
UO Lab Injuries 2013 - 2018



UO Lab Injuries 2013 - 2018



UO Lab Injuries 2013 - 2018



Incident Breakdown

- Total = 54 injury reports
- Average 9 reports/year
- 24 = first aid only
- 30 = medical claim

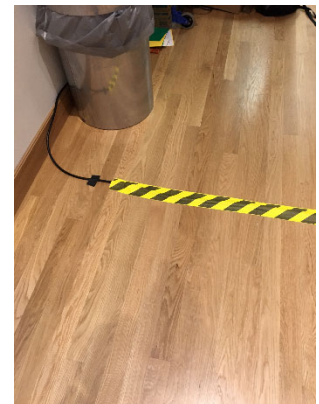


Safety Culture

Merriam-Webster:

- Set of shared attitudes, values, goals and practices that characterizes an institution or organization
- Culture is how you conduct yourself even when no one is looking.

How would you describe the safety culture in your work area?



Reporting Hazards

- **Imminent Danger:**

- Ok to intervene directly
- Or call EHS, UOPD, 911 etc.

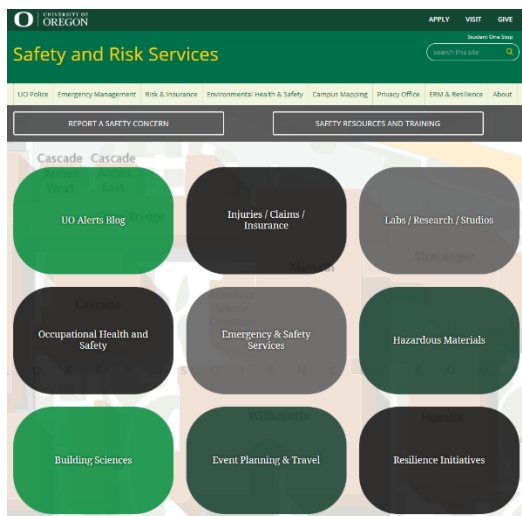


- **All Other Hazards:**

- If qualified, correct hazard
- If hazard is a “fix it” item, report to CPFM Work Control (6-2319)
- All other hazards
 1. Report to PI
 2. Use the “Report a Concern” online form for EHS assistance



Report A Concern safety.uoregon.edu




Reporting Injuries and Near Miss Incidents

- Report all injuries
 - Regardless of severity
 - As soon as possible
- Report Near Miss (Close Call) Incidents
- Report to PI
 - Use Workplace Injury Report
 - Send to workinjury@uoregon.edu

WORKPLACE INJURY REPORT

Safety and Risk Services
1200 University of Oregon
1715 Franklin Blvd., Suite 2A
Phone: 541-940-3192
Fax: 541-940-7008
workinjury@uoregon.edu

Instructions: To be completed by employee with a lead staff member, supervisor or manager WITHIN 24 HOURS of when employee reports a work-related injury, illness, or near miss. Complete ALL sections, do not leave any blanks.

Department _____ Date of Report _____
Date of Incident _____ Time of Incident _____ a.m. p.m.

Employee Information:

Employee Name: Last _____ First _____ Birth Date: _____ Position Title: _____
Employee Category: Regular, full-time Temporary UO Student Worker
 Regular, part-time Temporary Agency Volunteer
Working Days: M T W T F S S Working Hours: _____

Injury Information:

Nature of Injury: Burn Inflammation/Irritation
 Bruise Scratch/abrasions
 Cut Sprain/strain
 No injury Other _____

Cause of Injury: Burned by _____
 Cut by _____
 Contact with _____
 Struck by _____

Body Part Affected: Left Right Both
Fall/Slip/Trip: Different level Lifting
 Same level Bending/squatting
 Floor condition Holding/carrying
 Weather condition Pushing/pulling
 Over object Reaching
 On sidewalk/path Repetitive motion
 On stairs Stairs
 Footwear Twisting/turning
 Rushing Working

Treatment: Received 1st aid Will be seeking medical treatment
 Received medical treatment
(for fire workers' compensation claim complete ICS form)
 Hospital transport*
 Fatality**
 No treatment
 Other _____

Work Status: Left work early
 Missed work, date: _____
 No missed work

Was blood present? Yes No
If yes, was anyone exposed to blood? Yes** No
**If an employee was exposed to another person's blood or bodily fluids, please refer to exposure procedures at safety.uoregon.edu/bloodborne-pathogens



A Case Study for Reporting

Don't limit reporting to just injuries!

- Solvent spill, July 2018
- Toluene & methylene chloride being transported on a cart
- Cart tipped over spilling 3 bottles of toluene & 1 of methylene chloride
- EHS responded to support clean up, install temporary ventilation, ensure proper disposal, and verify safe conditions to reoccupy space
- Follow up included support on cart use



Building a Safety Culture

Internal support:

- Encourage injury reporting
- Encourage hazard reporting
- Demonstrate safe behaviors
- Hold self and others accountable to safe practices



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Building a Safety Culture

Internal support:

- Talk about hazards
- Talk about injuries
- Walk the walk
- Set clear expectations
 - Policy/procedures
 - Reporting hazards/injuries

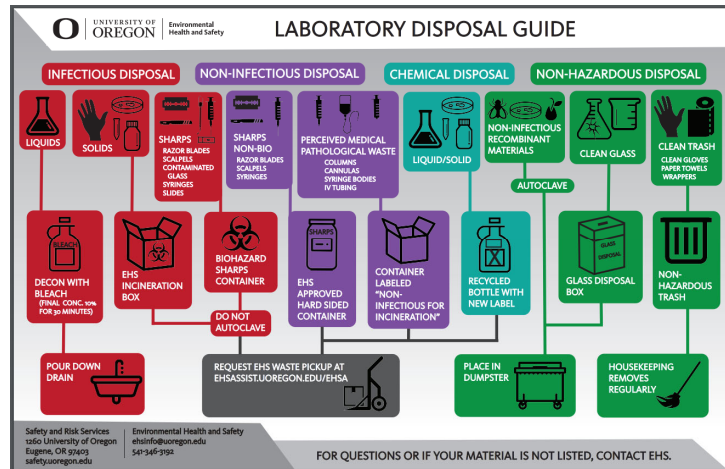


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Building A Safety Culture

Setting Expectations:

- Lab safety practices
- Housekeeping
- Chemical handling/storage
- PPE
- Disposal



Building a Safety Culture

Internal support:

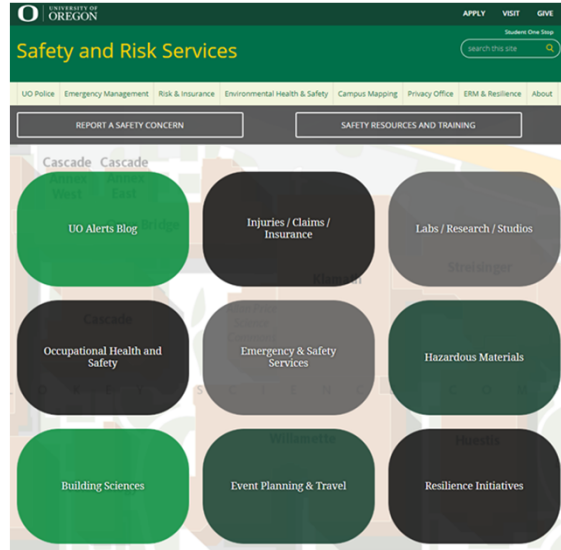
- Bring safety into regular communications
 - Staff meetings
 - Weekly emails
 - Newsletters
 - Safety committee
- Use EHS resources!



Building a Safety Culture

Safety Sheets!

safety.uoregon.edu



Lab Specific Topics

CHEMICAL INVENTORY

CHEMICAL INVENTORY
All hazardous materials owners (Principal Investigators or PI's, facility directors, shop managers, etc.) who use or store hazardous materials at the University of Oregon must maintain a written chemical inventory. A detailed inventory is required for compliance with various safety and environmental regulations, and to provide critical information to responders during an emergency.

CHEMICAL INVENTORY REQUIREMENTS:

- Occupation of new University of Oregon buildings and newly remediated laboratory spaces will be contingent on each "hazardous materials owner" providing accurate and detailed information to the University.
- Chemical inventories must contain the chemical name, quantity, CAS number, and storage room at a minimum, and be available in electronic form.
- EHS provides an online chemical inventory program for use by UO hazardous materials owners. safety.uoregon.edu/chemical-safety-division You will also find the following resources available:
 - An Excel inventory template
 - Several tutorials on using the EHS web interface
 - Contact information for technical assistance

EHS ONLINE INVENTORY PROGRAM:

- New Principal Investigators can request a user name and password from EHS to access the inventory program.
- Data housed within this database is available to chemical owners, their lab members, and EHS. This enables the University to fulfill reporting obligations to local, state, and federal authorities.
- Contact the Hazardous Materials Manager (6-9399) for more information.

LABORATORY HAZARD SIGNS

LABORATORY HAZARD SIGNS
are required for laboratories on campus that store or utilize hazardous materials and equipment. The signs provide general safety and hazard communication information for laboratory workers and visitors. Emergency hazard and after-hours contact information are provided for first responders who may have to enter the lab in an emergency.

TO OBTAIN OR UPDATE A SIGN:
Contact the Lab Safety Officer (6-9384) and provide the following information:

- An updated chemical inventory for the space see EHS Assistant or Excel
- A deactivation of non-chemical hazards in your lab
 - Gas cylinders
 - High voltage equipment
 - Lasers
 - Biological hazards
 - Radioactive hazards
- A completed contact information form with after-hours contact numbers for responsible parties for the lab.

EHS will create a sign using the above information and verify the contents with the lab's occupants prior to installation.

WHAT TO DO!

- Notify EHS if the hazards in your lab change
- Notify EHS if the hazards in your lab change
- Check the hazard signs before entering new labs
- If reporting an emergency provide the hazard ratings and contact info on signs to the call taker if possible
- Do not remove or cover hazard signs for your lab
- Direct all additional questions or concerns to EHS.

PERSONAL PROTECTIVE EQUIPMENT - LAB

PERSONAL PROTECTIVE EQUIPMENT (PPE) is required equipment worn on a person to lower or eliminate the potential risk of bodily injury or infection. PPE is a safety measure used when administrative and engineering controls are not enough. The type of PPE is determined based on the hazards presented to each position. There is baseline PPE that is required to work in all wet laboratories regardless of the task you are doing (safety glasses and gloves). Lab coats provide greater protection from chemical and fire hazards than street clothes. Additional PPE will be required based on the type of research activity and must be supplied by your lab.

COMMON PPE:

- Face masks or shields
- Gloves
- Lab coats
- Liquid resistant, Closed toe shoes
- Respirators
- Shoe covers
- Safety glasses or goggles

POTENTIAL HAZARDS:

- Chemical hazards
- Electrical hazards
- Environmental hazards
- Mechanical hazards
- Physical hazards
- Radiological hazards

WHAT TO DO!

- Always wear required PPE while in your lab!
- Check SDS for compatibility.
- Ask your PISupervisor if PPE is needed.
- Keep PPE clean, maintained, and properly fitted!
- Do not use damaged PPE, contact your PISupervisor.
- Always use the right PPE for the job. Do not substitute!
- Bring PPE concerns and questions to your PISupervisor.
- Direct additional questions or concerns to EHS.
- Report injuries to your supervisor immediately!
- In an emergency, call 911 and UOPD (541-345-2998) for immediate assistance!

CHEMICAL FUME HOODS

FUME HOODS
also known as, "chemical fume hoods" and "fume cabinets" are vented and protected work areas for conducting hazardous or noxious laboratory work. Fume hoods exhaust laboratory air directly out of the building independent of normal HVAC operations and remove vapors, gases, and airborne particles that are generated inside the unit. To receive adequate protection from fume hoods, laboratory users must follow fume hood best practices to ensure all airborne hazards are contained in the hood.

FUME HOOD COMPONENTS

- Fume hood sash: sliding glass partition to control front opening size
- Airfoil: molded front edge of hood to minimize turbulence
- Rear baffles: adjustable openings to control exhaust volume
- Flow alarm (if equipped): audio and/or visual low airflow warning
- Visual flow indicator (present on all hoods): flagging tape on bottom of hood sash

PROPER FUME HOOD USE:

- Keep all work inches back from the fume hood face to ensure all vapors and gases are trapped in the hood.
- Never raise the sash above the maximum working height that is marked on the fume hood.
- If working with heavier-than-air gases or vapors, lower the sash as far as possible to increase containment.
- If the fume hood alarm is sounding or no movement is visible on the visual flow indicator, stop work immediately and contact EHS for testing and to schedule repairs.
- If large equipment is stored in a hood, raise it on blocks to maintain airflow to the rear baffles.



General Topics

UNIVERSITY OF OREGON SLIPS, TRIPS, AND FALLS

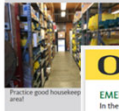
SLIPS, TRIPS, AND FALLS
are some of the leading causes of injury or death in the workplace. Usually these occur because of loss of traction or contact with a fixed or movable object along a walking or working surface. There are a variety of environmental and behavioral hazards that can set the stage for a slip, trip, or fall. A few common hazard examples include: debris, spills, surfaces in disrepair, the wrong shoes, and weather related conditions. Being aware of these and other possible hazards can help lower the potential for incidents to yourself and your coworkers.

EXAMPLE BEST PRACTICES:

- Be aware of wet conditions
- Do not place cords or hoses in pathways
- Do not use pathways for storage
- Keep floors dry and free of spills
- Use caution signs in wet floor areas
- Use fall protection, if required in the area
- Wear appropriate shoes with traction
- Use handrails on stairs when going up and down
- Look up, face forward, and pay attention
- Do not text or read while walking
- When walking inside from outside, take the time to dry your shoes on the mats before proceeding

WHAT TO DO!

- Follow the example best practices above!
- Recognize hazards. Address them if you are qualified. If not, contact your supervisor or CFFM's Work Control (541-346-2398).
- Bring questions and injuries to your supervisor!
- Direct additional questions to EHS.
- In an emergency, call 911 and UOPDS(541-346-2399 for immediate assistance!



Look up, face forward, or attention!



UNIVERSITY OF OREGON EMERGENCY CONTACTS

EMERGENCY CONTACTS
In the event of an emergency, establishing an emergency contact(s) allows the University or first responders to notify your loved ones. There are three ways to make this information available. Utilizing all three creates the best chance of a quick notification to your contact(s).

DUCKWEB

Is the preferred choice for housing emergency contact(s). HR (human resources) securely retains this information and can dispense it to managers, supervisors, first responders, or other necessary parties in the event of an emergency. Upon initial hire, you will receive a prompt to provide this voluntary information, but it can be updated at anytime. Follow these steps:

- Visit duckweb.uoregon.edu or follow the "duckweb" link at the bottom of the homepage
- Login using your UO ID and PAC
- Under "Personal Information" click on "Update Emergency Contacts"

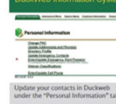
YOUR SUPERVISOR

Is often on-site in the workplace with you. By sharing your contacts with them, they can quickly notify your loved ones in the event of an emergency. However, if your supervisor is not available, there may be no way for others to access the information.

SMARTPHONE'S MEDICAL ID

Many smartphones offer a medical ID feature. Should you be found incapacitated with your phone, the feature can be accessed even while the phone is locked. The layout and setup are unique to the operating system of the phone. I.e. Apple, Android, etc. Some phones will allow allergies or important health information to be displayed with your emergency contact(s).

DuckWeb Information System



UNIVERSITY OF OREGON EARTHQUAKE

- BEFORE**
1. Conduct a "nonstructural" assessment of your space.
 - Identify primary and secondary evacuation routes.
 - Move large or bulky material (boxes, heavy binders, etc.) to lower shelves to prevent falling items from causing injuries.
 - Secure heavy furniture to the wall (contact CFFM or your facility manager for assistance) to prevent injury or blocked evacuation paths.
 2. Identify safe places to drop, cover, and hold in rooms or buildings where you regularly spend time.

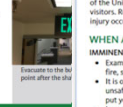


Drop, take cover under sturdy furniture, and hold on to it.

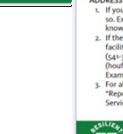
DURING



Stay away from wall that could fall.



Invisible to the eye point after the shut.



Holdings until declared safe by titles.

UNIVERSITY OF OREGON HAZARD REPORTING

WHAT IS A HAZARD?
Activities or environmental factors in the workplace that could potentially lead to ill health effects, injury, or death. Not as common, imminent danger is a hazard that could immediately result in severe physical harm or loss of life. The University consists of numerous workplaces with different and evolving hazards.

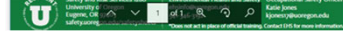
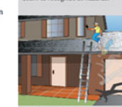


WHY SHOULD I REPORT?
Safety is a collective goal. Reporting improves the safety of the University for you, faculty, staff, students, and visitors. Recognize and address or report all hazards. If an injury occurs, tell your supervisor immediately.

WHEN AND HOW DO I REPORT?
IMMINENT DANGER:

- Examples: on a roof's edge without fall protection, fire, standing on the top rung of a ladder, etc...
- It is okay to make contact with the person doing unsafe work, if doing so will not cause an injury or put yourself in danger.

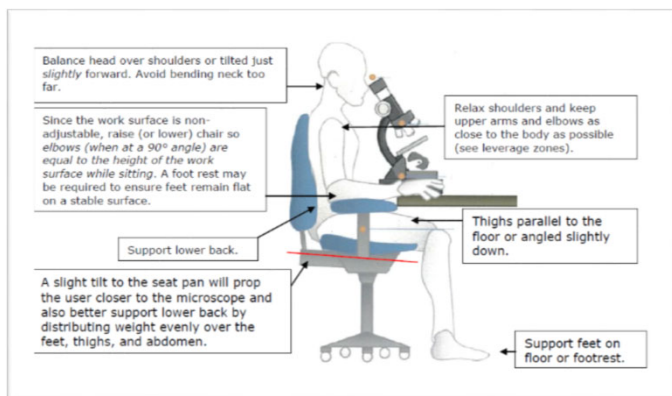
- ADDRESS ALL OTHER HAZARDS:**
1. If you are qualified and able to address the hazard, do so. Examples: tape down cords, move a chair, clean a broken spill, etc...
 2. If the hazard is something easily addressed through facilities, contact CFFM's Work Control (541-346-2399) or Housing Customer Service (houfacaff.uoregon.edu).
 3. For all other hazards, tell your supervisor and use the "Report a Concern" form on the Safety & Risk Services site: safety.uoregon.edu.



Building a Safety Culture

EHS Support

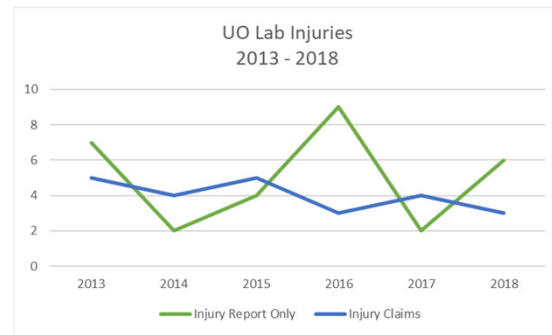
- Training
- Hazard assessments
- Ergonomic assessments
- Workplace inspections



Building a Safety Culture

EHS Support

- Consultations
 - Internal Resources
 - External Resources
- Injury/near miss data
 - Safety committees
 - Safety meetings



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Wrap up...

EHS wants to partner with you to build your safety culture!

- We are not the “NO” people.
- We are the “Yes... but let’s think about it and come up with a plan first” people!
- We’d love to partner with you to help you meet your goals safely!



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QUESTIONS?

EHS Contacts:

Hallie Hoskins

Lab Safety Manger and Biosafety Officer

Office: 541-346-3476

hallieh@uoregon.edu

Laurie Graham

Laboratory Safety Officer

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