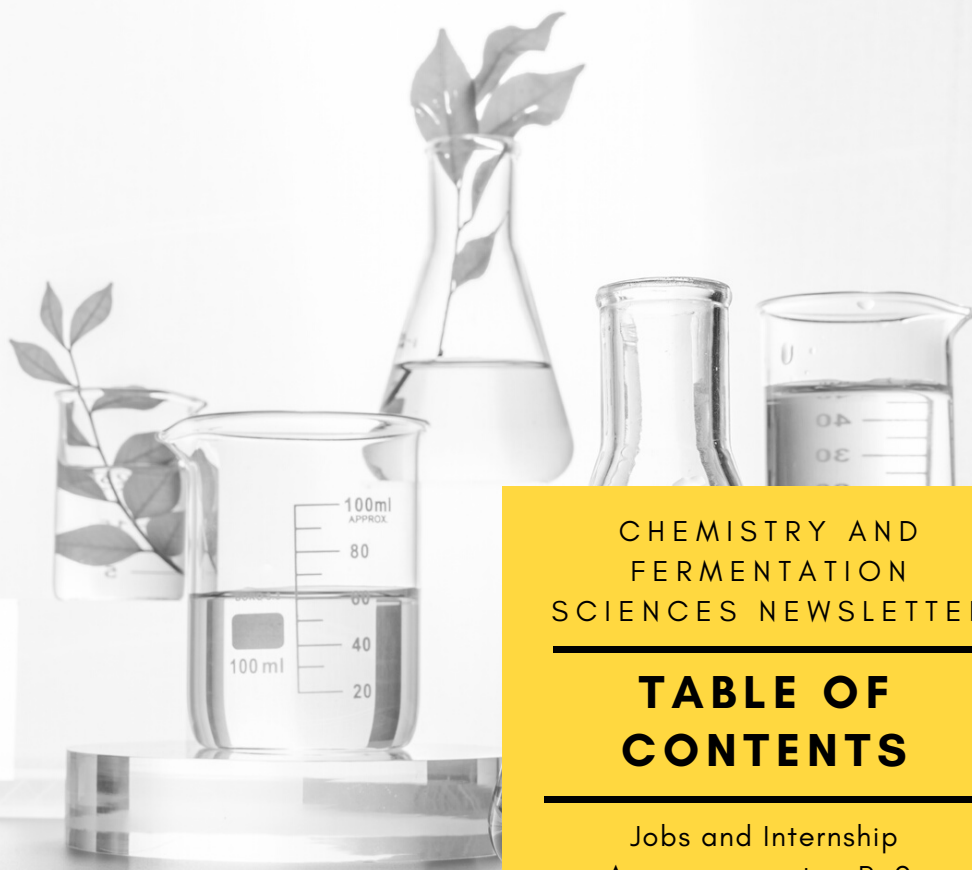


THE PERIODIC TIMES

STUDENT NEWSLETTER - OCT 2023



CHEMISTRY AND FERMENTATION SCIENCES NEWSLETTER

TABLE OF CONTENTS

Jobs and Internship
Announcements - P. 2

Professional Development
Corner - P. 3

Club News - P. 4

Student and Faculty
News - P. 5

Graduate/Professional School
and Q&A - P. 6

Fall Activities, Alumni
Spotlight - P. 7

Alumni Spotlight Q&A, Dear
Labby and Contributions - P. 8

WELCOME!

BY EDITOR-IN-CHIEF
DEHLIA LANG

Welcome to the October 2023 edition of *The Periodic Times: Student Newsletter*! Here, you can find updates about everything happening in the Department of Chemistry and Fermentation Sciences. In this edition, you can find information regarding finding jobs and internships, the resources available at the Career Development Center, and what the clubs in the department have to offer! Read about the Student Summer Research Presentation competition and about our student alumni and faculty who have been inducted as American Chemical Society fellows. Read through the tips and tricks for preparing a graduate/professional school application, some fun activities happening in the area, and last but certainly not least our alumni spotlight on Katie May!

We hope that you find this newsletter resourceful and engaging!

JOBS AND INTERNSHIPS

BY MADELINE AKES

Are you looking for a job or internship?

The Career Development Center has a portal called Handshake. Handshake is an online career services portal that provides students with easy access to jobs, internships, on-campus recruitment opportunities, career fairs, and employer contact information. All you need to do is login with your Appalachian State University credentials. Handshake also provides current students and alumni with the opportunity to connect with potential employers. The Career Development Center sends out emails regularly regarding job and internship opportunities. They approve hundreds of new postings weekly. Handshake also allows you to filter by job type and numerous other preferences.



Interested in pursuing a career in education?

If you are interested in pursuing a career in education or a related field, the upcoming career fair on Friday October 20, 2023 is for you! From 12:00-2:30 PM in the Holmes Convocation Center, the Career Development Center will be hosting a career fair during which you will have the opportunity to network with employers and explore countless opportunities. Students should bring a their AppCard and resume with them. Professional or business casual dress is encouraged.

<https://careers.appstate.edu/education-career-fair-students>



PROFESSIONAL DEVELOPMENT CORNER

BY VICTORIA WYNKOOP

Graduating in December or looking for a career in chemistry? Visit the Career Development Center. They provide many resources for creating and developing careers in STEM. Here are some tips and tricks to making your dream job become a reality.



Have an application or interview to prepare for?

The Career Development Center can also help with the graduate school application process:

Q: How can I be viewed as the ideal candidate?

A: Get experience as a tutor or research assistant! Attending conferences is also a great way to network with others in your field.

Q: How do I approach people asking for recommendations?

A: Pay attention to their body language. You do not want to ask someone to write a recommendation who appears reluctant to do so. Be sure to provide several reasons as to why you believe they should write you a letter of recommendation.

Resumes and Cover Letters: Your resume and cover letter should each be only one page long. You will want to keep the formatting simple and consistent across both articles. Your experience isn't limited to paid work, so if you have experience relevant to the position, use it! For the experience that is most relevant to the position, you should have the most detailed information listed. Researching the employer/organization can help steer the information you put on your resume and cover letter to be relevant to the employer.

Interviewing: When preparing for an interview, you want to allow yourself time to prepare. Your goal should be to appear relaxed, polite, and punctual, and preparing for the interview can help you feel confident. When asked difficult or negatively worded questions, never speak ill about previous employers or businesses. Using the STAR method can help you guide the answering process:

- **S**ituation: Identify the specific example you want to use.
- **T**ask: State the problem or conflict you experienced in that situation.
- **A**ction: Detail how you handled the task.
- **R**esult: Explain the outcome of the conflict and what you learned from that experience.

Q: How do I write an entrance essay?

A: A good way to approach writing an entrance essay would be to consider why you want to pursue the subject and your goals for once you finish your degree.

Q: How do I prepare for a graduate school interview?

A: You can research the program's interests, training emphases and review your own qualifications. Also, you can be prepared to address possible points of concern (i.e. low GPA, breaks between semesters, etc...) within your graduate school application.



CLUB NEWS

BY ANNA BRYANT



Want to get more involved with the department? Check out some of our clubs! The Appalachian Chemical Society, Fermentation Science Club, and Forensic Science Club are open to anyone interested in chemistry, fermentation, or forensics. All three clubs can be found on Engage, and you can email the respective faculty advisors/officers to find out how you can get involved!

The Appalachian Chemical Society meets on Thursdays from 6-7 PM. Contact the president, Luke Darney (darneylb@appstate.edu), to get involved! Be on the lookout for a graduate school panel in early October! The club is currently preparing for its annual Fall Chemistry Demo Show which is tentatively scheduled for November 2, 2023.

Join the Fermentation Science Club this semester for an opportunity to make your own pizza from scratch! Contact asufermentationclub@gmail.com or scan their QR code to join their email list and stay updated on meeting times and events!

Tentative Meeting Schedule:

- October 12: Fermented meat/vegetable day!
- October 24: Making mozzarella and lacto-fermented tomato sauce!
- November 7: Making sourdough starters!
- November 28: Making pizza with the fermented products from the previous meetings!



The Forensic Science Club has an exciting semester planned for its members! Meetings will commence on Mondays from 7-8 PM in GWH 150. Contact the president, Kaitlyn Kozicki (kozickika@appstate.edu), for more information and to be added to the email list!

STUDENT & FACULTY NEWS

BY ALLYSON SHANAHAN AND TAI VU



Chemical Health and Safety — Many Faces, One Voice

Samuella B. Sigmann was recently inducted as a new 2023 ACS Fellow due to her outstanding contributions to science. She has more than 30 years of experience in academia and has been active in chemical safety education for 16 years. She holds a BS in Chemistry/Biology, MA in Chemistry, and MS in Occupational Health and Safety. She retired from Appalachian State University in 2022 where she was the Stockroom Director, a Senior Lecturer, and the departmental Chemical Hygiene Officer. She has extensive experience teaching chemical safety topics including risk management, chemical use storage, demonstration safety, the GHS of Labeling and Classification, and interpreting information on SDSs. She has worked on numerous projects for the ACS to produce safety publications for chemistry students, preservice, and K-12 teachers. She has consulted nationally for plaintiffs in legal cases involving high school incidents where students were injured during experiments and demonstrations. Ms. Sigmann was the 2019 Chair of the ACS Division of Chemical Health & Safety and is the 2022-2024 Chair of the ACS Committee on Chemical Safety. Her Task Force is currently working on a set of three Editorials that were accepted for the Journal of the American Chemistry Society. The [series](#) outlines how issues of diversity, equity, inclusiveness, and respect (DEIR) can and do impact laboratory safety.

“As professional chemists, we have an obligation to protect our resources, our colleagues, and the environment. Chemical safety is evolving, and it is now becoming recognized as one of the many subdisciplines of chemistry such as organic, nanomaterials, and physical. The paradigm is shifting from teaching students a list of rules and expecting them to understand chemical safety to teaching students how to find authoritative chemical safety information and use it in a risk assessment. Chemical safety as a subdiscipline is a new idea and, as such, meets resistance from those who teach in the established areas of chemistry.”

Check out the [ACS Committee on Chemical Safety](#) and more [publications](#) written by Samuella B. Sigmann.

Student Summer Research Presentation Competition

The Fall 2023 semester has started off strong with the 2023 ChemAppalooza Student Research Seminar during which numerous students from the many active research groups in the department each gave a quick 10-minute presentation on the progress they've been making in their respective research groups over the summer and in past semesters. This, however, was not an ordinary seminar as the presenters were competing for a prize! The department was able to bring in unbiased judges from local chemical companies to evaluate our presenters.

A *huge* congratulations to the first place winner, Teddy Shepard from Dr. Brooke Christian's research group, and to the second place winner, Carli Samuelson from Dr. Nicholas Shaw's research group. Thank you to all the students who presented and to the students and faculty that came out to support them!

In addition to the competition between the presenters, the result of the ChemAppalooza interlab competition was announced. Congratulations to Dr. Christian Wallen and his undergraduate researchers for winning the 2023 ChemAppalooza interlab competition!

To learn more about [ChemAppalooza](#), their mission, and how to get involved, follow the hyperlink!

PREPARATION FOR GRADUATE & PROFESSIONAL SCHOOL

BY TAN LIN

It's that time of year where the leaves are changing colors, the weather gets colder, and graduate school applications open! Between filling out applications, getting letters of recommendation, writing your statement of purpose and/or personal statements, and researching the institutions that catch your interest, there is a *lot* to do before the application deadlines in late November-early December!

Figuring out where to go: One of the most important considerations when thinking about graduate school is the institution to which you will be committing for the next step in your education. Consider the geographical location, the faculty, type of school, and the research being conducted at the institution. If you have questions about the specific program, the area, or the academic/social environment, reach out to the institution's faculty as showing interest and getting your name out there can only help your application!

Application requirements and fees: Go over the application materials for each institution. Most schools will require multiple writing segments with specific prompts. Make sure to cover the required points and check for grammatical errors. For recommendation letters, let your recommenders know early so that they have ample time to construct a strong one. Application fees are expensive and pile up as you apply to more and more schools, but many offer fee waivers. Check their requirements to see if you are eligible.

Written materials: Most applications will require a Statement of Purpose (SOP) and/or a Personal Statement (PS), but what exactly is the difference between the two? To put it very generally, the SOP is the "what I can do and be for your institution academically and why you should believe me" essay, and the PS is the "what kind of person I am and what would make me a valuable member of your community" essay. Spend ample time to put these together, and make sure they fulfill the points outlined in the application requirements of the specific school!

GRADUATE STUDENT Q&A

Q: What advice would you give to an undergraduate student beginning the application process?

A: Reach out to any professors you are interested in as soon as you can! Not only does it show them you are interested and have the drive to contact them, but if they're on the program admissions council they may recognize your name and that generally gives you a better shot.

Q: What were your top factors (i.e. lab environment, research facilities, institution location, potential P.I.s, etc...) in picking a graduate program?

A: In no particular order:

- Rotations. Some programs don't have lab rotations and that was a big red flag. I wanted to rotate with a couple different labs the first semester, so I'd have a better idea of what I was getting myself into.
- The Principal Investigator (PI)/Lab environment which go hand-in-hand. Try to find at least 2 PIs that you would be interested in working with at each program to which you apply.
- Program location. Since you'll be spending the next ~5 years there, live where you will enjoy living.

Q: What was the biggest transition you experienced going into graduate school?

A: You wear three hats in grad school and exist in a gray area between them all: Teacher, Researcher, and Student. It's tough finding the time for everything so you're almost constantly shuffling priorities.

Anderson Noonan graduated from Appalachian State University in May 2023. He is currently a graduate student at Colorado State University in Fort Collins, Colorado pursuing a Ph.D. in Organic Chemistry



FALL ACTIVITIES TO RELIEVE STRESS AND IMPROVE MENTAL HEALTH

BY ANNA DUNCAN

With the ever-looming stress of academics, keeping your mental health in check is of utmost importance for both your overall mood and performance in your classes.

One way to relieve stress during the Fall semester is by engaging in seasonal festivities and exploring the outdoors, so here are some of the events happening in Boone and around the area for October!

- **Brushy Mountain Apple Festival** - October 7 (8 AM - 6 PM) in Downtown North Wilkesboro
 - Free admission
 - Free parking on a first come, first served basis
- **Valle Country Fair** - October 21st (9 AM - 4 PM) in Valle Crucis
 - Free admission
 - \$10 parking per car/personal vehicle
- **Wooly Worm Festival** - October 21 and 22 in Banner Elk
 - \$10 for adults (online; \$8 in-person)
 - Free parking on a first come, first served basis
- **Halloween Festival** - October 28 (3-8 PM) at Blowing Rock Memorial Park
 - Free admission
- **Some local hiking spots:**
 - Green Mountain Creek Falls
 - Linville Falls

ALUMNI SPOTLIGHT

KATIE MAY

Graduation Year: 2023

Degree: B.S. in Chemistry - Forensic Science and a Criminal Justice minor

Current Role: Quality Control (QC) Analyst for the clinical chemistry group at Regeneron Pharmaceuticals



ALUMNI Q&A

Q: What are you doing after graduating from App?

A: I currently work in the Analytical Chemistry department at Regeneron Pharmaceuticals as a QC Analyst for the clinical chemistry group. In my position, I run samples of our clinical pharmaceutical products on the HPLC and analyze the quality of the products.

Q: What is your favorite memory in the department?

A: My favorite memory would have to be when we traveled to Atlanta, Georgia for the Southeast Enzyme Conference. Getting to speak with professionals in the biochemistry field about my research was a great learning experience and proposed some new aspects to my project from others' ideas. At the conference, I also realized how many different enzymes there were even at such a field-specific conference. There were Ph.D. chemists with minimal understanding of other people's projects because the field can be so specialized.

Q: What do you feel set you up for success after graduation while in the department?

A: I would say participating in undergraduate research helped me the most for my future. Unlike other schools, App State doesn't have a chemistry graduate program so I got to perform tasks on my own and learn things that my peers did not at their programs. Having no graduate students allowed me to expand my understanding of the processes involved in high-performance liquid chromatography outside of what was taught in my lecture courses. This variety of skills that I learned aid in my day-to-day work working in a lab.

DEAR LABBY

Do you have a question or need advice from a fellow chemistry student here at App? Feel free to drop a line on the google form below and let us know how we can help you out.

https://docs.google.com/forms/d/e/1FAIpQLSfa526nmn6y8EQe7I6cSPi_fe9_QY7LVefWs7EPiUWXkoWWDA/viewform

CONTRIBUTIONS

Editor-in-Chief: Dehlia Lang

Layout/Formatting Editor: Tan Lin

Contributors: Madeline Akes, Victoria Wynkoop, Anna Bryant, Allyson Shanahan, Tai Vu, and Anna Duncan