

# CHEMISTRY **NEWS**

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

FALL 2023

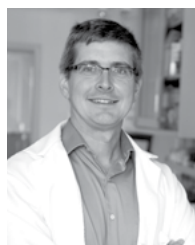


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*Editor: Jon Kirchhoff*  
*Co-Editor: Stephanie Wood*  
*Layout and design: Gayle Heer*

## Welcome from the Chair



I hope this newsletter finds you in good health and high spirits. It is with great pleasure and a profound sense of responsibility that I assume the role of

Chair of the Department of Chemistry and Biochemistry at The University of Toledo. Having been a part of this institution since 2005, I am honored to share that both myself and my spouse, Treasure, are proud graduates of the undergraduate and graduate chemistry programs, respectively.

I hope you enjoy reading the updates in this newsletter as much as we do. The continued achievements and hard work in teaching, research and service to the profession by our faculty, staff and students are truly impressive and highlight our commitment to nurturing the next generation of scientists while pushing the boundaries of scientific exploration and innovation, firmly positioning us at the forefront of cutting-edge research.

The first few months have already been a whirlwind, involving tasks such as on-boarding our new Administrative Assistant, Amaya Carpenter, hiring instructors, navigating through the ACS recertification process, relocating our central offices to Wolfe Hall, and warmly welcoming our incoming fall '23 graduate and undergraduate student class. We also managed to carve out some time to savor the delightful fall weather, as we enjoyed a fall cookout organized by our talented ACS Student Chapter at the picturesque Koester Alumni Pavilion, alongside our dedicated faculty, staff and students.

My vision is to continue growing our

graduate and undergraduate programs in both size and stature. We can achieve these goals by attracting and retaining exceptionally talented faculty, staff and students, dedicating ourselves to a pursuit of excellence and providing our budding scientists with the latest tools and resources they need to flourish.

As we continue to build upon our department's legacy of excellence, I invite you to stay connected with us. Your support, both as alumni and friends of the department, remains invaluable. In the face of funding cutbacks in higher education, your support is instrumental in helping us navigate these challenges and maintain our mission of producing well-trained scientists capable of addressing society's most pressing problems as well as retaining our highly productive faculty. We eagerly anticipate engaging with you through alumni events, collaborations and partnerships. Together, we will continue to advance the frontiers of science, inspire future generations of scientists and uphold our reputation as leaders in the field.

Please do not hesitate to reach out if you have any questions, suggestions or if you would like to get involved. You are welcome to send an email at any time and we would greatly appreciate your following our social media accounts on platforms such as LinkedIn or X (formerly Twitter at @ChemistryToledo). Your input and involvement are of immense value to us.

Thank you once again for your steadfast support.

Warm regards,



## Greetings from Jon Kirchhoff, Past-Chair

Another eventful year has passed filled with good news to share in this newsletter covering academic year 2022-2023, which was my last as chair. Steve Suheck took over the reins of the department as of July 2023. Wei Li succeeds Cora Lind-Kovacs, whose steady hand helped guide the department for the past ten years, as associate chair of the department.

Reflecting on my nine years as chair, I am very proud of the progress the department has made in many areas. Despite serious challenges encountered by the COVID-19 pandemic and budget pressures, the department remained focused on our mission of student success, research excellence and serving the profession. For example, the Chemistry Stockroom effectively sourced Personal Protective Equipment (PPE) and disinfecting supplies for the main campus to ensure a safe reopening of teaching and research laboratories after the COVID shutdown. The stockroom also incorporated sustainability and budget saving practices such as development of an acetone recycling program and installing new equipment for the conservation of cryogen resources. A recent grant award from NSF for a helium recovery system continues these efforts by creating a sustainable NMR facility for student training and research. The department also celebrated important milestones including the department's 100<sup>th</sup> and Ph.D. program's 50<sup>th</sup> anniversaries and established the Dr. Nina McClelland Laboratory for Water Chemistry and Environmental Analysis in 2019.

Focused efforts to modernize the curriculum and instruction in general and organic chemistry laboratory classes were a priority. Led by Nate Coleman, Michael Young and the Chemistry Stockroom team, new experiments were introduced, updated equipment was obtained when opportunities allowed and new safety procedures were implemented resulting in improved student satisfaction and retention. In addition, the B.S. biochemistry program obtained ACS certification in 2016 and a new certificate program in analytical chemistry was introduced in fall 2023. The number of our undergraduate majors seeking research experience continues to grow, providing valuable skills for their future careers. Faculty excelled in the classroom with three recognized with the University of Toledo's Outstanding Teaching Award: Claire Cohen-Fray (2016), John Bellizzi (2019)

and Kristi Mock (2020).

Research funding increased 332% between FY14 (\$1.28 M) and FY22 (\$4.24 M) despite a reduction in the number of research active faculty and staff positions. Three assistant professors (Emanuela Gionfriddo, Michael Young and Matt Wohlever) received prestigious NSF CAREER awards to go along with the success of other faculty obtaining significant federal, state and industrial funding. Scholarly output remained strong with graduate and undergraduate students contributing to peer-reviewed scientific publications in some of the top journals in chemistry and biochemistry. The graduate program graduated 108 Ph.D. and 30 M.S. students since 2014, while 195 undergraduates earned bachelor's degrees. An additional 2,283 students earned chemistry minors emphasizing the importance of chemistry in many degree programs on campus consistent with the department's standing as the third largest department on campus in terms of the number of students taught and FTEs generated. Numerous faculty and staff garnered local, regional, national and international recognition and awards ([utoledo.edu/nsm/chemistry/people/awards.html](http://utoledo.edu/nsm/chemistry/people/awards.html)) and are serving in leadership positions in the American Chemical Society and other high profile organizations, editorial boards and advisory councils. All of these accomplishments were key to the department being recognized in international and national rankings by *U.S. News and World Reports*.

The department very much appreciates the support from our alumni and friends who are helping the next generation of chemists and biochemists reach their career goals. Through many generous donations seven new scholarships and awards were created since 2014. At the spring 2023 Honors Tea (below left), approximately \$45,000 was awarded to students to assist their education. The positive impact on our current students through your generosity is immeasurable. On behalf of the department's faculty, staff and students, thank you. I also would like to thank the faculty and staff of the department, including the many talented individuals who have retired or left the department. Their contributions to the department's success were much appreciated.

I hope you enjoy reading the details about many of these accomplishments from 2022-2023. As always, please keep in touch, stop by and visit, send us your news and career updates.

Best regards,




## DEPARTMENT UPDATES

### Comings and Goings



**Amaya Carpenter,**  
Administrative Assistant I, joined the department in June 2023.

**Eric Findsen,**  
Associate Professor, retired on July 1, 2023, after 35 years of service to the University.



**Lindsay Galandiuk,**  
Chemical Storekeeper II, joined the department in spring 2023. Lindsay previously helped the department, on occasion, as a part-time instructor.



**Anna George,**  
Visiting Assistant Professor, joined the department in fall 2022. Anna has a focus on data analysis with a strong background in research,

specifically chemistry education research. Before Anna began teaching for the Advanced Data Analytics program at the University of North Texas in the

fall of 2019, she had a variety of teaching experiences, ranging from teaching statistics for a business school, chemistry for a couple different universities, to teaching future science teachers pedagogy and teaching methods. Like most of her students, she has not followed the traditional academic path, allowing her to see both the academic and practitioner viewpoints, thereby helping to add practical, real-world meaning to the textbook material. She holds a doctoral degree in Chemistry focusing on Chemical Education from the University of North Texas, a Master of Business Administration with specializations in Marketing and Business Analytics from the University of Nebraska - Lincoln, a master's degree in Secondary Education with an endorsement in Gifted Education as well as baccalaureate degrees in Biology and Chemistry from the University of North Texas.

**Stephanie Kaetzel,** Chemical Storekeeper II, left the department in fall 2022 after 22 years of service to the University. Stephanie is now an Environmental Specialist in the Ohio EPA Department of Environmental Response and Revitalization working as a hazardous waste inspector and site coordinator for many state of Ohio clean-up sites.

**Ajith Karunarathne,** Associate Professor, left the department in summer 2022 for a similar position in the Department of Chemistry at Saint Louis University.

### **Pam Samples,**

Secretary II, retired on April 28<sup>th</sup>, 2023, after almost 37 years of service to the University. We wish her well in her retirement and will miss her experience and talents. Pam was the force behind the annual Chemistry and Biochemistry Honors Tea where our students were honored for their outstanding achievements in their studies. At the April 26<sup>th</sup> 2023 Honors Tea, Pam was presented with a special glass tea pot decorated with the UToledo logo and an engraving by department glassblower, Eamon King.



**Amy Toole,** Associate Lecturer, retired from teaching at the end of spring semester 2023 after almost 6 years of service to the University.

**Matt Wohlever,** Assistant Professor, left the department in summer 2023. Matt is now in the Department of Cell Biology at the University of Pittsburgh.

**Stephanie Wood,** Administrative Assistant I, left the department on June 2<sup>nd</sup>, 2023.

## IN THE NEWS

### New Pesticide Exposure Test Developed to Protect Inexperienced Cannabis Farmers

*By Christine Billau, UTNews, April 2023, used with permission*

A chemical analyst and expert in micro-extraction at The University of Toledo created a more reliable, robust and efficient way to monitor pesticide exposure and help protect the health and safety of agricultural workers, especially for emerging sectors like the cannabis industry.

**Dr. Emanuela Gionfriddo**, an assistant professor of analytical chemistry, and **Nipunika H. Godage**, a Ph.D. candidate in UToledo's Dr. Nina McClelland Laboratory for Water Chemistry and Environmental Analysis, published research in the journal *Analytical and Bioanalytical Chemistry* outlining their groundbreaking method that is able to detect 79 pesticide residues in human blood plasma at "ultra-trace" levels, or parts per trillion

"This has the potential to be applied to human exposure studies for the general public such as exposure through food or contaminated water but, most importantly, agricultural workers who have a higher potential for acute exposure to these toxic chemicals, which typically occurs through the skin, with pesticides then passing into the bloodstream and circulating through the body," Gionfriddo said.

Pesticides are widely used in farming to prevent or reduce produce losses caused by pests and improve the quality of fruits and vegetables, but human exposure during mixing or application has been reported to cause neurological disorders, poisoning, cancer, reproductive disruptions, respiratory problems and chronic kidney diseases among farm workers.

Though pesticides are regulated by the U.S. Environmental Protection Agency, Gionfriddo said the legalization of cannabis recently in several states has led to "inexperienced" farmers being exposed to the harmful chemicals since those workers are less familiar with pesticide safety equipment and procedures as well as proper pesticide storage and handling.

The pesticides selected for her study are the most commonly used pesticides during cannabis cultivation.

Gionfriddo's new testing method uses what's called bio solid-phase microextraction with liquid chromatography-tandem mass spectrometry.

"To meet the growing demands of regulatory agencies and routine analysis laboratories, sample throughput and method tunability is critical," Gionfriddo said. "Using automated samplers, the preparation time per sample is 1.7 minutes."

And as occupational exposure to pesticides can occur at varying concentration levels, it is important for any method to quantify pesticides at low concentrations. The new testing method demonstrated higher sensitivity, precision and accuracy and a



*Nipunika H. Godage, a Ph.D. candidate in UToledo's Dr. Nina McClelland Laboratory for Water Chemistry and Environmental Analysis.*

drastic reduction in abnormalities compared to the commonly used approach, known as QuEChERS, which stands for Quick, Easy, Cheap, Effective, Rugged and Safe but can be labor intensive with prolonged workflows.

Last week during National Farmworker Awareness Week, the U.S. EPA said pesticide exposure doesn't only happen when working in the fields. The federal agency said pesticide take-home exposure can occur when farm workers go home bearing pesticide residues that may cling to their skin, clothing, hats, boots, tools, lunch coolers or other items in their work environment. Their children may then be exposed to these pesticide residues.

"Assessing pesticide exposure quickly and thoroughly is crucial for the health and safety of workers and their families, to correct malpractices in pesticide storage and application, and to prevent further exposure," Godage said. "Our new method can extract and analyze simultaneously a wide variety of pesticides from human plasma."

To learn more about the U.S. EPA's Occupational Pesticide Safety and Health program, visit the agency's website.

### In the UToledo Glass Shop, 2,000-year-old Methods Enable Modern-Day Discoveries

*By Tyrel Linkhorn, UTNews, June 2023, used with permission*

In a small workshop tucked near the back of Bowman-Oddy Laboratories, **Eamon King** spends his days putting 3,000-degree flames to glass.

Glassblowing is a 2,000-year-old craft, the basic principles of which haven't changed much since the Roman Empire. And yet as The University of Toledo's scientific glassblower, King's precise creations help to enable some of the most cutting-edge science being done at UToledo.

"There are portions of our research, particularly in synthetic

chemistry, that wouldn't be possible without what Eamon is able to do," said Dr. Jon Kirchhoff, Distinguished University Professor and chair of the Department of Chemistry and Biochemistry. "It is a highly skilled craft, if not an artistry."

King's workspace looks more like a machine shop than an art studio. There are ovens and torches, but there's also a drill press, calipers and shears, saws and a large lathe.

Job orders with hand-drawn diagrams cover the workbenches.

"It's split about 50-50 between blank slate creations and repairs," King said. "I get everything from simple fixes like a broken neck on a flask to requests for really specific things that either aren't available or would cost a fortune to buy off the shelf."

A specialized vacuum manifold, which allows researchers to perform reactions in the absence of reactive oxygen, for example, can easily cost \$1,200 to \$1,500 from an online retailer. King can create the same apparatus for a couple hundred bucks — and eliminate the wait and damage risks associated with shipping.

He also can salvage costly broken glassware. For example, King recently got a request to fix a large glass condenser that would cost more than \$2,000 to replace. Repair cost? About 30 bucks.

"Having someone in-house who can create the same thing from the parts, it's a huge cost saving," Kirchhoff said. "It allows us the ability to perform unique experiments and it stretches our research dollars. When things break or get nicked up, it can be fixed instead of buying a new one."

King's position is housed within the Department of Chemistry and Biochemistry, with his work supporting the department's research and educational missions. His services, however, are available to anyone across the University.

The rarity of King's expertise also sends other universities and local industries calling on his expertise. He's done work for the University of Cincinnati, Eastern Michigan University, Bowling Green State University and Stonybrook University.

Scientific glassblowers were once common at large universities but as glassblowers have retired, relatively few universities have kept their glass shops. Part of the reason is there's not a large roster of people available to step in.

The American Scientific Glassblowers Society claims a membership of 650. King guesses there are about 1,000 people nationwide who specialize in scientific glassblowing. The vast majority of those work for industry.

King's entry to scientific glassblowing came out of a lifelong love of working with glass.

"It's definitely one of the most captivating materials you can work with because it's always changing. You can't focus on anything else when you're working with glass," he said. "You've really gotta give all your attention to the glass if you want to be successful and working with something molten is just hypnotic."

King snagged a job at a glass studio right out of high school

and, after earning an art degree at UToledo, spent more than a decade at the Toledo Museum of Art's Glass Pavilion.

He ultimately returned to UToledo to earn a master's degree and learn scientific glassblowing under master scientific glassblower Steve Moder, who was preparing to retire.

Through his education and a post-graduation apprenticeship, King learned to translate what he already knew about blowing glass for art into blowing glass for science.

"The biggest difficulty transitioning from art to science is learning how to adapt to doing things more like a machinist than an artist," King said. "With artwork you're all over the board. You're not thinking about the end goal of a product. With the researchers, if they want something 15 millimeters, you need to make it 15 millimeters. You have to be within precise tolerances."

Moder retired in 2020. King was hired as the University's scientific glass blower in 2021 when the position was reinstated following temporary COVID-related cuts.

"He's really talented and he picked it up very quickly," Kirchhoff said. "We've been fortunate to keep him on here as a valuable resource for the University."

King still does art glass as a hobby, but he's developed a strong appreciation for the exacting work he completes to help advance science.

"What I'm making might just help with one step in a process, but it does feel good to know you're helping a researcher figure something out that otherwise we might not know," he said. "You're doing something meaningful. It's rewarding."



*Eamon King working in the Glass Shop.*

## Chemistry Professor Earns Two Medals at Taekwondo World Championship

*By Kirk Baird, UTNews, July 2022, used with permission*

If there were a UToledo community contest for the best answer to "How I spent my summer," **Dr. Cora Lind-Kovacs** could claim the top prize.

In July, Lind-Kovacs, professor and associate chair in the Department of Chemistry and Biochemistry, represented Team USA at the 2022 International Taekwondo Federation World Championship in Amsterdam, medaling in both of her events.

Lind-Kovacs took bronze in 4<sup>th</sup> Degree Senior Women's Patterns



*In The News, continued from page 5*

Competition, in which she displayed her level of mastery of taekwondo in a solo performance, and silver in the Senior Women's Heavyweight Sparring Competition, with full contact and both wearing protective gear. The "senior" category is for ages 36 and older.



*Dr. Lind-Kovacs competing for Team USA at the 2022 International Taekwondo Federation World Championship.*

"I'm definitely very happy with my success," she said. "I have never competed in a world championship before now, and I haven't competed at a high level since I had a serious knee injury in 2016. Being able to come back from that and compete at this level puts a smile on my face."

"Cora's performance earning gold medals at the North American Championships and USA Qualifiers in March was impressive, but then medaling again at the

world championships was incredible," said Dr. Jon Kirchhoff, Distinguished University Professor and chair of the UToledo Department of Chemistry and Biochemistry.

"All of UToledo should be proud that we have one of the best taekwondo athletes in the world on our campus! Her dedication to training after a serious knee injury a few years ago is inspirational to all of us to never give up reaching for our goals."

After initially training in the traditional Japanese style of jujutsu, Lind-Kovacs took up taekwondo, a Korean martial art famous for its foot techniques, in the late 1990s while a graduate student at Georgia Tech.

"Taekwondo literally means the art of the hand and foot or the way of the hand and foot, depending on who translates," she said. "The kicks and high kicks of taekwondo is what sets it apart from the other martial arts. It's designed to be effective not just for big and tall people, but for people who are smaller and for women and children."

Lind-Kovacs joined the Department of Chemistry and Biochemistry in 2003 as a tenure track professor with a focus on Materials Chemistry and Crystallography. She teaches students at all levels, from freshmen in General Chemistry to specialized graduate classes in Advanced Materials Chemistry and Crystallography. In addition, she supervises a postdoc, graduate and undergraduate students in her research lab, where she explores low temperature routes to negative thermal expansion materials and the synthesis of model compounds to improve the performance of advanced lead batteries.

After settling in at the University, she looked for a martial arts school to continue her training in 2004, eventually achieving the level of fourth-degree black belt.

But then she injured her knee and needed physical therapy for her recovery.

"I am very grateful to my physical therapy team, because, without them, I would not have been able to get back to this level," she said. "The head of my PT team, Tony Gwin, passed away in December from cancer. He had continued to give me advice and feedback long after I 'graduated' from PT, so I competed in his memory."

She's not finished, either. Lind-Kovacs, 47, said she plans to test for her fifth-degree black belt in taekwondo next year and to train for the next world championship, when she will be 50.

Lind-Kovacs said she wants to be a role model for her students to pursue their interests and passions.

"Some students have this impression about faculty, that once you become a professor your whole life is work," she said. "But for students to see that faculty can still have hobbies and still dream; to go and win medals at the International Taekwondo Federation World Championship at age 47? I think that's good for students to see. It allows them to look at their own lives differently, that, just because I take a job doesn't mean there's nothing else in my life at my age."

Cora was also featured in The Toledo Blade.

## **Department of Chemistry and Biochemistry Achieves International and National Rankings by US News & World Reports**

The University of Toledo was ranked at #1002 out of the more than 1400 ranked institutions in the 2023 *U.S. News & World Reports* Global Rankings with Chemistry and Biochemistry being one of the few departments on campus to be ranked and recognized at #773. Individual category rankings showing the impact of the chemistry program include:

- Chemistry Global Research Reputation: #648
- Chemistry Regional Research Reputation: #108
- Chemistry Publications: #1145
- Chemistry Normalized Citation Impact: #127
- Chemistry Total Citations: #840
- Chemistry Number of Publications that are among the 10% most cited: #767
- Chemistry Percentage of Total Publications that are among the 10% most cited: #232
- Chemistry International Collaboration-relative to country: #1104
- Chemistry International Collaboration: #776
- Chemistry Number of Highly Cited Papers that are among the top 1% most cited: #441
- Chemistry Percentage of Highly Cited Papers that are among the top 1% most cited: #84

The Department was also ranked in the latest *U.S. News and World Reports* Best Graduate School rankings of 212 programs

in Chemistry. This is the second consecutive listing where the doctoral program has been ranked. The program improved to #136 in the 2023 ranking up from #150 in 2022 for all public and private institutions. Based on an internal review of just the public institutions, The University of Toledo doctoral program in chemistry broke into the top 100 at #91.

For comparison to other ranked programs in Ohio:

- 20 Ohio State University
- 74 Case Western
- 91 University of Cincinnati
- 119 Ohio University
- 136 University of Toledo
- 136 University of Akron
- 150 Bowling Green State University
- 192 Kent State University
- 208 Cleveland State University

## Saturday Morning Science Returns!

After a hiatus due to the COVID-19 pandemic, Saturday Morning Science was back for spring 2023. The program organized within the College of Natural Sciences and Mathematics by **Michal Marszewski** (Chemistry and Biochemistry), **Heidi Westrick** (Ritter Planetarium) and **Funda Gultepe** (Mathematics and Statistics) aims to bring hot topics in modern science to the general public. The spring 2023 program featured:

**Tom Megeath**, UToledo Distinguished University Professor of Physics and Astronomy, "Observing the Birth of Stars With the James Webb Space Telescope: A Toledo Odyssey".

**Stephen Christman**, UToledo Professor of Psychology, "A New Look at Handedness: From the Laboratory to the Nation".

**Tara Grey**, Jam Maker and Owner of Gus & Grey in Detroit, "The Science of Jams, Preserves and Marmalade".

Planning for Saturday Morning Science is underway for spring 2024. Updates will be posted at [utoledo.edu/nsm/saturday-morning-science/](http://utoledo.edu/nsm/saturday-morning-science/).

## Outstanding Teaching Assistant Award Named for Andy Jorgensen



Teaching is a passion for retired chemistry faculty member **Andy Jorgensen**, and has been ever since he received an award for his excellent performance as a teaching assistant at the University of Illinois at Chicago. As Director of General Chemistry for many years, Andy focused on student success in general chemistry providing a foundation for their studies in higher level coursework

through innovative placement testing and teaching strategies.

His efforts extended to training graduate students to be effective instructors in recitations and laboratories. It is fitting then that the department's outstanding teaching assistant award be named in his honor. To support the award, Andy and Kathy Jorgensen have generously provided a planned gift to endow the award for future outstanding teaching assistants. The department appreciates their thoughtfulness and generosity. Anyone interested in contributing to the fund can do so through the University of Toledo Foundation or the form in this newsletter.

## Graduate Students Establish NoBCChE Chapter at UToledo



L-R: Adedapo Olosunde, Abigail Olomukoro and Millicent Akere.

**Abigail Olomukoro** (Ph.D. candidate, Gionfriddo), **Adedapo Olosunde** (Ph.D. candidate, Hu) and **Millicent Akere** (Ph.D. candidate, Schiefer, Medicinal & Biological Chemistry) successfully launched a new student chapter of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NoBCChE) at UToledo. Abigail will serve as the first

president of the organization while Millicent and Adedapo will be the vice president and treasurer, respectively. **Nate Coleman** will be the group's faculty advisor. Abigail officially received the charter at the NoBCChE National Conference in New Orleans, La., in September 2023.

## Vintage Two Pan Analytical Balance

Retired Toledo area science teacher and UToledo Alum **Robert Lengel** (B.Ed. '67; M.Ed. '70) generously donated to the department a vintage two pan analytical balance manufactured in the 1940s by William Ainsworth & Sons. The balance is displayed in the Wolfe Hall lobby near the main lecture halls for all students to enjoy.



## AWARDS/SCHOLARSHIPS

*The following awards and scholarships were presented at the spring 2023 Honors Tea Ceremony:*

### **Alfred F. Foster Health Science Award**

Kayla Deiners (Fall 2022)  
Kerstin Nadolny (Spring 2023)

### **Analytical Chemistry Award**

Ela Verhoff

### **Andrew Jorgensen Outstanding Teaching Assistant Award**

Ankita Mishra  
Madison Williams

### **Arthur H. Black Award in Analytical Chemistry**

Anthony Pham  
Zachary Turner

### **Arthur H. and Virginia R. Black Merit Scholarship**

Ernest Wolke

### **Biochemistry Award**

Mark Marusak

### **Bodo Diehn Undergraduate Award**

Zachary Miller

### **Chemical and Allied Industries of Northwest Ohio (CAI-NWO) Scholarship**

Carmen Rhinehalt

### **Chemistry Faculty Scholarship**

The Leonard Brady Scholar  
Amira Alkaissi

### **CRC Press Freshman Chemistry Achievement Award**

Addison Casillas

### **CV Wolfe Scholarship in Natural Sciences**

Katyme Luna

### **David Dollimore Award in Chemistry**

Alyssa Murrall

### **David R. Hostetler Memorial Scholarship**

Anthony Pham

### **Dr. Gene K. Richard Chemistry Department Scholarship**

Chloe McLeod

### **Henry R. Kreider Scholarship in Chemistry**

Alexandra Simpson  
Chloe Villa  
Paige Wlodkowski

### **Inorganic Chemistry Award**

Jonathon Truong

### **James E. and Margaret M. Sander Scholarship in Chemistry**

Jonathon Truong

### **Joseph A. and Mary A. Capobianco Memorial Scholarship**

Mary Eby  
Alice Ou

### **Organic Chemistry Award**

Chloe Villa

### **Organic Progress Fund Graduate Student Award**

Radhika Thanvi

### **Outstanding First-Year Graduate Student/Ramachandran and Potlapally Graduate Award**

Rashidat Bamidele

### **Outstanding Graduating Senior**

Isabella Walter (Fall 2022)  
Michelle Huynh (Spring 2023)

### **Outstanding Graduate Student Research Paper of the Year**

Ronald Emmons

### **Physical Chemistry Award**

Chloe McLeod

### **William B. Silverman Scholarship in Chemistry**

Fateh Haris

## NEW ALUMNI (August 2022 - August 2023)

### **B.A.**

Jacob Dumas  
Kaylee George  
Bryce Owens  
Alex Pham

### **B.S.**

Jocelyn Cole  
Sarah Couturier  
Hunter Fields  
Margaret Hannah  
Cassidy Howard  
Lilyann Lawson  
Jaelyn McNamee  
Tyler Miller

Raegan Phillips  
Leo Roberts  
Morgan Schumacker  
Cole Shoults  
Zachary Turner  
Nicholas Voyles  
Isabella Walter

### **M.S.**

Abigail Gohmann  
Joan Onwunma  
Hannah Rowe  
Ramesh Sapkota  
Baylee Smith

### **Ph.D.**

Sandhya Adhikari  
Majed Aljohani  
Pawan Bhatta  
Ronnie Emmons  
Mollie Enright  
Shanika Gamage  
Vinod Kumar Gattoji  
Nipunika Hirimuthu Godage  
Saniya Shehbaz Khan  
Sabitri Lamichhane  
Abiral Poudel  
Yesmin Rina  
Radhika Thanvi  
Prakash Thapa



## DEPARTMENT HIGHLIGHTS

### NEW GRANT\$\$

#### Peter Andreana,

who in collaboration with Dr. Edward Ryan, M.D., Director of Global Infectious Diseases at Massachusetts General Hospital, Boston, Professor of Medicine at Harvard Medical School and Professor of Immunology and Infectious Diseases at Harvard T.H. Chan School of Public Health, received two NIH awards. Their R37 project *O-Specific Polysaccharide Responses and Cholera* was funded for 3 years and \$2,219,261. Peter's group will receive \$270,900 to focus on the chemical synthesis of vaccine constructs including conjugation of complex bacterial capsular polysaccharides and their analytical characterization. The second project, *Quadrivalent Shigella flexneri/sonnei Conjugate Vaccine (SCV4) Product Development, Characterization, and Preclinical Evaluation*, provides Peter with another \$526,365 for the five years of the NIH R01 grant.

#### Emanuela Gionfriddo

was awarded \$7,500 for the collaborative project with the University of Texas El Paso titled *Untargeted Analysis of Treated Produced Water Samples*. The project was funded by Aris Water Solutions, Inc and ran from April 11 to November 11, 2022.

#### Emanuela Gionfriddo and Jon Kirchhoff

were awarded a grant from the USDA for their project *Organic and Metal Contaminant Occurrence and Fate in Operational Water when Producing Containerized Specialty Crops*. The grant is funded for \$175,591 from June 1, 2023, to May 31, 2024, with funding possible for up to five years to May 31, 2028.

#### Dragan Isailovic,

in collaboration with Dr. Randall Ellingson (PI) from the UToledo Department of Physics & Astronomy and Dr. Ivana Validzic from University of Belgrade Vinca Institute of Nuclear Sciences, received funding from the U.S. Department of State through the U.S. Embassy in Belgrade, Serbia, for their project *Renewable Energy and Water for U.S. and Serbia*. The joint partnership will result in academic workshops on renewable energy sources, solar energy and energy's impact on clean water, including in-person exchange visits between both institutions by scholars and students to foster joint research projects. A significant goal for the project is to educate the academic and public communities on the benefits and practical aspects of solar photovoltaic energy and water sustainability, to increase

familiarity as well as to dispel possible misinformation. The project was funded for \$99,964 and will run from September 1, 2022, to August 31, 2025.

#### Eamon King,

Scientific Glassblower, received an Individual Artist Grant for \$1,000 from The Arts Commission of Toledo and Lucas County to support his creative projects in glass artistry.

#### Cora Lind-Kovacs

received a grant from the International Centre for Diffraction Data for her proposal *Temperature Dependent Lattice Constants of Negative Thermal Expansion Material  $Al_{0.5}Sc_{1.5}Mo_3O_{12}$* . She was awarded \$5,040 for the generation of 18 new, unpublished experimental powder patterns. Cora also received a two-year renewal of her project *Molecular Design of Lead Acid Battery Model Expanders*, which was funded by the American Battery Research Group (ABRG) through Argonne National Laboratory with collaborator Pietro Papa Lopes. The project was funded for \$478,759 from June 1, 2023, to May 31, 2025.

#### Michal Marszewski

was awarded an NSF LEAPS grant for his project titled *LEAPS-MPS: Harnessing*

(cont'd on page 10)

### New Helium Recovery Equipment for the NMR Laboratory!

In keeping with the department's emphasis on green and sustainable chemistry practices, **Yong Wah Kim**, principal investigator and Director of the NMR Laboratory, and co-investigators **Wei Li** and **Jon Kirchhoff**, were awarded a grant for their project *Acquisition of Helium Recovery Equipment to Establish a Sustainable NMR Facility at the University of Toledo*. The project began September 1, 2023, and runs for three years.

Helium is a non-renewable resource critical for various scientific and medical applications, including NMR spectroscopy. However, the limited global helium supply and the increasing costs associated with its consumption have posed significant challenges for research and industry alike. The award in the amount of \$322,980 will enable UToledo to develop a sustainable solution for the use of helium to cool the superconducting magnets in the NMR laboratory. This equipment will enable efficient recycling and conservation of helium, significantly reducing the facility's reliance on new helium supplies. The project's cost savings and sustainable practices are expected to ensure the long-term availability of these vital instruments used for training undergraduate and graduate students in the characterization and discovery of new materials and compounds. During this grant period, UToledo will establish itself as a leader in helium recycling joining the ranks of other elite institutions who have recently adopted these practices.



Department Highlights, continued from page 9

*Materials From Nature: From Biomaterials to Metal Oxides.* The project was from the NSF Division of Materials Research and funded for \$249,938 from September 1, 2023, to August 31, 2025.

### Mark Mason

and collaborators Steven Huebner, Sorin Cioc and Anju Gupta, from the Department of Mechanical, Industrial and Manufacturing Engineering, received additional funding of \$302,098 for their project *Advanced Aerodynamic and Instrumentation Features and Simulation (A2IFS)* from the U.S. Department of

Defense. The project period runs from March 3, 2023, to July 31, 2023.

### Ron Viola,

in collaboration with Lirim Shemshedini and Isaac Schiefer (PI), received funding of \$45,000 through the UToledo Research Innovation Program for their project titled *Synthesis and Evaluation of Novel Dual Mechanism EZH2/AR Inhibitors for Prostate Cancer.*

### Jianglong Zhu

received an NIH R15 award for his project titled *New Glycosylation Methods for*

*Microbial Glycan Synthesis.* The project runs from September 1, 2022, to August 31, 2025, with a total budget of \$451,500.

URFO Small Grant Awards of \$1,000 were awarded to **Emanuela Gionfriddo** (Summer 2023 American Chemical Society Project SEED Program), **Jon Kirchhoff** (*Characterization of Polymeric Sorbent Materials for Metal Ion Recovery*), **Mark Mason** (*Development of Catalysts for Conversion of Ammonia to Hydrogen*) and **Michal Marszewski** (*Synthesis and Characterization of Perovskite-Based Catalysts for Ammonia Decomposition*).

## APPOINTMENTS

### Peter Andreana

was elected to a national leadership position as Treasurer of the American Chemical Society Division of Carbohydrate Chemistry.

### Emanuela Gionfriddo

was granted tenure and promoted to Associate Professor at the April 2023 Board of Trustees meeting. Emanuela was also elected as the Chair Elect of the Analytical Division - Subdivision on Chromatography and Separations Chemistry. Her term will commence in October 2023 for two years. She was also appointed to the editorial advisory boards of *Analytical and Bioanalytical Chemistry* and *LCGC North America, MJH Life Sciences*, and served on the scientific committees for the 39<sup>th</sup> International Symposium on Microscale Separations and Bioanalysis

(May 2023, Florida State University, Tallahassee, FL) and the 25<sup>th</sup> International Symposium on Advances in Extraction Technologies (July 2023, University de la Laguna, Spain) and as symposium organizer for Advances in Separations at the Spring 2023 ACS National Meeting (March 2023, Indianapolis, IN).



### Kristi Mock

received was promoted to Senior Lecturer beginning fall 2023.

### Steve Sucheck

was elected Vice Chair for the 2025 Carbohydrates Gordon Research Conference and will serve as the Chair for the 2027 conference. Steve was also

invited to serve as a member of the Associate Editorial Board of *Organic Chemical Synthesis*, which is a specialty section of the journal *Frontiers in Chemical Biology*.



### Lisa Zhurova

was promoted to Senior Lecturer and

**Nate Coleman** was promoted to Associate Lecturer beginning fall 2022.



## HONORS, AWARDS AND RECOGNITION

### FACULTY/STAFF

### Peter Andreana



received the 2023 Melville L. Wolfrom Award from the ACS Division of Carbohydrate Chemistry. The award recognizes outstanding service to the Division and to the field of carbohydrate chemistry. Peter received the award at the Spring ACS National Meeting in Indianapolis, IN.

### John Bellizzi and Nate Coleman

were recognized by the Provost Office as Equity Champions for AY 2021-2022.

Faculty and Staff award recipients from the 1<sup>st</sup> NSM Diversity and Inclusion Day on April 22, 2022 included **Nate Coleman** and **Stephanie Kaetzel**.

### Emanuela Gionfriddo

received three prestigious international

awards during 2022-2023 for her achievements in teaching and research. She received the 2022 ACS Analytical Division Satinder Ahuja Award for Young Investigators in Separation Science and the 2023 LCGC Emerging Leader in Chromatography Award during symposia organized in her honor at the 2023 Pittsburgh Conference and Exposition March 18-22, 2023, in Philadelphia, PA. Emanuela was also awarded the 2023 Eastern Analytical Symposium Young



*Investigator Award*, which she received at a symposium at the 2023 Eastern Analytical Symposium at the Crowne Plaza Princeton

Conference Center in Plainsboro, NJ, in November 2023.

Emanuela was also recognized by UToledo at the 2022 Awards for Creative and Scholarly Activity reception on May 10, 2022, for three high profile articles during 2019-2022 in *Trac-Trends in Analytical Chemistry*.

### Xiche Hu

and his research group's discovery *Why Some Molecular Mutations Make COVID-19 More Contagious* was recently featured as a press release by the Ohio Super Computer Center. **Majed Aljohani** (Ph.D. '22) and **Pawan Bhatta** (Ph.D. '22) used their expertise in high-level quantum mechanical calculations to look at differences in binding energies between the COVID-19 spike proteins and human receptors to assess how contagious the virus and variants were.

### Andy Jorgenson

celebrated 50 years as a member of the American Chemical Society in 2022.

### Eamon King

Scientific Glassblower, received the American Scientific Glassblowing Society's Memorial Award at the closing reception of the ASGS Annual Symposium on June 30, 2023 in Vancouver, Washington. Eamon received an Award Certificate Plaque and an expense paid trip to the ASGS annual symposium.

The Memorial Award is presented to a junior member of the ASGS who shows early interest in participating in ASGS activities and honors deceased members on the Memorial Scroll of Honor whose contributions to the advancement of both the science and the art of glassblowing and the ASGS were of outstanding importance. The purpose is to stimulate and encourage active and continued participation in the field of scientific glassblowing by outstanding junior members.

Two former chemistry and biochemistry colleagues were recognized by the Catherine S. Eberly Center as *Influential UToledo Women* in the Champions category in honor of the 150<sup>th</sup> anniversary of The University of Toledo. Nominations from the campus and community celebrated the contributions of women to the growth of the university.

- **Nina McClelland**, Alumna and Dean Emeritus, a highly respected world leader in chemistry and champion for public health initiatives to provide safe drinking water to the public, held many leadership positions at UToledo and in the global scientific community.
- **Stephanie Kaetzel**, Alumna and Chemical Storekeeper II, an environmental health and safety advocate, instrumental in implementing an acetone recycling program at UToledo.

### Steve Sucheck and Matt Wohlever

were both recipients of the UToledo 2023 Excellence in Sponsored Research Award to recognize their success in attracting external support for research and scholarship over the past three years. The reception was held on May 18, 2023, in the Brady Engineering Innovation Center and hosted by President Postel.

### Lisa Zhurova's

distance learning class, Chem 1090: Elementary Chemistry, received Quality Matters recertification for three years with a perfect score of 100/100.

Two U.S. Patents were awarded based on research in the department:

U.S. Patent 11634517-B2 *Pyrrole-based polymers for metal extraction, analysis, and removal* was issued on April 25, 2023. Inventors include Distinguished University Professor **Jon Kirchhoff**, and UToledo alumni **Ahmad Rohanifar**, Ph.D. '19 (Intel Corp.), and **Govid Sharma Shyam Sunder**, Ph.D. '21 (Waters Corp).

U.S. Patent 20230128972-A1 *Anat Inhibitors and Methods of Use Thereof* was issued on April 27, 2023. Inventors are Distinguished University Professor Emeritus **Ron Viola** and Dr. Adrian Stecula, Isomorph Labs, UK.

Chemistry and Biochemistry faculty members received acknowledgments from students during the "Shout Out" for *Innovative Instructors and Staff* campaign sponsored by the Office of the Provost. The campaign provided students with the opportunity to highlight instructors and staff who positively impacted their well-being, success, or sense of community on campus. Those receiving *Shout Outs* for the fall 2022 and spring 2023 semesters were **Terry Bigioni**, **Anna George**, **Emanuela Gionfriddo**, **Joanna Hinton**, **Amy Toole**, **Michael Young** and **Lisa Zhurova**.

The following employees received University of Toledo service recognition awards in 2022: **Amy Toole** (5 years), **Peter Andreana** (10 years) and **Kristi Mock** (20 years).

## STUDENTS

**Sandhya Adhikari** (Ph.D. '23, Kirchhoff), **Nipunika Godage** (Ph.D. '23, Gionfriddo), and **Radhika Thanvi** (Ph.D. '23, Sucheck) received poster prizes at the 1<sup>st</sup> NSM Diversity Day at UToledo on April 22, 2022.

### Indunil Alahakoon

(Ph.D. candidate, Young) was one of 60 students selected to attend the 2023 American Chemical Society Green Chemistry and Sustainable Energy Summer School from July 12-19, 2023, in Golden, Colorado at the Colorado School of Mines. The American Chemical Society, ACS Petroleum Research Fund and the ACS Green Chemistry Institute covered all eligible travel and program costs.

### Camilla Alves Escanio

(visiting Ph.D. student, Lind-Kovacs) from the National Institute of Space Research in São Paulo, Brazil, was the inaugural recipient for the best poster presentation at the Battery Council International Convention in Louisville, KY, from April 23-26. Her poster was titled *Carbon Fiber/ Polyaniline/Lead Composite With Low Hydrogen Evolution Activity With Potential Use In Lead Acid Batteries*.

**Uzoamaka Bokolo** (Ph.D. candidate, Sucheck) and **Prem Gurung** (Ph.D. candidate, Zhu) received poster presentation awards at the 18<sup>th</sup> Midwest



Honors, Awards and Recognition, continued from page 11

Carbohydrate & Glycobiology Symposium (MCGS) held on October 7, 2023, at Purdue University, West Lafayette, IN. Uzoamaka presented on *Synthesis and Immunological Study of the entasaccharide Unit of Pseudomonas aeruginosa Exopolysaccharide Psl-CRM197 Conjugate*, while Prem's presentation focused on *Chemical Synthesis of Salmonella enterica Tetrasaccharide Antigens via Gold(I)-Catalyzed Glycosylation*.

**Chizoba Iheme** (M.S. student, Marszewski, 2<sup>nd</sup> place) and **Sandhya Adhikari** (Ph.D. '23, Kirchhoff, 3<sup>rd</sup> place) received poster prizes at the 2022 Midwest Graduate Research Symposium at the University of Toledo on April 10, 2022.

### Saniya Khan

(Ph.D. '23, Sucheck) received an ACS Division of Organic Chemistry Travel Award to attend the fall 2022 ACS national meeting in Chicago, IL.

### Hasaruwani Kiridena

(Ph.D. candidate, Isailovic group) received an award for an outstanding oral research presentation at ANACHEM 2022 in Livonia, MI, on November 10, 2022, and was recognized at the November 22, 2022, UToledo Graduate Council meeting for "demonstrated excellence in research and scholarship".

**Hasaruwani Kiridena** (Ph.D. candidate, Isailovic group) and **Sharmila Thenuwara** (Ph.D. candidate, Isailovic group) completed an NSF-I-Corps project and received a \$2,500 grant award upon completion of the project.

### Sabitri Lamichhane

(Ph.D. '23, Isailovic) was the recipient of a GSA Graduate Research Award for Academic Year 2022-2023 of \$2,170 for her project *Investigation of Enzymatic Regulation of Cardiotonic Steroids by Paraoxonases using UHPLC-MS*.

### Chloe McLeod

(B.S., Gionfriddo) received an I.M. Kolthoff award of \$750 from The Education Committee of the ACS Division of Analytical Chemistry to support her travel to attend the 2023 Pittsburgh Conference in March in Philadelphia, PA. Chloe also received first place in the 2023 Ohio Japanese Speech Contest at the University of Findlay.

### Babatunde 'Samuel' Obadawo

(Ph.D. candidate, Sucheck) was invited to participate in a peer-led workshop organized by the ACS Chemical Health & Safety Division. This workshop aimed to empower academic researchers in strengthening safety culture. As the incoming workshop leader for ACS Chemical Health & Safety (2024-2025), Babatunde had the opportunity to attend the in-person workshop and present his research at the Northeastern Regional Meeting (NERM 2023) in Boston. He received travel support from the ACS and an additional GSA award of \$400 to assist with other expenses.

### Abigail Olomukoro

(Ph.D. candidate, Gionfriddo) was awarded an Advancing Science Conference Grant to attend and present her research at the 2022 NOBCChE Conference in Orlando, Florida from September 26-29, 2022. Her talk titled *Ion Exchange Solid Phase Microextraction Coupled to Liquid Chromatography/Laminar Flow Tandem Mass Spectrometry for the Determination of Perfluoroalkyl Substances in Water Samples* was selected for an oral presentation. The selection committee noted that the Advancing Science Conference Grant recognized Abby as one of the country's best and brightest upcoming scientists. Abigail also received an ACS Division of Analytical Chemistry Younger Chemists Conference Travel Grant for \$1,000 to support her travel and presentation at the American Society for Mass Spectrometry conference June 5-9, 2022, in Minneapolis, MN. Abigail was also selected for the 2023 Merck Research Award for Underrepresented Chemists of Color. She received the award in September 2023 at Merck's Rahway, NJ, site during a scientific symposium.

**Isabella Walter** (B.S. '22 fall) and **Michelle Huynh** (B.S. '23 spring) were selected as the Department's Outstanding Graduating Students for fall and spring semesters, respectively. Michelle was then selected as the Outstanding Graduating Student in the College of Natural Sciences and Mathematics for spring.



### The University of Toledo Student Chapter of the American Chemical Society

was recognized with an Honorable Mention Award from the ACS for their chapter activities in 2022-2023. The group's faculty advisor is **Michael Young**.



### Student award recipients from the 1<sup>st</sup> NSM Diversity and Inclusion Day

included graduate students **Navdeep Kaur** (Ph.D. '22, Li) and **Saniya Khan** (Ph.D. '23, Sucheck), and undergraduate student: **Fateh Haris**.

Eleven Chemistry and Biochemistry undergraduate students were awarded Undergraduate Summer Research Fellowships from the Office of Undergraduate Research to perform research in the laboratories of Chemistry and Biochemistry faculty members in summer 2022 and 2023.

### Summer 2022

Chloe McLeod (Emanuela Gionfriddo)  
Alexandra Simpson (John Bellizzi)  
Hoda Arif (Matt Wohlever)  
Jaelyn McNamee (Wei Li)  
Anam Dewani (Matt Wohlever)

### Summer 2023

Ernest Wolke (Wei Li)  
Jonathan Waller (Mark Mason)  
Fateh Aameera Haris (Emanuela Gionfriddo)  
Elijah Harris (Joseph Schmidt)  
Paul Friday (Ronald Viola)  
Chloe Villa (Wei Li)



Isabella Walter



Michelle Huynh

## ALUMNI NEWS

### BIRTHS

#### Tien Ho

(Ph.D. '14, Anderson) and his wife Honglian welcomed their daughter Annabelle Ho, on June 20<sup>th</sup>, 2023.

### CAREER UPDATES

#### Sandhya Adhikari

(Ph.D. '23, Kirchhoff) accepted a position as Research/Project Scientist at Therapeutic Systems Research Laboratories (TSRL), Inc. in Ann Arbor, MI.

#### Quinner Baltazar

(M.S. '07, Anderson) is currently the Assistant Director in Analytical Development for a startup company called SalioGen Therapeutics, a gene coding company, in Woburn, MA. Prior to SalioGen Therapeutics, Quinner was the Associate Director for Analytics at a KIT inhibitor company, Cogent Biosciences, as well as a Senior Manager for Analytical Development at Moderna.

#### John Beck

(Ph.D. '12, Schmidt) now serves as the

chair of the Natural Sciences, Exercise Science and Wellness Department at Lake Michigan College.

#### Ronnie Emmons

(Ph.D. '23, Gionfriddo) joined Argonne National Laboratory in Lemont, IL, as a Postdoctoral Appointee.

#### Mollie Enright

(Ph.D. '23, Mason) accepted a prestigious internship in patent law at Morrison & Foerster in Boston, MA, and was accepted by Boston College Law to study patent law.

#### Vinod Gattoji

(Ph.D. '23, Andreana) accepted a position as a Research Scientist at Creagen, Inc. in Woburn, MA.

#### Abigail Gohman

(M.S. '22, Young) is working as an R & D Chemist at SpectronRx in Indianapolis, IN.

#### Margaret Hannah

(B.S. '23) was accepted into Medical School at The University of Toledo, beginning fall 2024.

#### Ishani Lakshika Hettiarachchi

(Ph.D. '22, Zhu) is a Synthetic Chemist at Biosynth Carbosynth in the United Kingdom.

#### Tien Ho

(Ph.D. '14, Anderson) is working at Gilead Sciences in Foster City, CA, as a Senior Scientist I.

#### Saniya Khan

(Ph.D. '23, Suchek) accepted a postdoctoral associate position with GlycoMIP - A National Science Foundation Materials Innovation Platform at Virginia Tech University in Blacksburg, VA.

#### Vince Kowalski

(M.S. '17, Mason) started a new job in quality control at Huntsman Corporation in Rockville, SC. He previously worked at Glenmark Pharmaceutical.

#### Sabitri Lamichhane

(Ph.D. '23, Isailovic) is working as an Analytical Chemist at FLSmidth in Salt Lake City, UT.

## RECOGNIZING OUR DONORS

*The chemistry department recognizes and thanks all donors who generously made gifts from January 1, 2022 to June 30, 2023. Donors are listed alphabetically.*

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#### Industrial and Organizational Contributors

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Alumni News, continued from page 13

### Armon Mohammadione

(B.S. '15) is enjoying his position at Wild Flavors, a company of Archer-Daniels-Midland in northern Kentucky. The company is spread between Cincinnati, OH and Erlanger, KY.

### Vinay Mutthamsetty (Ph.D. '17, Viola) and Kelly Lambright (Ph.D. '21, Giolando/Lind-Kovacs)

recently bought their first house in Perrysburg, OH. Also, Vinay was recently promoted to a Manager Position within the Process Development Dept. at Piramal Pharma Solutions, Riverview, MI, while Kelly

is an Advanced Scientist in Thin Film Technology at NSG-Pilkington North America in Rossford, OH.

### Abiral Poudel

(Ph.D. '23, Kirchhoff) accepted a position as Senior Analytical Chemist with L'Oréal in Clark, NJ.

### Collin Reimer

(B.S. '21) was accepted into the MD/Ph.D. program at Emory University in Atlanta, GA. The program is designed to provide students with the in-depth, high-caliber research training and medical education required of future academicians.

### Yasaman (Fatemeh) Saleh

(Ph.D. '20, Mason) is currently working as a research scientist at Croda Pharma in Princeton, NJ.

### Radhika Thanvi

(Ph.D. '23, Sucheck) accepted a position as Scientist in Oligonucleotide and Small Molecule Process Sciences at Intellia Therapeutics in Cambridge, MA.

### Prakash Thapa

(Ph.D. '22, Zhu) is a Scientist at NJ Bio, Inc in Princeton, NJ.

## CHEMISTRY AND BIOCHEMISTRY FUNDS

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For more information about giving, including setting up scholarships or additional gift funds, please contact Brittanie Kuhr, Director of Development, Colleges of Natural Science & Mathematics, at 419.530.5418 or [brittanie.kuhr@utoledo.edu](mailto:brittanie.kuhr@utoledo.edu).

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Mail Stop 602  
The University of Toledo  
2801 W. Bancroft St.  
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DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

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