Department of Chemistry & Biochemistry Newsletter

Elizabethtown College

Fall 2020
Volume 17, Issue 1

From the Chair

Jeff Rood

Welcome to the annual newsletter from the Department of Chemistry and Biochemistry at Elizabethtown College! It's been quite a year and I hope you and your families are well during these uncertain times. While COVID-19 has caused some interruptions and forced us to think differently about how we offer our programs, there continues to be exciting news from the Department and the College that I am eager to share:

—The Department of Chemistry and Biochemistry is now part of the School of Sciences at Elizabethtown College along with the Departments of Biology and Psychology. Dr. Jodi Lancaster is the Dean of the School. We are excited to see what opportunities grow out of the newly formed School and hope to generate even more enthusiasm for the sciences here at Elizabethtown.

—Our biochemistry major is now called Biochemistry & Molecular Biology. This is an interdisciplinary major between the Departments of Chemistry and Biology that will intentionally direct focus to the intersection of these fields and allow for a broader choice of electives from the two departments. Students in this major will be co-advised through Chemistry and Biology and have options for research from both departments.

—The department saw its first graduates from the Chemistry Lab Sciences major in May. Two students carried out a semester-long internship at Eurofins Lancaster Labs to finish up the requirements for this program.

—Our summer research program was largely put on hold due to the restrictions put in place for COVID-19, but eleven students carried out research for credit during the academic year. The students are back in the lab this fall and resuming work on various projects with the faculty.

—We inducted one student, Rachel Molino, into the Gamma Sigma Epsilon Chemistry Honor Society and we honored seven students at our (virtual) annual awards banquet for outstanding work in the department. At the awards banquet, we were also able to recognize Professor Dick Papez, who completed his final semester in the department in the spring. We are fortunate to have worked with Professor Papez over the past ten years and are grateful to him for all that he brought to the department and our students.

It's inspiring to look back and see all that was accomplished over the past year. The abrupt shift to remote learning in the spring brought with it many challenges, but I am grateful to the students for their willingness to adapt and continue working hard, to my faculty colleagues who put in a tremendous effort in switching gears to online teaching and overhauling our fall courses to be delivered in a blended fashion, and to the rest of the staff and administration for preparing Etown for the students to return this fall. Each morning I walk past the BSC and there is a banner hanging that states "We're all in this together, Blue Jays". We certainly are. The strength of the Elizabethtown community continues to show, and I am impressed by how everyone has risen to the occasion to navigate through these challenging times.

In my own teaching, the past year was a good one. I continued teaching in the First Year Seminar program and taught an Honors section in the fall semester. My usual roles in general chemistry and inorganic also continued. We are gearing up for a few curricular changes this year and I am excited to work with Dr. Mackay on a new lab course called Synthesis Lab, which will combine content and learning outcomes from the inorganic and organic II laboratory courses.

On the research front, our collaborative work on luminescent metal-organic frameworks with Dr. Kristi Kneas continues. Lucas Stehle continues to work on the project this fall. Sarah Moyer wrapped up her work in this area and graduated in May after successfully completing her Honors in the Discipline thesis. I also have a new project that deals with oxovanadium complexes and stems from work first carried out by Steven Reehl, '19 and Paul Andonie, '20. We published our first paper in this area in June in *Acta Crystallographica E* and are now exploring a possible collaborative project with Biology as these compounds are known to have potential function as insulin mimetic molecules. I'm excited to see where this project leads, and I will have a lot to learn about cells if it comes to be!

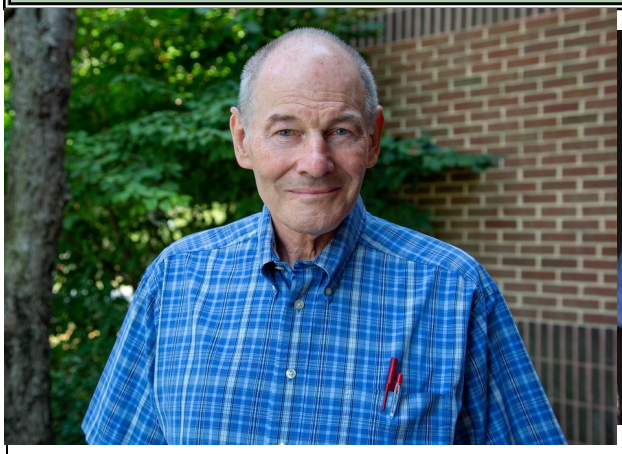
On the home front, things are going well. Our daughters keep Liz and I busy. Kella is now 8 and in 3rd grade. She is really getting into soccer and enjoys running with me. Kaceley will turn 4 in December and likes following in her sister's footsteps. She keeps us on our toes! To wrap up, it's always great to hear from you. We always enjoy learning updates and success stories from our alumni. Please continue to keep us posted about the exciting things that you are doing. We will be hosting our biannual career exploration night earlier in the spring semester and likely in a virtual format. If you have interest in sharing your experiences with our students, please let us know!

Inside this issue:

Etown Chemistry & Biochemistry Department is celebrating 50 years of ACS accreditation!

Next year will mark our chemistry department's 50-year anniversary of ACS (American Chemical Society) accreditation! Our chemistry major with ACS concentration prepares students for graduate school, careers in the medical field (dental, medical, vet, etc.), or for a career in industrial or government laboratories. The ACS just published an article which highlighted Etown 's accreditation and our 50-year anniversary. You can find the online article at the link below: https://www.acs.org/content/acs/en/education/policies/acs-approval-program/news/institutional-highlights-trio.html

Retirement News



Mr. Richard Papez
Assistant in Chemistry, 2010-2020

After spending ten years as an instructor with the chemistry & biochemistry department, we are sad to say Dick Papez has retired. He taught his final semester this past spring. Dick was the only faculty member who taught our forensic science courses (both lectures & labs) so with his departure, we are no longer able to offer forensics courses at the college. Dick also taught general and organic chemistry labs and helped with maintaining chemical instrumentation around the department. However, the forensics courses were truly his favorite. He always said they were the most exciting ones for him to teach "...due to the ever changing breakthroughs in crime related science." His passion for teaching was apparent to all who attended his classes and he has passed on his love of forensics and chemistry to countless students over the years. Dick will be missed greatly by students, faculty and staff alike and the chemistry department will not be the same without him. We were sad to say goodbye but wish him all the best and know he will always remain a part of our chemistry family. Best wishes Dick and we hope to see you soon at future departmental events!

ΓΣΕ 2020

ΓΣΕ

On Thursday, March 12, 2020, the annual induction ceremony for new members of the Rho Eta chapter of Gamma Sigma Epsilon, the national chemistry honor society, took place. Only students with a grade point average of 3.3 or higher in chemistry are invited to join.
New member: **Rachel Molino** (shown center).
Current members in photo left to right:
Kaitlyn Jacoby, Sarah Moyer
Current members not in photo: **Paul Andonie, Sara Luckenbill**

The faculty advisor is Dr. Jeff Rood. We congratulate these outstanding students!

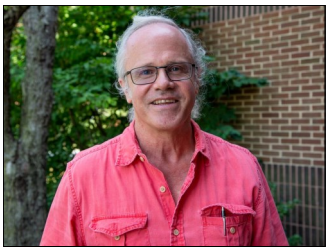
FACULTY NEWS

Tom Hagan

What an interesting 8 months it has been! I hope our annual newsletter finds you healthy and doing well. A few years ago the impossible happened when there was a waitlist for Biochemistry I, and as a result, I had to teach it in Gibble Auditorium. Well apparently hell has frozen over and I can now add remote (on-line) teaching to the list of things I thought would never happen to me. That being said, the on-line and hybrid teaching that has been part of my teaching landscape since March has had its ups and downs. I am definitely more tech savvy than I thought I would become. I think we have definitely pulled together as a community as a result of the pandemic. Early on at the beginning of this semester, one of my first-year students said the Blue Jays were going to show the virus we can't be beat, and she has been right thus far.

I think that resiliency speaks to a better part of our population. Sadly, some of the things we normally do as a department have been jettisoned including: end of semester dinners at our house for the students, the annual graduation morning breakfast for the chemistry department graduates and their families, summer picnics with the research students, and the annual sojourn to Shady Maple. Still, we have been able to maintain our Friday lunches with the students, we simply eat outside (and the weather has cooperated for the most part). Turning the old adage of, "if life gives you lemons make lemonade," the Chem Club has created their own face masks to be sold as a fundraiser. If you are interested in supporting the department and the Chem Club, feel free to purchase one or as many as you like. Twelve dollars each which includes shipping, and we can ship to anywhere in the United States! We even have two versions. (Please contact Michele Herndon at herndonm@etown.edu for pics and more information!) Though we will still be under pandemic conditions for the spring semester, we are beginning preparation for our biannual career exploration event for the students. This will be conducted virtually this year, so it opens the opportunity to "bring in" alums who have not been able to join us in past years due to geographic constraints (again lemonade out of lemons!). If you would be excited and willing to share your career path with the current students, please drop me email so we can work you into the program.

Though there hasn't been much opportunity for travel, more time has been spent riding bikes around the area (Lancaster county is a great place to ride bikes!) and doing lots of yardwork. We also enjoy having the grandkids over for the occasional sleep over. It provides the chance to have special time with them as well as giving their parents a well needed break! (And you can never have too many cooks in the kitchen when you are making cookies!) Please continue to take care of yourselves and stay in touch. Best wishes, Tom



Gary Hoffman

What an unusual year! The pandemic has affected everyone, I'm sure. As it turns out, I had no classes to teach last spring. Being on phased retirement, I am responsible for half the normal load and was able to satisfy that in the fall semester. Although I missed out on the joys of learning Zoom and dealing with on-line classes in the spring, I was able to get back on board during the current semester.

As usual, I taught the first semester physical chemistry class last fall. In addition, I oversaw the general chemistry labs (making sure supplies and reagents were prepared on time and being on top of the administrative aspects) as well as taught two of the sections. We did not offer the second semester of physical chemistry in the spring. However, I had two advisees who were in the Chemistry Lab Sciences major and they both served their internships at Eurofins last spring. That made things exciting! In March, there were many back-and-forths with the students, Eurofins, and the College administration. Changes and adjustments had to be figured out and administered. We made it through and I am pleased that everyone was able to adjust smoothly to the unusual circumstances.

On the research front, I have started two new projects. For the first, I have put together a library of CC calculations using different basis sets and levels of theory on a set of diatomic molecules. The idea is to predict experimental results 100% with theory and assess the different calculations. There is one calculation that is still going – I expect it to last until the end of the semester.

The second project is tied to testing the set of three-body equations for what is known as FHNC theory, which I had derived a number of years ago. People generally avoid the three -body equations (they require considerable computational resources) and use what is called the "superposition approximation". I felt it would be appropriate to actually solve the three-body equations and verify (or not) whether the superposition approximation is justified. I've been learning the recent developments of the Fortran programming language, which has been fun. Programs are running right now and I am hoping to finish by the end of the semester.

On the personal front, we were able to get a couple of trips in before the pandemic hit. We went to Beaufort, NC for Alyson and Drew's wedding in October. It was nice to meet Drew's family and see everyone else. We also took a trip to meet Carlos and Jane in Miami in early March – just before everything hit the fan. We have since stayed put but had some good news recently: we are grandparents! Luana was born to Carlos and Jane on August 7. Mom and baby are doing well. When all this is over, we will need to take a trip down. On other news, Alyson took a job last fall in San Francisco with a pharmaceutical company called Twist. She has been able to continue work through the pandemic, but has had to deal with smoke in the air, protests, … It's been a strange year. Here's wishing everyone a better one to come.

James MacKay

Hey Alumni! This newsletter article is *not* going to use words or phrases like 'new normal' or 'unprecedented times.' Nor will it mention "the virus that shall not be named" (except for the fact that my PNA molecules are interested in the RNA of the non-named virus). It will, however, tell you about some awesome things that are happening in Musser and in my family. So, I hope it reads like an 'old-normal' newsletter article.

First off - the personal stuff. All three kids are thriving and loving life. We continue to homeschool them, including Kendon (now 5), and that is working quite well. Kendon is gaining quite the personality and loves riding his bike and wrestling with JJ (8). JJ loves everything Star Wars and is becoming quite a good piano player. Leah (10) is our violinist and creative little young lady. In March, my mother moved from Cincinnati which included a 3-month long visit at our house. Now she's settling into an apartment in Lititz so I get to see her more often! I've taken up trying to learn how to walk a slackline, continue to fiddle around on my Taylor guitar, and love playing games with the kids and Jana. And Jana…well, words cannot express how unbelievable she has been as a mother, and wife to this crazy chemist. She keeps the ship running. Below is a pic of the family from a summer trip to dig for fossils.

Professionally, the work goes on and continues to evolve. I took up the challenge this year to flip my classroom, so now Organic Chemistry is offered asynchronously on video and we use class time to work problems together in groups. It's something I've wanted to do for a while so why not now? It's been a lot of work, but I think that the ability for students to go back and re-watch lectures has a pretty big advantage. Plus, now we get to solve problems together in class which is much more fun than me talking at the front of the room. Dr. Rood and I are also designing a new lab course called Synthesis Lab to begin in the spring. It is basically a combination of what used to be Organic II lab and Physical Inorganic lab. We are going to focus on what I love most about chemistry…making molecules.

My research program continues to thrive as Eriks Rozners (Binghamton U.) and I develop new monomers for binding RNA. Since last year, we had a book chapter published on our methods. We also just submitted a manuscript (that included alumnus Aubrey Maryniak and current student John Talbott as co-authors) with some exciting findings related to binding A-U base pairs. Fingers crossed, but hopefully you will be able to read about that soon. We also just submitted a renewal application to NSF and if it were to get funded, it would open up many new and exciting opportunities for students. I have a ton of interest from younger students and expect to have a big group next semester!

I'm guessing that this newsletter explains some of the recent structural changes at the college and in the department. Change is not something I gravitate to, but I do think that we are positioning ourselves for the future and for that I'm grateful. But one thing remains – Etown continues to be a great place to learn and do chemistry. We are grateful for your support and hope you can continue to engage with us though whatever means possible!

Lauren Toote

Hi Everyone!

This past year has been unexpected and different to say the least! Last fall was a great semester where I found out that a grant I submitted to the EPA for the development of a lateral flow assay for detection of lead(II) had been funded. I had three experienced research students in my lab and we made some great headway on this project, along with our collaborators in the engineering department. We received quite a bit of publicity from this grant and the students and I had a great time sharing our research with the general public. Unfortunately, this work came to a halt once the COVID-19 pandemic hit and my focus quickly changed to learning how to effectively teach online. This transition was definitely a challenge and I really missed face-to-face interactions with my students but I learned a lot! I plan to incorporate a lot of what I learned about online instruction technology into my future face-to-face classes to even better serve my students.

Though things at E-town have been very challenging, we have had several exciting developments at home. In March, Celtson and I found out we were expecting our first child and we will be welcoming Baby Girl Toote into the world around the beginning of November! As a result, I will be on leave, learning to be a mom, during the upcoming spring semester. Celtson and I also purchased our first home this summer and have spent the last few months on different projects to update the house. It's been really fun to work together and we have learned a lot! I hope you all are doing well! Please stay in touch!

Nora Jane Remona Toote was born on November 1st! Congrats Lauren and Celtson!

Charles Schaeffer

My role as A.C. Baugher Professor of Chemistry Emeritus continues. I continue to assist with the organization of the annual conventions of the Intercollegiate Student Chemists (ISC). The ISC is the oldest continuous undergraduate chemistry meeting in the United States; Etown last hosted the event on April 7, 2018. The cancellation of this year's meeting was the first interruption since 1948. Our research involves the preparation and characterization of main group organometallic compounds of silicon, germanium, and tin compounds; NMR spectroscopy continues to play a vital role in product characterization. The most recent research manuscript containing former Elizabethtown student coauthors (underscored) is: C.H. Yoder, T.M. Agee, A.K. Griffith, C.D. Schaeffer, Jr., M.J. Carroll, A.S. DeToma, A.J. Fleisher, C.J. Gettel, A.L. Rheingold. Use of 73Ge NMR Spectroscopy and X-ray Crystallography for the Study of Electronic Interactions in Substituted Tetrakis(phenyl)-, -(phenoxy)-, and -(thiophenoxy)germanes. Organometallics 2010, 29, 582-590 (DOI: 10.1021/om900905c). The most recent collaborative presentation with Dr. Rood and Elizabethtown students (underscored) is: J. Pigga, J.A. Rood, C.D. Schaeffer, Jr., "Germanium Coordination Complexes: Synthetic Development and Structural Characterization," oral presentation, 80th Annual Convention of the Intercollegiate Student Chemists, Ursinus College, April 16, 2016; First Prize, Inorganic Division. I continue to refine and add material to our extensive online NMR bibliography of English language books and reviews (http://www.wiredchemist.com/nmr/bibliography). Another obsession is the acquisition and cataloging of titles for the chemistry section of the library. I received recognition as a fifty-year member of the American Chemical Society (Chem. Eng. News 2019, 97(11), 43).

Our long-time research collaboration with Professor Claude H. Yoder, Charles A. Dana Professor of Chemistry Emeritus at Franklin and Marshall College, began in Fall of 1966 (https://www.fandm.edu/chemistry/chemistry-faculty-research).

I continue to explore aspects of medium-format digital photography. The chemistry student affiliate chapter distributes a calendar composed of some of these campus images, with proceeds supporting various student affiliate activities.

Kristi Kneas

Hello, all. What an unusual year it has been. I hope that this message finds you and your loved ones in good health. Fortunately, the craziness of this year has been punctuated by uplifting news from you—about new jobs, degree completions, weddings, babies, awards, and accolades. Please keep the updates coming; they bring us such great pleasure!

Last academic year I enjoyed being back in the classroom to teach introductory chemistry, and in the spring I devoted much of my time to supporting faculty members as we made the pivot to distance learning. I was and continue to be inspired by the resilience, dedication, and commitment of our Etown faculty and students. This year, with the move to a School structure at Etown and my taking on some additional responsibilities related to curriculum, my title has been changed to Associate Provost for Academic & Faculty Affairs. It's been a year of physical moves too. On campus I've relocated to the "garden level" of Alpha Hall, so named, I believe, because of the critters that cohabitate with us. And this fall we *finally* made the move from Harrisburg to Etown, so Garrison (8th) and Benjamin (2nd) are now experiencing the delight of being the new kids in the middle of a pandemic. I'm looking forward to safer days when we can welcome you to campus and to our home. Please stay in touch.

Mike Bierbower

Hello, my name is Mike Bierbower and I am the Chemical Hygiene Officer (CHO)/Risk Manager for the Biology and Chemistry Departments. As you are aware by now, there are an abundance of hazards that exist in the laboratory setting. Those risks/hazards show up as both unsafe acts and unsafe conditions. It is my job to assist in the process of identifying and eliminating them before they result in injuries. For the past two years we have been able to involve the students in this process by virtue of a Student Chemical Safety Committee. I am also a member of the Site Safety Committee and a member of the Site Wellness Team.

I arrived at the college 23 years ago coming from industry with backgrounds in engineering and risk management. I am the father of two daughters, one is a nurse at Harrisburg Hospital, graduating from Millersville University and the other is a massage therapist, graduating from Gettysburg College.

When I am not at the college I have a variety of interests. A number of years ago my daughters talked me into signing up for the Dewey Beach Triathlon. At my age that requires that I be either swimming, running or riding the bike throughout most of the year. It is exciting for me to simply be participating in the event. I also enjoy hiking both locally on the River Walk and the Rail Trail and more distant on the Appalachian Trail. I have been able to hike a significant portion of the Appalachian Trail in Pennsylvania. My mother was a seashell collector for some 50-60 years accumulating shells from most, if not all, families of shells and from all over the world. Mother and I partnered in this venture some 15 years ago. I also enjoy reading and spending time with my dogs.

My hope is that the virus leaves us soon and we are able to continue the work of controlling the chemistry's departmental risk profile and of course to continue using the students to assist the faculty/staff in this important process.

STUDENT NEWS

2020 Graduates

Paul Andonie
Accepted a position as a Sample Management Specialist with Merck & Co. while also applying to medical schools

Elena Hess
Pursuing a career with Eurofins Lancaster Labs

Kaitlyn Jacoby
Became certified to teach English as a foreign language and will be teaching English abroad in South Korea. Applying to grad schools or looking for a chemistry job while in Korea

Sarah Moyer
Attending grad school at University of Pittsburg

Michael Perzel
Plans to spend the next year working in a research lab while applying to grad schools

Miranda Wysochansky
Working as a Quality Control Chemist at Copperhead Chemical Company in Tamaqua, PA

Students Recognized for their Educational Accomplishments

Grace Childs '22
ACS Student Affiliates Award

Emily Kagarise '19
Analytical Chemistry Award

Emily Harding '23
Sophomore Organic Chemistry Achievement Award

Kaylynn Leap'23
CRC Freshman Chemistry Achievement Award

Sarah Moyer '20
ΓΣΕ Sontag Award
SEPSACS Outstanding Senior Chemistry Award

Kaitlyn Jacoby '20
Physical Chemistry Award
ΓΣΕ De-Lap-Holcomb Scholarship
Undergraduate Award in Organic Chemistry
A.C. Baugher Chemistry Award

Rachel Molino '21
Inorganic Chemistry Award

Congrats to our award winners!

2020 Summer Research

NOTE: Due to the COVID-19 pandemic and required closures, the majority of our students were unable to participate in research and/or internship opportunities this past summer. We look forward to next summer when our students are again able to engage in these exciting opportunities and we can share that information with you all!

RESEARCH AT E-TOWN (SCARP):

John Talbott, a junior chemistry major, worked with Dr. MacKay virtually on research entitled "Nucleobase-Modified Peptide Nucleic Acids for Sequence Selective Triple-Helical Recognition of Non-Coding RNA." He was also still able to present his research on July 27th during the college's annual SCARP event held this year virtually on Zoom.

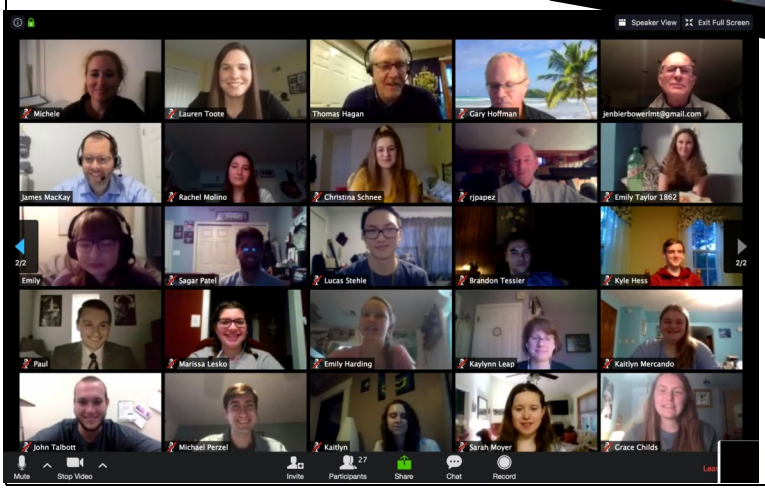
John Talbott & Dr. MacKay

RESEARCH OFF CAMPUS:

2020 alum Sarah Moyer reported she was able to do research over the summer in a biochem lab at the University of Pittsburgh where she will be attending grad school this fall.

Sarah Moyer

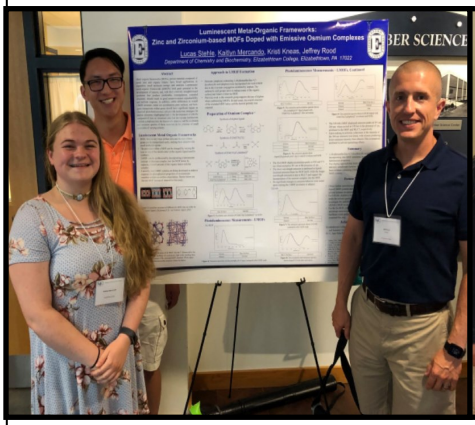
2020 Virtual Student Awards Banquet!



COVID didn't stop us from having our annual student awards banquet on April 22nd! The format may have been different and we weren't able to enjoy each other's company in person but that's okay! Faculty, staff and students still came together virtually to recognize the graduating seniors, honor Dick Papez and to celebrate all our wonderful students and their accomplishments! So proud of our chem family!

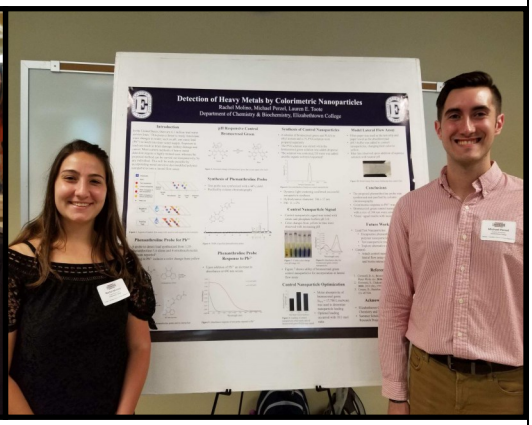
Student Presentations at Local, Regional and National Meetings

2019-2020—A large number of our chemistry and biochemistry majors participated in research over the course of this past school year. Unfortunately, due to COVID-19, many local and national conferences were cancelled and our students didn't have as many opportunities to actually present their research. However, some were still able to present the results of their work for the Scholarship and Creative Arts Day (SCAD) event at Elizabethtown College which was held virtually in April. Student presenters were: Paul Andonie '20, Kaitlyn Jacoby '20, Kaitlyn Mercando '22, Rachel Molino '21, Sarah Moyer '20, Michael Perzel '20 and Lucas Stehle '22.



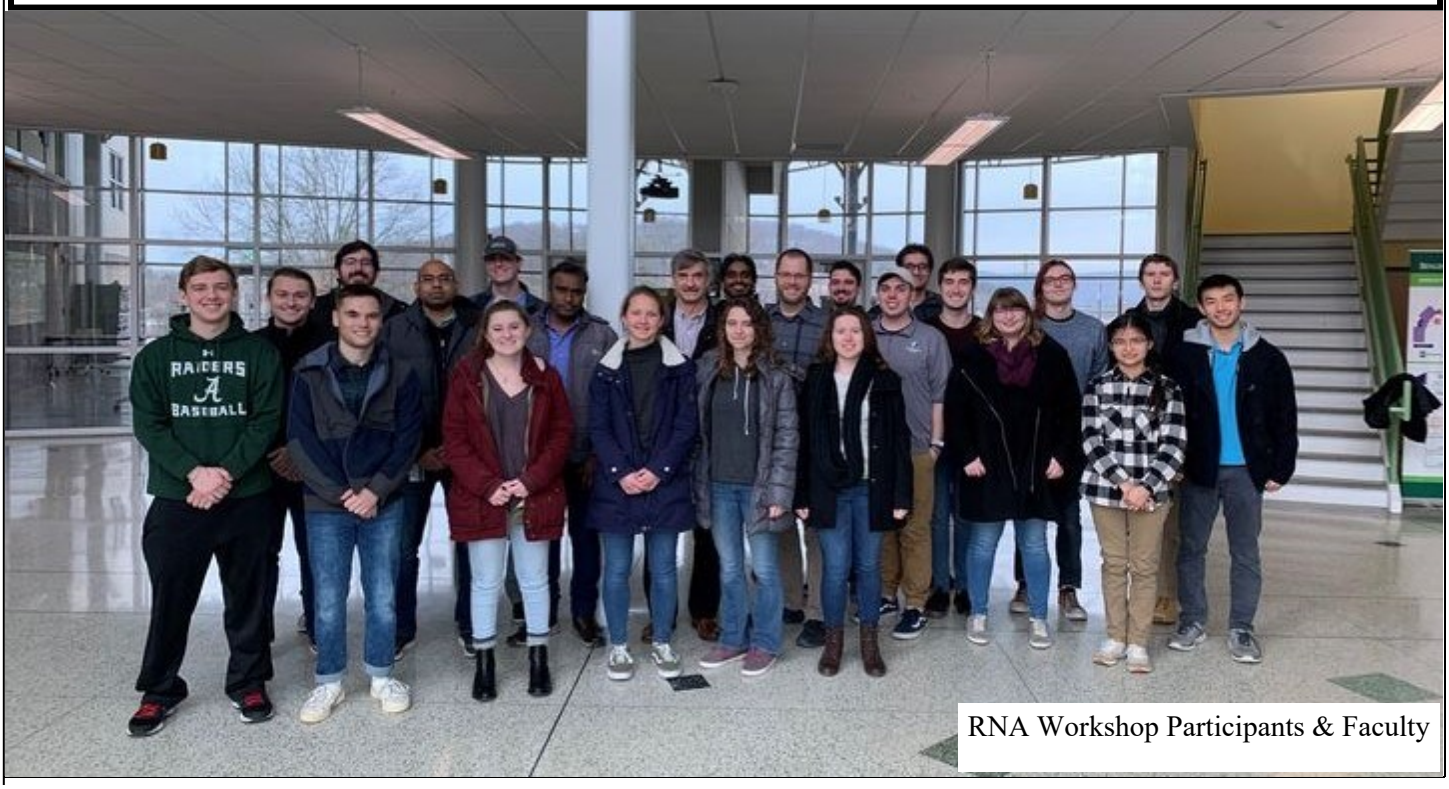
Lucas Stehle, Kaitlyn Mercando with Dr. Rood

Kaitlyn Jacoby, Sarah Moyer, Paul Andonie



Rachel Molino, Michael Perzel

Before the holiday break was over, some of our students were "back in action" early attending a 3-day RNA workshop related to Dr. MacKay's NSF grant research at Binghamton University January 5th through the 7th. The workshop was in collaboration with The Rozners Group led by Professor Erik Rozners, chair of the chemistry department at BU.



RNA Workshop Participants & Faculty

School of Sciences

Jodi Lancaster

ETOWN ELIZABETHTOWN COLLEGE | SCHOOL OF SCIENCES

Hello Chemistry and Biochemistry family! Over the summer of 2020, Elizabethtown College organized Departments into Schools. I am serving as Dean for the School of Sciences, which includes Biology, Chemistry and Biochemistry and Psychology. Some of you may know me from my recent role as Biology Department chair and my teaching of Bio111. I'm both excited and humbled to have this new leadership role at Etown. The formation of Schools allows us to better collaborate across disciplines to serve the needs of our students, faculty and staff. The School of Sciences Mission Statement is:

> Engages students in the scientific study of biology, chemistry, psychology and their intersections, fostering a desire for life-long learning and application of skills and knowledge to improve the health and well-being of people, animals and our environment through research, health and helping professions, advocacy and science. Faculty in the School of Sciences provide a rigorous academic experience coupled with strong mentoring and advising to help students craft a personalized path to meet their unique academic and career goals.

I've personally met with each faculty member in Chemistry and Biochemistry to learn about their research program, strengths and passions. It is clear to me that the faculty in Chemistry and Biochemistry are focused on providing students a high-quality education and undergraduate research. I'm excited to be working alongside such talented faculty and staff!

Chem faculty, staff, students & family members always enjoy spending time together!

Lunch in the sun (fall, 2020) and Shady Maple breakfast (fall, 2019).

STUDENT AFFILIATES

Hello Everyone! We hope this newsletter finds you all well!

This past year was full of exciting events for the Chemistry Club! Chemistry Club was an active volunteer group as we participated in the 26th annual Into the Streets event hosted by Elizabethtown College. A group of students set up a table at the local Gears Fest at the Elizabethtown Area High School where we demonstrated the concept of acids and bases. Various household items such as lemon juice, baking soda, and cabbage juice were used to demonstrate how a solution can change color depending if an acid or a base was added. The kids enjoyed watching the various color changes! We also had the opportunity to host two Chemistry in a Box events lead by the American Chemical Society (ACS). The topic of the first webinar was "Marvelous Metals," where the use of organometallics in synthetic chemistry was discussed. The second Chemistry in a Box webinar discussed "Food of the Future." During this event Chemistry Club members gathered to eat pizza and make invisible pumpkin pie! Temporary tattoos and a raffle were also present at both events.

For research, the traditional Scholarship and Creative Arts Day (SCAD) hosted by Elizabethtown College during the spring semester was transitioned to an online format. This did not stop students from presenting the hard work they accomplished during their research for the semester! Students apart of Dr. Toote, Dr. Rood, and Dr. MacKay's research groups each presented their projects during SCAD. This was a great event for students to build upon their presentation skills and share in the work of their peers! The Summer Scholarship, Creative Arts and Research Program (SCARP) was also transitioned to an online format this year. Student John Talbott ('22) was able to present his research with Dr. MacKay at the end of the summer through an online poster presentation!

Our plans for the coming year are a little up in the air right now. We are hoping to do an event soon involving fun stress relief activities for students on campus! We have also been collaborating with the biology club on campus, Biome, to plan for a potential event where we will discuss the science behind all things related to COVID-19.

By Grace Childs, President

Ms. Herndon wearing one of the Chem Club face masks!

Chemistry Club '20-'21 Officers:
President—Grace Childs Vice President—Jessica Kasper
Secretary—Kaylynn Leap Treasurer—Alexandra Gates
Marketing Chair—Alex Russo
Faculty Advisor: Dr. Tom Hagan

From the E-Mailbag & Department Snapshots

I officially have my email back as a Grad student here at Etown. I am going for my Master's in Curriculum and Instruction and will be starting in the next year. I switched schools and jobs back in August. I am now teaching in the School District of Lancaster at McCaskey East. I have 5 chemistry classes and a section of honors chemistry. This allows me to work with a full chemistry department and really collaborate on the best ways to help our students. In this remote teaching environment, I am using a lot of the principles of a flipped classroom to keep our content moving, while only seeing kids a few times a week over zoom.
Ryan Thomas (‘19)

In June, I completed 4 years of Emergency Medicine residency at Brown - I was fortunate to have great clinical training there and benefited from mentorship in research, developing an interest in the ever-growing geriatric population and transitions of care within our complex healthcare system. Being perennially curious, I've continued my training a bit further south, now at Yale as a part of the National Clinician Scholars Program to acquire more formalized training in health services research, health policy, population health, etc. In essence, I'd like to have a seat at the table when the decisions of our healthcare system are being made - having started at Etown and continuing now, the path of training will hopefully allow me that opportunity.
Cameron Gettel, M.D. (‘11)

I was super excited to hear that the department recently got an ICP-OES, because I am currently an ICP-OES and ICP/MS specialist at Eurofins Lancaster Laboratories. I test with ICP almost every day and have qualified/validated our ICP method for the department. I heard they also have a microwave digester. My department at Eurofins has recently just bought a new microwave digester ourselves…. Also congrats on the new LC/MS as well! ...I recently just got promoted to Scientist II this month and am also beginning to do analyses using LC/MS TOF instrumentation. All I have left to train on is direct inject GC/MS and headspace GC/MS and I will know all the analytical techniques my department does! I have learned so much working here and continue to learn new things every single day!
Kate Glass (‘16)

This past June I graduated with my masters in biomedical science from Geisinger Commonwealth School of Medicine and I began medical school in August. I am currently attending GCSOM as a first-year medical student and as an Abigail Geisinger Scholar. In the short time that I’ve been a medical student, I’ve learned a lot; more than I ever have before. The first year has its struggles, especially in the virtual space that 2020 has afforded us, but it’s also had highs. I’ve been fortunate enough to interact with standardized patients to learn important clinical skills, I’ve been able to get involved with my class as the Vice President of the Class of 2024, and I’ve made some really amazing friends. I’m also currently working on getting involved in research about graduate education. While doing all of this, I’ve been thinking a lot about my time with the department and how it’s prepared me for the work I’m doing today. Wishing everyone in the department and beyond the best!
Steven Reehl (‘19)

Chem Club sharing the love of science!

Grace & Alex happy to be back!

Dr. Toote’s EPA grant research in the news!

Showing off Dr. Schaeffer’s photos in the Chem Library!

DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY FACULTY & STAFF

A Special Thank You *to the faculty, students and alumni who contributed to this newsletter.*

Chemistry and Biochemistry Faculty and Staff: *Dr. Jeffrey Rood, Chair, Mr. W. Michael Bierbower, Dr. Thomas Hagan, Ms. Michele Herndon, Dr. Gary Hoffman, Dr. Kristi Kneas, Dr. James MacKay, Mr. Richard Papez, Dr. Charles Schaeffer, Dr. Lauren Toote, Dr. David Yeagley*

How to contact us: *Department of Chemistry & Biochemistry Elizabethtown College*
One Alpha Drive, Musser Hall, Room 100
Elizabethtown, PA 17022

Phone: (717) 361-1126
Website: www.etown.edu/depts/chemistry-biochemisty
Facebook: Elizabethtown College Department of Chemistry and Biochemistry

The labs are always busy here in the Chem Dept!