

## **Congratulations - Class of 2021**

Department of Chemistry  
University of Maine, Orono



### **Megan Arsenault, Indianapolis, IN**

I loved everything about the school (UMaine) and the area! I was able to go to UMaine for the same cost as in-state schools, so I thought I would try it out. The dedicated faculty and kind community are the reasons I stayed! I love science and math. I also really liked chemistry in high school. I study the enantioselectivity of lactic acid produced from reacting glucose over a tungsten oxide catalyst. The original research project is a biofuel reaction, and I have loved applying my passion for sustainability to my research on campus! I am moving to Tampa, FL and hope to work for a year then apply to a physician assistant program.



### **Sam Bonnevie - Cumberland Center, ME**

I was offered a full tuition scholarship; I knew that UMaine had a great Engineering program, and I'd be able to stay close to home and in my favorite state. Growing up, I always felt like Chemistry was real magic, and in high school learning how it worked was to me like learning potions for Harry Potter (minus Professor Snape, maybe). In college, I wanted to pursue an Engineering major, but I had enough credits that I could take Chemistry as a sort of hobby major. College has done nothing but emphasize the magic of Chemistry for me, no matter how in-depth I've gotten. I'm so fortunate to be working with such a brilliant research group. Our work, modelling the filling of methane in various pore sizes, is entirely different from any other Chemistry I've done, but I like it just as much; if OChem was potions, my research is arithmancy. I love how what we do, which is entirely theoretical and computational, has direct real-world applications. I'd like to get a job as a Junior Chemical Engineer, and once I have enough experience, my long-term goal is to move to Norway and work in the gas industry.

### **Peng Cheng – Ashland, ME**

Peng is a double major in Math/Chemistry.

### **Emma Lueders – Canton, ME**

I came to UMaine due to the beautiful campus and the numerous financial opportunities available to me as an in-state student. I transferred to Chemistry at the end of my freshman year because of the inviting faculty. Additionally, I developed a passion for chemistry here at the UMaine and I am forever grateful. The highlights of my research were the opportunities available to me as an undergraduate student. Specifically, I thoroughly enjoyed the multiple research symposiums that I was fortunate enough to participate in which allowed me to develop my career as an aspiring synthetic organic chemist. I will be attending Cornell University to pursue my Ph.D. in Chemistry and Chemical Biology.



### **Jackie Malvin – Greenbush, ME**

I wanted a challenging major and I also find organic molecules aesthetically pleasing. In Dr. Brichacek's laboratory, I'm currently trying to synthesize the bisphosphoramidate functional group on the EM2487 molecule. The goal is to use this molecule as an antiretroviral medication for HIV-1. I've applied to the Peace Corp as a community health volunteer in Madagascar. I'm hoping to get accepted and leave next year. After this I will be applying to medical school.



### **Dalton McClure - Originally from Port Angeles, Washington, but have lived in Windham, ME**

UMaine was the public school university that many people in my high school would end up going to based on costs. I've loved times and not loved them so much here, but I've learned a lot and that was the intent upon applying here, and I hope to learn and do so much more with my degree. Chemistry just seems like the natural choice. I love lab work, natural things (which chemistry is majorly devoid of in my typical experience here, solvents, investigated natural products, etc.) and hope to continue researching and accruing experience. I have done wondrous research with Bruce Labs in the search for biological activity in a few tested Au(I) Mo(VI) compounds to build off their research, and send compounds off to other testing facilities in Texas and New Zealand for testing of antibacterial/microbial/cancer activity, with a few different NMR/UV-vis/electrochemistry tests to confirm. Namely, two compounds MoS<sub>4</sub>Au<sub>2</sub>di(Triisopropylhexane) and MoS<sub>4</sub>Au<sub>2</sub>di(Trimethylhexane). Recently, I've investigated the partition coefficient of these compounds in octanol and water, by taking respective UV-vis scans in these two solvents. The hope is that the gold would disengage from the compound and act as a soft donor, having an affinity for soft acceptor metals like selenium, taking the place of hydrogen in selenium thioredoxin, without all the same potential to reduce the cell, in hopes there would be specificity that targets cancer cells/microbes/foreign agents, focusing on arterial growth that is characteristic of cancer with the molybdenum. I plan to perhaps work with a close family friend in hydrocarbon/supercritical carbon dioxide extraction and hopefully learn the ropes of advanced, expensive machinery since sensor technology does appeal to me, alongside natural products.

### **Matthew Murphy – Woodstown, New Jersey**

I wasn't brought to UMaine, UMaine was brought to me! Why Chemistry? Because it's fun. My research highlights include making never synthesized before linear phosphine gold(I) thiolate compounds. My plans after graduation are to make money (finally).

## **Angel Nieves**

Angel was a transfer student and is already employed at Abbott Laboratories.



## **Chelsea Sainsbury - Watertown, CT**

I was drawn to UMaine by the size of the campus, the student life, etc. When I went on a tour during an accepted students' day, I really got a feel for the campus. It's located in a small town, all the buildings are within walking distance, and there wasn't this hustle and bustle that I had felt at the larger universities I had visited. In terms of student life, there's plenty of organizations to get involved in on campus, there's opportunities for on campus jobs, there's outdoor activities all year round, etc. UMaine checked all of my boxes for what I wanted in a college.

Chemistry was one of the only things that I was really interested in during high school. I took an honors level chemistry course my junior year of high school and then I took AP/Dual Enrollment during my senior year. Despite not doing great in AP/Dual Enrollment, I still had a strong interest in chemistry so I decided to be a chemistry major. While taking chemistry courses at UMaine, I was able to learn about the various fields of chemistry and organic chemistry ended up being my favorite.

The highlights of my research were being able to pick which project I wanted to work on, getting lab experience, learning various skills such as NMR skills, thin layer chromatography skills, column chromatography skills, etc. I was also able to make connections with other undergraduate and graduate students. I'm going to go to graduate school for my PhD at the University of Washington (Seattle).

***To Our Graduates,***

***We wish you the best of luck in your future endeavors!***