Lab Safety Teams at Michigan Tech: Student efforts to promote safety within the Chemistry department and beyond

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Outline

• What’s my story?
• The Chemistry Graduate Safety Committee
• Supporting Graduate Safety Education and Training
  • The role of the ACS CHAS Division
  • The role of Champions (Faculty, Staff, Department, Research Integrity)
  • The role of the Student Researchers
• What we’ve learned
• Moving Forward
One does not choose the lab safety life

The lab safety life chooses them
What’s my story?

- Started Grad School in Fall 2018
- Research in Organic Synthesis and Chemical Biology
- Lack of adequate preparation to work safely in the lab

Improving the academic safety culture: the place of LST – ACS GP Chemist
• Formed in Spring 2021
  • MTU Registered Student Organization
  • ACS Graduate Student Organization
• Consists of
  • Lab Safety officers (Emergency Contacts), Personnel from the Research Integrity Office, a Faculty champion, and *Undergraduates in research labs*
• **Our mission:** to increase safety awareness and improve the safety culture within the department through student engagement in safety-related discourses.

To provide a platform where graduate researchers working within chemical labs can teach and learn about safer laboratory practices while building their safety leadership skills.

8/20/23
Some Notable Members

Adelina Oronova
Alexander Apostle
Sodiq Waheed, PhD
Priyanka Kadav, PhD
Nazar Gora
Alex Ismail
Devrim Durur
Dilka Arachchige
Supporting Graduate Safety Education and Training

- The role of the ACS CHAS Division
- The role of Champions (Faculty, Department, Research Integrity)
- The role of the Student Researchers
The role of ACS CHAS Division

- Peer-Led Workshops
  - Lab Safety Teams (LST) Workshop
    - Acknowledging the voices and experiences of student researchers
    - Professional development opportunities
  - RAMP Workshop
- LST Quick Connections
  - LST leaders sharing best practices
The role of Champions

- Faculty, Staff & Department
- Research Integrity Office
Importance of a Champion

“A person who enthusiastically supports, defends, or fights for a person, belief, right, or principle.”

"A true champion without a cause is entrapped energy. A great cause without a champion is but an elusive dream. But with a great cause with a true champion is the realization of a vision"

- Robert Porter Lynch

Listen to Needs  Give Advice  Advocate  Empower  Provide/Seek Support

https://dx.doi.org/10.1021/acs.chas.0c00016, ACS Chem. Health Saf. 2020, 27, 170−182
The role of Faculty and the Department

“Hello Grads,

I'd like to support several graduate students from different labs to attend this workshop, “Empowering Academic Researchers To Strengthen Safety Culture.” The department will cover the $25 fee for up to 8 participants.

Please let me know if you'd like to register for this.
Dr. Sarah A. Green (former dept chair)"

“Hello Mikhail, Monica, Parya, Adelina, Abhijeet, Alexander, and Shulin,

Please go ahead and register for the workshop, then send the receipt for $25 to Charlene for reimbursement.

We will want to see your certificate when you complete the workshop after November 12th. And let's plan a session afterward for you to report back to the department.

Thanks for volunteering to do this!
Sarah”
The role of Faculty and the Department

Empower:

to encourage and support the ability to do something.

Empowering Academic Researchers to Strengthen Safety Culture:
An American Chemical Society Workshop

An account given by: Alexander Apostle, Adelina Oronova, Parya Siahcheshm, Komal Chiller, Abhijaiti Pati, and Monica Nyansa

Empowering Academic Researchers to Strengthen Safety Culture

November 12, 2020
Facilitators: Jessica Beilng, University of Iowa
Sarah Ziva, University of Chicago

Workshop Leader: Jessica A. Martin, University of Connecticut
CHAS Coordinator: Dr. Kell A. Miller
The role of Faculty and the Department

Empower:

to encourage and support the ability to do something.

“Thanks to students Abhijeet Patil, Adelina Oronova, Alexander Apostle, Komal Chillar, Monica Nyansa, and Parya Siahcheshm for their Dec 11th presentation "Reflecting On Safety During The Holiday Season."

The first outcome of that event is a new graduate safety committee, which will have its first meeting soon.

Grad students, note this article:

The Joint Safety Team at the University of Minnesota, Twin Cities: A Model for Student-Led Safety
The role of Faculty and the Department

Listen to Needs

Mercury Thermometer Collection

Lab Coat Laundry

SAFETY SIGNAGE CAMPAIGN
The role of Faculty and the Department

Annual Hands-on Fire Extinguisher Training

FIRE EXTINGUISHER SAFETY EVENT AND ICE CREAM SOCIAL
Learn how to safely use a fire extinguisher while having ice cream

DATE
FRIDAY 17TH SEPTEMBER, 2021

TIME
3-5 PM

LOCATION
Gravel Parking Lot by the Basketball Fields on Campus

Please RSVP as we need a head count!

Email chemsafetycom_l@mtu.edu with any questions or concerns

Chemistry Graduate Safety Committee (CGSC)

Michigan Tech
The role of Faculty and the Department

Annual Departmental Lab Clean-Up and Safety Chat

DEPARTMENTAL LAB CLEAN UP, LUNCH AND SAFETY CHAT EVENT

Date - Tuesday, June 20, 2023
Time - 10 AM - 2 PM

Location For Lunch & Safety Chat - Lawn in front of ROTC

Please RSVP as we need a head count

1 LAB CLEAN UP
   10 AM - 12 PM

2 VOLUNTARY LAB WALKTHROUGH
   12 PM - 12:30 PM

3 LUNCH & SAFETY CHAT
   12:30 PM - 2 PM

Email chemsafetycoml@mtu.edu with any questions or concerns

Chemistry Graduate Safety Committee

Michigan Tech
The role of Faculty and the Department

- Departmental Ambassador Award

Michigan Technological University
Department of Chemistry

2021-2022 Ambassador Award

Advocate:

to publicly support or suggest an idea, development, or way of doing something

- Nominations for Awards

- Recommendation Letters

GRADUATE STUDENT SAFETY LEADERSHIP AWARD
The role of Faculty and the Department

- Chemistry Graduate Safety Committee Website

Advocate:
to publicly support or suggest an idea, development, or way of doing something
The role of Research Integrity/ EH&S

Advocate:
to publicly support or suggest an idea, development, or way of doing something

Jeffrey Lewin
Director of Chemical Laboratory Operations

David Dixon
Director of Biological Laboratory Operations

DEPARTMENTAL LAB CLEAN UP AND LUNCH AND SAFETY CHAT EVENT

DATE
MONDAY, JULY 11, 2022

TIME
10 AM TO 2 PM

PROGRAM OUTLINE
10 AM TO 12 PM: LAB CLEAN UP

12 PM TO 12:30 PM: VOLUNTARY LAB WALKTHROUGHS

12:30 PM TO 2PM: LUNCH AND SAFETY CHAT (There will be a short interactive presentation by Jeffrey Lewin from Research Integrity on managing hazardous waste in the lab)

LOCATION FOR LUNCH AND SAFETY CHAT: Chemistry Learning Center, RM 208

Please RSVP as we need a head count

Email chmsafetycom-l@mtu.edu with any questions or concerns

Chemistry Graduate Safety Committee (CGSC)
The role of Research Integrity/ EH&S

Financial Support to Conferences

Advocate:
to publicly support or suggest an idea, development, or way of doing something

CSHEMA 2023 @ Boston
The role of Faculty and Research Integrity

Advocate: to publicly support or suggest an idea, development, or way of doing something

- Beyond the Chemistry Department

Invitation to Present about CGSC initiatives at the University CHO meeting

Connecting CGSC to interested departments and Colleges within MTU:
- College of Forest Resources and Environmental Sciences)Chemical
- Department of Engineering
- Department of Civil, Environmental and Geospatial Engineering
The role of the student researchers

• Recognizing the relevance of this professional development opportunity as part of their education
• Monthly Lab Safety Officer meeting
• Periodic Emergency kit inspection
• Registering as a student organization
• LSO Guidebook (Adapted from UMN JST LSO Guidebook)
What We’ve Learned

Improving and maintaining a positive safety culture

"A true champion without a cause is entrapped energy. A great cause without a champion is but an elusive dream. But with a great cause with a true champion is the realization of a vision"

- Robert Porter Lynch
Moving Forward

• Mentoring and empowering the next generation of safety leaders within the department
Acknowledgment

Dr. Green, Charlene and Megan