### University of Iowa Chemical Safety and Responsibility Stewards: Finding Our Place in the Chemistry Department

Jessica L DeYoung, Lindsey C Applegate, Hannah T Nennig, Madeline J Parker, Leah J Scharlott

University of Iowa

Division of Chemical Health and Safety Awards Symposia

# Why should safety be a priority *for students*?

There are a lot of things competing for a graduate student's attention

Some are mandatory (teaching, research, lab duties)

Some are "optional" think more professional development type opportunities









After graduation, student's pathway often will depend on the skillsets they develop in the "optional" activities

### Background of JST



Inform & Reform

The University of Minnesota formed Joint Safety Teams to bridge gaps in communication and to address frustration of the front-line workers

Since this, the organizations have shown to be useful in discussions of issues often resulting in resolutions that benefit both the authority of the organization and the students.

Epinasse, A., et al. (2020).

### Forming the CSARs

The Chemical Safety and Responsibility Stewards (CSARs) were formed in 2017

The cited influence was the University of Minnesota and their success in bridging the gap between front-line researchers (like graduate students and post-docs) and the institutional powers that be

As we have grown, there has been heavy influence of the ACS workshop *Empowering Academic researchers to strengthen safety culture* 



(Martin, Miller et al. 2020)

### What do JST's do?



(Martin, Miller et al. 2020)

### How does this fit into "finding your place"?

How we exist (and why we chose these specific routes) What (if anything) you should take away from this presentation

What we do and how it impacts the department

### How does the CSARS exist at lowa?



Two highlights here

1. We are an organization focused on safety at UI

2. We function more as a platform for students to lead and get involved with inspired and created initiatives

### ACS funding and RSO status

**Organization at UI** 

for our own funding

ross departments

or events on

### <u>Resident St</u> Organizatio

- 1. Funding α for small g
- 2. Helps with ne across institution
- 3. Membership discounts

External funding provides programming for the department and helps students with funding practice.



Madeline Parker

### Maintaining the safety cabinets



### Coffee hour with EHS

Pre- research ramp up th health and safety rer the right) met with discuss what is head to decide

Launching

January 202

It is important to provide a space for students to address safety questions/ concerns without fear of repercussions. Justice

lars

ding for ng attendance st students rnals within the c they might not be s with access to ming like this that could

-p them

### Outreach with local middle schools

Local schools hav the department get some infor videos based curriculum

We collaborat -grade class to videos with a spa emphasis focusing for each of the demonstrations we chose

Outreach can help show what chemists do and why our safety measures are important.



#### Hannah Nennig

# First year training videos

There are some inst specific safety reg day- to- day- la there is some be universal. on creating y highlight fur concepts/h for various d tasks as a res undergraduat career graduate

Making safety information readily available can lessen barriers for all researchers. Liquid Nitrogen

ox Etiquette

nators on



Lindsey Applegate

### ACS workshop involvement

As means to grow or network, we have been a part of r and facilitatin Empowering Researchers Safety Cultu

Being a part of a bigger project can benefit students and their home institutions.

Lindsey Applegate

**Allison Devitt** 

ACS Division of Chemical

Health and Safety

aculty, staff, postdocs, & students

ical Safety & ponsibility ewards

afety

ical

ure

grams

rchers

Safety Liaisons

 $(\mathcal{S})$ 

### **COVID** response

A student represent was chosen to be research ramp

With this, it the faculty the faculty the faculty the star as we were as we were as research

Individual students, as well as student organizations, can help bridge the gap of communication in the institutional hierarchy.

This provided a p contact for students address issues that would brought up to the committee vibuting documents outline building pectations

a survey after art of classes to ess the situation of RAs and TAs

### Highlighting initiatives

We want to make sure summer we focuse why they joined

#### is appreciated so last their efforts and

### These highlighters under



"Hello! I'm a third year (almost fourth, yikes) graduate student in the Forbes group. I love being involved with CSARS because safety is very important to me and I want to be able to pass that on and promote it in the department. By having strong department-wide safety culture, we can both prevent accidents and be better equipped to deal with those that may occur. My focus for CSARS is running practice lab walkthroughs to prep for EHS audits. Even if you don't have an audit coming up and just want a safety spot-check, let me know! It's important to keep our labs properly safe and in order all the time!" Showing that you value student's work can boost morale and advertise opportunity for prospective participants.

> share when extend my knowledge of salety while being part of this team!

es- helping artment



#### **Ethan Fuhrmar**

-year grad student in Dr. Stone's Coming from a public health id, I was drawn to CSARS for its focus in fostering a robust safety culture oughout the program. I strongly believe that a safe workplace is everybody's - from students to administrators - responsibility, and this is especially important in chemistry. I hope to stay with CSARS throughout my tenure at UI to ensure that the safety culture they promote becomes fully intertwined into the fabric of the UI Chemistry Department.

### What does the future hold?



# Giveaways of secondary containment for NMR tubes

Thank you!



The Safe- tee awards where members of the department can nominate their peers for



16

### Conclusions (if you remember anythingremember this)

Developing skills outside the laboratory will help students after graduation JSTs exist both to help bridge gaps in departments but also to provide necessary skill development When it comes to laboratory safetyask the students (they will tell you what the issues are)

If you build it- they will come- providing a platform for students to pursue their own interests will Include graduate students on faculty committees- it is helpful for bridging gaps in communication

The best way to make change at an institution is to first know how things work. You can't expect substantial change when you are unaware of who to talk to or how to approach an issue.

### Thank you!





Jessica Martin



ommittee ACS Chemical mical Safety Safety Programs

ACS Division of Chemical Health and Safety

Empowering Academic Researchers to Strengthen Safety Culture

## References

Epinasse, A.; Jayaraman, A.; Reisbick, S. A.; Harris, C. M.; Kou, Y.; Xu, H.; Anderson, C. B.; Bader, T. K.; Sitek, A. A., The Joint Safety Team at the University of Minnesota, Twin Cities: A Model for Student- Led Safety. *Journal of Chemical Education* **2020**, *98*, 158-166.

Martin, J. A.; Miller, K. A.; Pinkhassik, E., Starting and Sustaining a Laboratory Safety Team (LST). *ACS Chemical Health & Safety* **2020**, *27*, 170-182.