

M.S. CHEMISTRY GRADUATE

Nikolas Esposito

Class of 2021

Specialization: *Small Molecule Research & Development*
Current Role: *Scientist, Small Molecule AR&D*
Employer: *Merck*
Sector: *Industry*

MONTCLAIR STATE UNIVERSITY

> *"The goal was to absorb all the knowledge I can from these professionals that have been in the field. Now I'm utilizing it on a day-to-day basis."*

BACKGROUND

Undergraduate Degree: *Pharmaceutical Biochemistry, 2017*
Pre-Program Role: *Contractor at a small commercial and development manufacturing organization.*

While working as a contractor, Esposito's former undergraduate research supervisor, Dr. Goodey, reached out to gauge his interest in returning to school on a scholarship for the M.S. Chemistry program. At the same time, Esposito was promoted to a scientist role within his company. Speaking with colleagues in his new role, he recognized an opportunity for growth in his career.

> *"I knew I wanted to stay in the pharmaceutical industry and it seemed like I definitely needed some more advanced knowledge. That's something that I knew Montclair's master's program could provide for me.*

The variety of courses relevant to pharmaceuticals appealed to Esposito. He received approval from his workplace to pursue the M.S. full-time while continuing to work full-time.

PROGRAM IMPACT

Professional:
Esposito gained confidence in his scientific work and knowledge through the M.S. program. Because of his positive experience at Montclair, he thinks he may like to be a professor later in his career. For now, he is satisfied with his industry work and considering moving into management.

> *"When I interviewed my now boss, I asked him if he knew this person connected to my program who had worked in industry. It turned out they worked together for 15 years. After my interview, they talked, and that helped me out.*

Personal:
The relationships Esposito developed in the program continues to have a positive impact on him. Peers in his cohort challenged him to study hard and pushed him to succeed. He is still in touch with some of these individuals. Esposito has also become a resource himself, as potential students reach out to learn about the program and his experience.

> *"It's definitely an amazing program. I recommend it to a lot of people that I work with.*

PROGRAM EXPERIENCE

Research Focus / Thesis: *Indole-3-Glycerol Phosphate Synthase From Mycobacterium tuberculosis: A Potential New Drug Target*
Advisor: *Dr. Nina Goodey*
Key Skills & Knowledge Gained:

- *High performance liquid chromatography*
- *Biochemical assay development*
- *Precision in lab techniques*
- *Presenting scientific findings*

CAREER OUTCOMES

Current Title: *Scientist, Small Molecule AR&D*
Employer: *Merck*
Employment Sector: *Industry*
Time to Employment: *Employed while enrolled*

Upon graduating, Esposito wanted to experience working in a large pharmaceutical company. While his work now is similar to what he did previously, he enjoys being able to work on pharmaceuticals at multiple stages.

In addition to expertise developed in the M.S. program, he also credits the faculty's connections to industry for helping him land his current position.

> *"When I interviewed my now boss, I asked him if he knew this person connected to my program who had worked in industry. It turned out they worked together for 15 years. After my interview, they talked, and that helped me out.*

ADVICE FOR PROSPECTIVE STUDENTS

> *"Use all the professors as a resource, because they have so much knowledge that can help you out. Even with your resume and what hiring managers look for in a scientist's resume. Just pick their brains whenever you can. Ask questions. Stop by their office and have a conversation.*

PUBLICATIONS & PRESENTATIONS

N. Esposito, D. W. Konas, N. M. Goodey, Indole-3-Glycerol Phosphate Synthase From Mycobacterium tuberculosis: A Potential New Drug Target. ChemBioChem 2022, 23, e202100314.



M.S. CHEMISTRY GRADUATE

Tomasz Kurcon

Class of 2010

Specialization: *Chemical Biology, Biochemistry, Glycobiology, Immuno-oncology*

Current Role: *Associate Director of Experimental Immunology*

Employer: *Immunai*

Sector: *Industry*

MONTCLAIR STATE UNIVERSITY

> *"There's something about chemistry that has this sense of creating something new."*

BACKGROUND

Doctorate: *Chemistry, New York University, 2016*
Undergraduate Degree: *Chemistry & Biochemistry, 2008*
Pre-Program Role: *Montclair Chemistry Lab Assistant*

Originally intending to pursue medical school, Kurcon discovered a love of research in the M.S. Chemistry program that led him to pursue science instead. The GK12 Fellowship opened the door to the M.S. Chemistry degree, and he has since completed a Ph.D.

> *"I've always gravitated towards quantitative sciences. I really enjoyed doing research. It was a great lesson in life to just dive in and figure it out.*

Kurcon worked as a student Lab Assistant in Montclair's Chemistry Department where he prepared biochemistry teaching lab sessions and tutored. The experience helped Kurcon learn to balance his responsibilities in the lab with his own studies. He was awarded Outstanding Student Employee.

PROGRAM IMPACT

Professional:
The Montclair Chemistry faculty made a significant positive impression on Kurcon. Because they were easy to approach, Kurcon's learning extended beyond the classroom and into everyday conversations. Faculty also shared industry insights that helped contextualize the hands-on research experience.

> *"I really enjoyed having those classes with faculty that you can interact with and have much easier access to. And we have really great faculty in the Chemistry Department. I felt empowered there because you get that one-on-one time with the faculty. It felt like I had the right support.*

Personal:
Kurcon's time in the Chemistry Department as an undergraduate and graduate student enabled him to explore and experiment, learning what aspects of chemistry he enjoyed and what he might like to pursue post-graduation.

> *"What made Montclair State special wasn't just the education—it was the people. The faculty and leadership were genuinely accessible and willing to help students succeed.... I'm grateful that MSU believed in giving motivated students the chance to exceed their own expectations.*

PROGRAM EXPERIENCE

Research Focus / Thesis: *Conformational Motion Associated With Catalysis in Indole-3-glycerol Phosphate Synthase from S. solfataricus*
Advisor: *Dr. Nina Goodey*
Key Skills & Knowledge Gained:

- *Independent research and experimental design*
- *Spectroscopy techniques*
- *Protein biochemistry*
- *Enzyme catalysts*
- *Biophysical characterization*
- *Concepts in Pharmacology*

CAREER OUTCOMES

Current Title: *Associate Director of Experimental Immunology*
Employer: *Immunai*
Employment Sector: *Industry*

After completing the M.S., Kurcon earned a Ph.D. in Chemistry where his research transitioned from the protein dynamics he worked on at Montclair to a focus on glycomics research. He completed a post-doctoral research position and worked at several biotechnology companies. The skills he learned at Montclair set him up for success in these endeavors.

> *"Everybody at my last job had Ivy League degrees. I felt intimidated. And then one night, my colleague with a PhD from Yale came up to my bench and asked me to help him with this chemistry reaction. I had never done it but I started thinking about it and I solved it. I realized that the knowledge that I had to solve this came from Montclair. It wasn't from my PhD, it came from Montclair, from my undergrad and from my master's degree.*

ADVICE FOR PROSPECTIVE STUDENTS

> *"The most important skill is to gain independence, to ask the right questions. Ask yourself, how does this work? And apply it.*

SELECT PUBLICATIONS & PRESENTATIONS

Kurcon T, et al. miRNA proxy approach reveals hidden functions of glycosylation. PNAS, 2015, 112, 7327–7332.
Schlee S, Dietrich S, **Kurcon T**, et al. Kinetic mechanism of indole-3-glycerol phosphate synthase. Biochemistry, 2013, 52, 132–142.
Patent: US20240197880A1. **Kurcon T**, et al. New anti-MUC1 CARs and gene edited immune cells for solid tumor cancer immunotherapy. Filed April 29, 2022.



M.S. CHEMISTRY GRADUATE

Romy Perez-Abraham

Class of 2016

Specialization: *Biochemistry*
Current Role: *Scientist - Biophysics*
Employer: *Johnson & Johnson*
Sector: *Industry*

MONTCLAIR STATE UNIVERSITY

> *"I don't think I could have entered into industry if it wasn't for the M.S. Chemistry program and the experience that I gained there."*

BACKGROUND

Undergraduate Degree: *Biochemistry, 2014*

With the recommendation of peers in the program and their own positive experience as an undergraduate with Montclair's Chemistry faculty and lab, Perez-Abraham pursued the M.S. Chemistry to gain additional lab experience and conduct research in biochemistry.

> *"I was figuring it out at that time. I really didn't know what I was going to with my degree. So, I figured I should work in a lab to get good experience to get a good job, but I didn't know what that looked like at that moment.*

In addition to offering subject matter expertise, faculty and peers shared resources across labs to ensure students had what they needed to complete their work.

> *"In addition to offering subject matter expertise, faculty and peers shared resources across labs to ensure students had what they needed to complete their work.*

PROGRAM IMPACT

Professional:
In courses, Perez-Abraham learned about working in industry and received advice for applying for industry jobs. She also worked towards a first-author publication in Dr. Nina Goodey's lab.

> *"Dr. Goodey let me do my own thing, but she was always available. And that set a good tone for the rest of my career regarding what to expect when working with a supervisor.*

Personal:
The program challenged and supported Perez-Abraham to succeed in difficult subject matter. She sought tutoring from peers who excelled in the courses she wanted more support with. She also embraced learning from the challenges of lab work.

> *"I was working with a protein purification that we could never replicate, and after months of trying, I concluded that it was something else. That challenge taught me a lot about the process of science and how not everything is a given.*

PROGRAM EXPERIENCE

Advisor: *Dr. Nina Goodey*
Key Skills & Knowledge Gained:

- *Protein expression, purification, & characterization*
- *Enzymology*
- *Biochemistry*

CAREER OUTCOMES

Current Title: *Scientist - Biophysics*
Employer: *Johnson & Johnson*
Employment Sector: *Industry*
Time to Employment: *Within 3 months*

The program equipped Perez-Abraham with a diverse set of skills that opened up a wide range of roles for employment upon graduating. Taking advantage of this, Perez-Abraham applied her wide skillset in different positions at major pharmaceutical companies, including Eli & Lilly and Bristol Myers Squibb.

> *"I had no lab skills besides what I did in undergrad lab classes. But being in charge of a program, developing it, working with other people, writing about it, and troubleshooting, I learned all of that in grad school.*

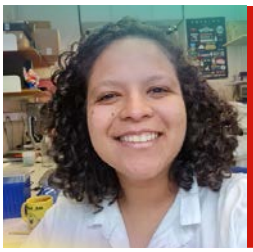
Perez-Abraham is happy with her current work at Johnson & Johnson where she still learns new things in her role. In the future, she might like to lead her own group of scientists.

ADVICE FOR PROSPECTIVE STUDENTS

> *"Definitely go for it, even if you're not sure. I wasn't, I didn't know what to expect, and it was probably the best decision I could have made. If the path forward isn't super clear, it's a really good program with really great people who care. It's a small program, so you won't get lost and it's very supportive.*

SELECT PUBLICATIONS & PRESENTATIONS

Perez-Abraham R, Sanchez KG, Alfonso M, Gubler U, Siekierka JJ, Goodey NM. Expression, purification and enzymatic characterization of Brugia malayi dihydrofolate reductase. Protein Expr Purif. 2016 Dec;128:81-5. doi: 10.1016/j.pep.2016.08.012. Epub 2016 Aug 18. PMID: 27544923.



M.S. CHEMISTRY GRADUATE

Irina Terrero Rodriguez

Class of 2019

Specialization: *Electrochemistry*
Current Role: *Post-doctoral Researcher*
Employer: *University of Campinas*
Sector: *Academic Research*

MONTCLAIR STATE UNIVERSITY

> *"I think the M.S. was a really lovely stepping stone. It was a very good way to dip my toes into the academic world, to do research, to work closely with the professors, to do teaching, and to live close to New York City."*

BACKGROUND

Doctorate: *Chemistry, 2023*
Undergraduate Degree: *Chemistry, 2017*
Pre-Program Role: *Undergraduate student*

Rodriguez applied to the M.S Chemistry program to help her decide if she would be interested in later pursuing a Ph.D. During her interview for a Graduate Teaching Assistantship at Montclair, she found she was attracted to the friendly faculty, small department size, and the attention M.S. students receive.

> *"A Master's seemed like a nice way of testing the waters. I was excited to get some teaching experience, the opportunity to interact with the undergrads. I worked closely with the professors that taught general chemistry courses, like Professor Weitner and Professor Gint. It was well organized and they gave teaching tips so I could help the students but also manage them.*

As an international student, Rodriguez experienced some visa challenges that caused a delayed start to her first semester. She found faculty to be easy to talk to and helpful for staying on track with degree progress and the transition from undergraduate classes to advanced graduate courses and labs.

PROGRAM IMPACT

Professional:
Rodriguez worked with Dr. Glen O'Neil to conduct her thesis research. She credits this faculty relationship for helping her go on to get a Ph.D.

> *"I think working with Dr. O'Neill was really, really important for my professional development because I got exposed to a whole world of literature and other research groups that he wanted to collaborate with, that he had worked for. He referred me to people and really took an active role in helping me shape my path after my Master's.*

Personal:
The program also allowed Rodriguez to nourish her personal life. She married the man she dated during her time as a Montclair student and fondly recalls the arts and cultural opportunities Montclair made available to students.

> *"Getting to live close to New York City was fun as well. Montclair had a lovely program where you can get Broadway tickets for cheap. I saw three musicals. It was so great."*

PROGRAM EXPERIENCE

Research Focus / Thesis: *Light Addressable Electrode for Neurotransmitter Sensing*
Advisor: *Dr. Glen O'Neil*
Key Skills & Knowledge Gained:

- *Reading scientifc literature*
- *Presenting scientific findings*
- *Electrochemistry*

CAREER OUTCOMES

Current Title: *Post-doctoral Researcher*
Employer: *University of Campinas*
Employment Sector: *Academic Research*
Time to Employment: *3 months*

Rodriguez felt her time in the M.S. Chemistry program prepared her well for pursuing a Ph.D. Rather than going straight into a Ph.D. from undergrad, Rodriguez is glad she took the time to try out graduate school with an M.S. in Chemistry at Montclair. The dedicated attention from faculty made all the difference in her experience and she attributes her success in her Ph.D. to the preparation she received in the M.S.

> *"When I started my PhD, I was really grateful that I got to work so closely with my professor during my thesis research project because there are so many things that Dr. O'Neill really took the time to explain to me very patiently.*

Following her current post-doctoral position, Rodriguez is considering pursuing industry positions or non-faculty roles in academia, such as a technician at a research training facility.

ADVICE FOR PROSPECTIVE STUDENTS

> *"You're going to be just fine. It's not going to be as bad as you think it will be. They're very much focused on teaching, which is really lovely for the students.*

SELECT PUBLICATIONS & PRESENTATIONS

Terrero Rodríguez, I. M., Borrill, A. J., Schaffer, K. J., Hernandez, J. B., & O'Neil, G. D. (2020). Light-addressable electrochemical sensing with electrodeposited n-silicon/gold nanoparticle Schottky junctions. Analytical Chemistry, 92(16), 11444–11452. https://doi.org/10.1021/acs.analchem.0c02512

Tully, J. J., **Terrero Rodríguez, I. M.**, Kaewsen, M., Wood, G. F., Houghton, D., Han, Y., Mollart, T. P., & Macpherson, J. V. (2024). Enhanced electrochemical ozone production via sp2 carbon content optimization in boron doped diamond electrodes using laser micromachining. Carbon, 228, 119261. https://doi.org/10.1016/J.CARBON.2024.119261



M.S. CHEMISTRY GRADUATE

Sarah Cho

Class of 2021

Specialization: *Biochemistry*
Current Role: *Ph.D. Candidate*
Employer: *Rutgers University*
Sector: *Academic Research*

MONTCLAIR STATE UNIVERSITY

> *"It's a really great program, especially for anyone doubting themselves. People are there to support you, and you can achieve more than you think you can."*

BACKGROUND

Undergraduate Degree: *Biochemistry, 2016*
Pre-Program Role: *Undergraduate student*

Cho applied to the M.S. Chemistry while she waited to learn the results of her medical school applications. However, upon starting the M.S., she discovered a passion for research and a newfound desire to teach.

> *"I was in that gray area of not knowing what to do next since I was waiting to hear back from medical schools. I got into the Master's program and within my first semester I realized that I really didn't want to go to medical school. Instead, I saw myself teaching as a professor.*

Valuing her learning experience at Montclair, Cho continued working in her advisor's lab another two years after completing the M.S. to publish a research article and gain more experience.

> *"The two years of working as Dr. Goodey's lab tech prepared me for a lot of scenarios. Research really is a waiting game. It's definitely helped to manage my expectations. When I feel stuck in a sense of my experiments not working, instead of despairing, I know this is just how research goes.*

PROGRAM IMPACT

Professional:
Cho's confidence grew with the support of the M.S. Chemistry and the degree expanded the professional opportunities available to her.

> *"If it wasn't for the Master's program, I don't think I would be in a Ph.D. program. I don't think I'd be considering being a professor. It's opened doors where I've been given more options and it's definitely expanded my confidence. I didn't know that I was capable of getting a Ph.D.*

Personal:
The close-knit community of her cohort helped Cho strengthen interpersonal skills. She also learned the importance of self-care.

> *"I had to learn how to manage myself emotionally and take care of myself. I think burnout is such a huge thing in science, especially with the pressure to get results. Even if I manage logistics well, I have to regulate myself before moving forward with my work to make sure my brain is functioning correctly to push forward.*

PROGRAM EXPERIENCE

Research Focus / Thesis: *Investigating the Effects of Catalytic Activity in Mycobacterium Tuberculosis Indole-3-Glycerol Phosphate Synthase in Wildtype, N189L, And E57D Variants*
Advisor: *Dr. Nina Goodey*
Key Skills & Knowledge Gained:

- *Lab management & organization*
- *Data acquisition & analysis*
- *Independent research*
- *Personal resilience*
- *Interpersonal skills*

CAREER OUTCOMES

Current Title: *Ph.D. Candidate*
Employer: *Rutgers University*
Employment Sector: *Academic Research*
Time to Employment: *Admitted to postdoc within two years*

Cho's M.S. in Chemistry degree prepared her to be a competitive Ph.D. student with multiple doctoral supervisors offering to work with her.

> *"I regularly draw on the skills in analysis and organization. It's become habitual, so I think that makes the work flow so much easier.*

Upon graduating with her Ph.D. in Chemistry, Cho would like to find a teaching-focused position at a university where she can offer the kind of education she received at Montclair.

> *"The courses that were offered were very formative in terms of allowing for a discussion rather than having just rote memorization as a requirement. So, I really enjoy the classes that were given at Montclair.*

ADVICE FOR PROSPECTIVE STUDENTS

> *"I would say go for it. Definitely join a lab. And choose your PI well. Your trajectory may not look the same as everybody else depending on what your needs are, but you're capable of achieving what you set your mind to.*

SELECT PUBLICATIONS & PRESENTATIONS

T. Aggarwal, L. Wang, B. Gutierrez, H. Guven, H. Erguven, **S. Cho**, E. C. Izgu, Angew. "A Small-Molecule Approach Enables RNA Aptamers to Function as Sensors for Reactive Inorganic Targets," Chem. Int. Ed. 2025, 64, e202421936.



M.S. CHEMISTRY GRADUATE

Craig Waitt

Class of 2017

Specialization: *Computational Chemistry & Chemo/Bioinformatics*

Current Role: *Assistant Professor*

Employer: *Trine University*

Sector: *Academic Research & Teaching*

MONTCLAIR STATE UNIVERSITY

> *"In my Ph.D. program, I would constantly reflect on the things that I learned from my M.S. advisor at Montclair and bring that into my current research."*

BACKGROUND

Doctoral Degree: *Chemistry, 2022*
Undergraduate Degree: *Chemistry, 2015*
Pre-Program Role: *Undergraduate student*

Waitt's undergraduate experience at Montclair sparked an interest in research that shifted his career goals from teaching in high school to pursuing a Ph.D. and teaching as a professor.

> *"I really just wanted to go into high school teaching, but one of the undergraduate requirements was doing some research... I fell in love with it. Dr. Eshuis made doing research fun, and he was probably an instrumental reason why I decided to go and pursue graduate work.*

Waitt applied to the M.S. Chemistry to build his research experience and be a more competitive candidate for doctoral programs.

> *"I was kind of a lazy undergraduate, and the Master's program helped prove I have the academics to do a Ph.D. Because I was doing work with Dr. Eshuis, I got to spend another two years doing research, honing computer skills, and sort of building my profile as a researcher.*

PROGRAM IMPACT

Professional:
Waitt learned how to manage a graduate academic load while simultaneously engaging in research opportunities.

> *"One of the biggest things I have to thank Montclair for is that I definitely learned how to manage time. To put time aside to study, do work, and all these things.*

Personal:
In addition to making lasting friendships among his cohort, Waitt also maintains contact with many of his Montclair professors.

> *"I made a lot of friends there throughout the years. They were all instrumental. I'm still in contact with a few of them now, mostly the faculty there. The faculty put in a lot of effort to make that program successful.*

PROGRAM EXPERIENCE

Research Focus / Thesis: *A Computational Study of C–CN Bond Activation Through Nickel Catalysis Using the Random Phase Approximation*
Advisor: *Dr. Hendrik Eshuis*

CAREER OUTCOMES

Current Title: *Assistant Professor*
Employer: *Trine University*
Employment Sector: *Academic Research & Teaching*
Time to Employment: *Admitted to postdoc by graduation*

Waitt's experiences with Montclair Chemistry faculty made a lasting impression that he emulates in his own classroom as an Assistant Professor.

> *"The faculty were really committed to their jobs as educators. Looking back, my favorite courses were the ones where I got to do my own little project. We got to choose our own topic and present our own work. Those are the kind of teaching techniques that I implement in my undergraduate classes.*

Waitt intends to progress toward a tenured faculty position and potentially go into academic administration later in his career. For now, he is happy as a professor.

> *"I knew if there was something that particularly bothered me, I could go to one of the faculty members. And if they couldn't resolve it, they would point me to a person who could.*

ADVICE FOR PROSPECTIVE STUDENTS

> *"The practical skills you learn from actually doing a research project are instrumental and can translate to any career in the future. Also, start the homework earlier. I remember many late nights in graduate school trying to get that homework done. It is a different level.*

SELECT PUBLICATIONS & PRESENTATIONS

C. Waitt, N.M. Ferrara, H. Eshuis, "Thermochemistry and geometries for transition-metal chemistry from the random phase approximation," Journal of Chemical Theory and Computation 12(11), 5350–5360 (2016).

C. Waitt, X. Gao, R. Gounder, A. Debellis, S. Prasad, A. Moini, W.F. Schneider, "Analysis and augmentation of guest–host interaction energy models as CHA and AEI zeolite crystallization phase predictors," The Journal of Physical Chemistry C 127(46), 22740–22751 (2023).



M.S. CHEMISTRY GRADUATE

Oshane Thomas

Class of 2019

Specialization: *Biochemistry*
Current Role: *Senior Tech Transfer Associate*
Employer: *Simtra BioPharma Solutions*
Sector: *Industry*

MONTCLAIR STATE UNIVERSITY

> *"As an M.S. student, I chose the project everyone ran away from because I saw it as an opportunity to learn more about research. I have an intellectual curiosity where I always question things and I like to learn."*

BACKGROUND

Undergraduate Degree: *Biochemistry, 2017*
Pre-Program Role: *Undergraduate student*

When financial barriers prevented Thomas from enrolling in medical school after graduating high school, he found a new professional path in chemistry. Thomas chose Montclair for its proximity to a strong pharmaceutical industry and because he had family nearby.

> *"Being exposed to biochemistry in undergrad, I fell in love. I have more ways to explore mentally… So I decided biochemistry would be the temporary path while going on to med school.*

Curiosity piqued by the challenge of a particular project in Dr. Goodey's lab, Thomas maintained his position as lab assistant for a year after graduating. There, he learned to interface with other departments and work with vendors to order supplies. His work on the project resulted in a research publication.

> *"I had to figure some stuff out to help get that paper published because that's very important… So I spent a little bit over a year working diligently to help Dr. Goodey and the team.*

PROGRAM IMPACT

Professional:
Thomas enjoyed the challenges presented in the M.S. Chemistry coursework, which required him to develop strong conceptual understanding and hands-on technical skills.

> *"It was like a welcome message to the real world of research. You learned how to look for the information and how to critique it. You'd have to look at a target and determine how you're going to conduct the assay.*

Personal:
The program exposed Thomas to a wide range of potential career paths, which helped him decide his passion for learning was better suited to conducting research than medical school.

> *"I like to learn. I don't like to crunch a lot of information and then potentially forget it. I like to enjoy and explore.*

PROGRAM EXPERIENCE

Research Focus / Thesis: *Indole-3-glycerol Phosphate Synthase Ligand Binding Interactions*
Advisor: *Dr. Nina Goodey*
Key Skills & Knowledge Gained:

- *Drug design*
- *Bioassay development*
- *Reading scientific literature*

CAREER OUTCOMES

Current Title: *Senior Technical Transfer Associate*
Employer: *Simtra*
Employment Sector: *Pharmaceutical Industry*
Time to Employment: *13 months*

Because of the industry-recognized talent coming from Montclair M.S. Chemistry and the experience Thomas cultivated in Dr. Goodey's lab, he landed a Senior Scientist position after graduating. Since then, Thomas has successfully held a wide range of roles, from large pharmaceutical companies to startups.

> *"Montclair provides good quality work that industry actually recognizes. First role was senior level with a Master's because of the high quality work that I did with Dr. Nina Goodey that impressed other researchers in the industry.*

Thomas appreciated the industry experience and connections that Montclair faculty could offer. He plans to remain in industry and is open to working with academia in the future.

ADVICE FOR PROSPECTIVE STUDENTS

> *"Consider why you want to do the program, your career aspirations. Do you want to do research in academia to advance knowledge, or in industry which pays better but doesn't really let you explore. The M.S. Chemistry goes over most of the things that we need to know for research, for medical school or even just working in the industry.*

SELECT PUBLICATIONS & PRESENTATIONS

Thomas, O. D., Cho, S., Catalano, J., Goodey, N. M., & Konas, D. W. (2023). Investigating the roles of active site residues in Mycobacterium tuberculosis indole-3-glycerol phosphate synthase, a potential target for antitubercular agents. ACS Bio & Med Chem Au, 3(5), 450–461.

Goodey, N. M., Leon H. K., **Thomas, O.** O., Cho, S., Booter, H., Riley, H., Candela, T., Fadden, P., Lacap, J., & Konas, D. W. (2021). Insights into the catalytic mechanism of M. tuberculosis indole-3-glycerol phosphate synthase. The FASEB Journal, 35(S1).



M.S. CHEMISTRY GRADUATE

Salma Kwarteng

Class of 2026

Specialization: *Biochemistry*
Current Role: *Ph.D. Student*
Institution: *Wesleyan University*
Sector: *Academic Research*

MONTCLAIR STATE UNIVERSITY

> *"Once you experience one thing, you just keep getting curious and you want to ask more questions."*

BACKGROUND

Undergraduate Degree: *Biology, 2023*
Pre-Program Role: *Undergraduate student*

Kwarteng was unsure what she wanted to do when she finished her undergraduate degree. Having an interest in medicine and seeing the Open New Jersey scholarship, she applied to Montclair's M.S. Chemistry with minimal background in the discipline.

> *"I got in with conditional acceptance of taking other chemistry courses. I got into Dr. Goodey's lab, and that's when everything started. This field and the research was something totally different from what I was used to.*

While she was initially nervous about entering advanced studies in a new field, but with faculty support she found she was up to the challenge and enjoyed the work.

> *"Restarting one of the lab's old projects was the most outstanding experience I've ever had in this program because I was coming from zero background in chemistry to now being a published author on a project.*

PROGRAM IMPACT

Professional:
Kwarteng fostered meaningful relationships both within and outside of her program, offering her insights from a variety of perspectives.

> *"I met a lot of people who I can call my best friends at this point. We can provide feedback or knowledge or share what we think about certain topics. Even though it might not be related to their program, they can give me some ideas.*

Personal:
Kwarteng grew more confident, not just in chemistry, but in herself. She expects the personal growth she experienced in the program will continue to serve her.

> *"I used to be a very timid person. I didn't talk much or speak up about a lot of things. But now I feel more comfortable talking to people about what I think. I've really grown as a person. I'm not scared to express myself. That is one of the most important things that I've gained.*

PROGRAM EXPERIENCE

Research Focus / Thesis: *Structural Characterization, Kinetic Parameters and Inhibition of Wuchereria bancrofti Dihydrofolate Reductase for the treatment of Lymphatic Filariasis*
Advisor: *Dr. Nina Goodey*
Key Skills & Knowledge Gained:

- *Leadership*
- *Communication*
- *Kinetic assays*
- *Protein crystallization*

CAREER OUTCOMES

Current Title: *Lab Assistant*
Employer: *Montclair State University*
Employment Sector: *Academic Research*

As a recent graduate, Kwarteng is continuing to work in Dr. Goodey's lab before transitioning to a Ph.D. in Molecular Biology and Biochemistry at Wesleyan University in Fall 2026.

> *"I actually ended up getting into two different doctoral programs, but then I had to make the hard decision to choose one.*

Kwarteng is excited to follow her curiosity and continue building her own and the field's knowledge base. She is interested in contributing to drug design, development, and the translation of medicine.

> *"Even though I'm not a doctor treating patients face-to-face, I'll still able to contribute to healing people.*

ADVICE FOR PROSPECTIVE STUDENTS

> *"Don't be scared because of the names of the courses that you see. If it's really something you want to do, just go ahead and do it. Just apply. There's a good support system. You will meet a lot of amazing people who can help you succeed in the program.*

SELECT PUBLICATIONS & PRESENTATIONS

Kwarteng, S., et al. "A virtual screening strategy to repurpose antifolate compounds as W. bancrofti DHFR inhibitors." Bioorganic & Medicinal Chemistry Letters (2025): 130370.