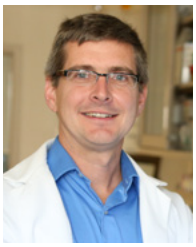
THE UNIVERSITY OF TOLEDO

College of Natural Sciences and Mathematics

CHEMISTRY **NEWS**

Department of Chemistry and Biochemistry **Summer 2025**

Welcome from the Chair



It is with great enthusiasm that I share highlights from another successful year in the Department of Chemistry and Biochemistry. Your continued support plays a vital role in advancing our mission to provide rigorous education, foster impactful research and serve communities both locally and globally.

Our department's trajectory of excellence continues to rise. The University of Toledo was recently designated an R1 research institution by the Carnegie Classification of Institutions of Higher Education, an achievement that recognizes our growth in research activity and to which Chemistry and Biochemistry faculty have significantly contributed. This year, our faculty secured several major external grants and renewals with the support of our dedicated staff. Among these was a hydrogen workforce development grant, supported by $3 million in congressionally directed spending through the U.S. Department of Energy. This initiative is expected to lead to recommendations for training students to secure and excel in jobs within the hydrogen economy, an industry valued at $282.63 billion.

Our programs are also evolving to meet new needs. The department received a strong recommendation for continued ACS certification following our 2023–2024 review, with specific praise for our innovative M.S. program in Green Chemistry and Engineering and our new certificate in Analytical Chemistry. In addition, we have developed a new B.S. concentration in Materials Chemistry and a Materials Chemistry Certificate. These initiatives align with emerging workforce trends and reflect our commitment to offering students pathways into high-demand fields.

We were proud to launch the Arthur H. Black Science Education and Research Lecture Series, honoring the late Professor Black and expanding our tradition of bringing thought leaders to campus. This series joins our Frontiers in Chemistry and Organic Synthesis Lectures, which this year featured distinguished scientists from Penn State and the University of Illinois Urbana-Champaign. Our annual Honors Tea once again celebrated dozens of outstanding students, supported in part by alumni-funded scholarships and awards.

Student research engagement continues to thrive. In 2024 and 2025, our undergraduate and graduate students earned numerous travel awards, ACS leadership recognition, and national honors, including the prestigious Barry Goldwater Scholarship (awarded to Chloe Villa). These achievements reflect the quality of mentorship in our department and the caliber of our students.

We also marked important transitions within our staff and faculty community. We bid farewell to Charles Davis, our long-serving Fiscal Specialist, who retired after 34 years of dedicated service. We welcomed José Olivarez, Jr., a 25-year UToledo staff veteran who holds two M.S. degrees from our institution. We are also pleased to announce that Dr. Anna George has joined us as a permanent faculty member and Dr. Claire Cohen was named a Distinguished University Lecturer in spring 2024.

As an alumnus of this department, I am continually reminded of the lasting impact our community makes, through scientific innovation, mentorship and your generous support. Your contributions help us sustain academic programs, maintain critical instrumentation and fund scholarships and research experiences that empower our students.

As higher education faces increasing pressures, from declining enrollments and shifting federal funding priorities to rapid technological change, your engagement and generosity have never been more critical. These ongoing changes underscore the importance of alumni as advocates, mentors and supporters who help ensure our students and faculty continue to excel.

Please stay in touch. We love hearing from our alumni and are always looking for opportunities to share your accomplishments and connect you with current students. Follow us on LinkedIn and X (formerly Twitter) and consider contributing to one of our departmental funds listed at the end of this newsletter.

Thank you for being part of our extended Rocket Chemistry family. Your continued engagement inspires the next generation of scientists and strengthens the legacy of our department.

Inside this issue ...

Editor: Jon Kirchhoff
Layout and design: Gayle Heer

Department Updates

Comings and Goings

Anna George is continuing in the department as an Associate Lecturer beginning fall 2024 after spending two years as a visiting assistant professor. Anna has been a valuable contributor to the general chemistry program and recently took on an increasing role teaching courses in analytical chemistry.

Charles Davis, Fiscal Specialist, retired after 34 years of service to the department and university. Charles made significant contributions throughout his career playing a vital role in supporting the purchase of supplies for undergraduate teaching and graduate research laboratories, benefiting thousands of students annually. Additionally, he managed intra- and interdepartmental fiscal transactions, assisted with grant-related accounting issues and handled departmental budget accounting and modeling. His cheerful demeanor and daily interactions with students, faculty and staff greatly contributed to the department's positive operations and smooth functioning. We wish him well in his retirement and will miss his experience and talent.

José Olivarez, Jr. joined the department in October 2024 as Fiscal Specialist I.

Emanuela Gionfriddo, Associate Professor, moved her research lab in January 2024 to the Department of Chemistry at the University of Buffalo.

Department Highlights

New Grant$$

Dragan Isailovic received an NIH R15 grant awarded by the National Institute of Environmental Health Sciences for a collaborative research proposal entitled *Discovery of Novel Cyanotoxins by Detection of Their Native Fluorescence and Unique MS/MS Fragments, and Determination of Their Toxicities*. The total award amount is $459,353 with a project period from 8/16/2024 to 7/31/2027 and was funded under NIH's Biological Response to Environmental Health Hazards program. His group is using advanced bioanalytical and biophysical chemistry techniques to identify new congeners of microcystins and other classes of toxins. (UTNews: bit.ly/3YZPYTT)

He is also one of the lead investigators on a multi-institutional award entitled *Great Lakes Center for Fresh Waters and Human Health* also from NIH. His part of the project provides $100,139 from 5/31/2024 to 2/28/2029.

Jon Kirchhoff's grant award from the USDA for the project *Organic and Metal Contaminant Occurrence and Fate in Operational Water when Producing Containerized Specialty Crops* was renewed for a second year of funding in the amount of $175,591 from 6/1/2024 to 5/31/2025. The project focuses on evaluating contaminants entering run-off water from the irrigation of specialty crops grown in nurseries. Targeted contaminants include organic solubles, trace metals, microplastics and per- and polyfluoroalkyl substances. The results will assist efforts to recycle operational water leading to conservation and proper disposal of water resources, and ultimately more sustainable growing practices. The research is in collaboration with **Professor Emanuela Gionfriddo** of the University of Buffalo.

Ron Viola secured collaborative funding on a project led by Professor Bob Blumenthal in the Department of Medical Microbiology and Immunology through the UToledo Research Innovation Grant mechanism. This award for the project *Identifying Ortholog-Specific Inhibitors of Adenosylmethionine Synthetase* was funded for $45,000.

Mark Mason (PI), **Chris Gianopoulos** (co-I) and **Leart Sejdarasi** (postdoctoral associate) received a 12-month research award from Kuva Labs Inc., a subsidiary of Mi2 Holdings LLC, for the Development of Novel NIR Photosensitizers. This new, one-year project will build upon the expertise of the Mason group in the synthesis and characterization of BODIPY dyes.

Mark Mason also serves as the lead PI along with co-investigators Lesley Berhan, Associate Dean for Student Success and Strategic Initiatives in the College of Engineering and Sujata Shetty, Associate Professor and Director of the Urban Affairs Center, on the successful launch of the $3M Hydrogen Workforce Initiative, funded by the U.S. Department of Energy. The project began in April of 2024 and will continue until September of 2026. Professors **Terry Bigioni** and **Joe Schmidt** along with Professors Glenn Lipscomb, Raghav Khanna and Ahmad Javaid, from the College of Engineering, and Professors Neil Reid and Dan Hammel, from the College of Arts and Letters, will also contribute to curriculum development as part of the project. This effort was highlighted in UTNews (link: bit.ly/4jE8I8q).

Pictured above: The University of Toledo's Dr. Mark Mason, Dr. Lesley Berhan and Dr. Sujata Shetty (not pictured) head a collaborative initiative to prepare regional workers for emerging jobs in hydrogen production, distribution, storage and use.

2023 ACS Periodic Review

The undergraduate B.S. programs in chemistry and biochemistry underwent periodic review during the 2023-2024 academic year for recertification by the ACS Committee on Professional Training (CPT). As a result of the review, the ACS CPT concluded "the chemistry program at University of Toledo provides students with a comprehensive education in chemistry needed to follow their chosen career path. Your program meets all of the current ACS guidelines and the reviewers recommend continued approval." The department's B.S. in chemistry has been continuously certified since 1953.

The ACS CPT noted as strengths the department's efforts and leadership in faculty hiring, mentorship and support afforded to new faculty, successful outreach programs and new curricular initiatives specifically noting the certificate in analytical chemistry and the 4 + 1 program combining a B.S. in chemistry with a Professional Science Master's degree in Green Chemistry and Engineering. Citing the new programs the ACS CPT said, "These demonstrate adaptability and responsiveness of your department to emerging needs and career path options for students." The next periodic review will be due June 30, 2029.

In keeping with the need to update the curriculum and provide new programs for emerging career paths, the department developed the following new degree options in 2024-2025: B.S. in Chemistry with a Business Focus, B.S. in Chemistry with a Concentration in Materials Chemistry, M.S. in Chemistry with a Concentration in Green Chemistry and Engineering and a Certificate in Materials Chemistry.

UToledo's Scientific Glassblower Lends Distinctive Skillset to Miami's Orange Bowl

by Nicki Gorny, UTNews, December 2024, reprinted with permission

Eamon King spends four days of his week as a scientific glassblower in Bowman-Oddy Laboratories, mending the manifolds and fabricating the flasks that make scientific discovery possible across The University of Toledo campus.

The other three days of the week he dedicates to glassblowing as an art, blowing and carving sculptural pieces better suited to a gallery than a laboratory.

He drew on both skillsets in his most recent and highest-profile project to date. King is the artist behind the fruit-filled bowls that will be awarded to the college football team that wins the Orange Bowl in Miami on Thursday, Jan. 9.

"It's been really exciting," King said. "It looks like a pretty simple bowl, but with glass it's often the simple shapes that are more difficult. Abstract works are much easier to make."

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King brings a unique expertise to UToledo, which is among a shrinking number of higher education institutions across the country to retain an in-house scientific glassblower.

The American Scientific Glassblowers Society counts its membership around 650.

Once common among large institutions, these highly skilled artisans collaborate with researchers to fix cracks in scientific glassware and to design and fabricate custom equipment for use in laboratories, often saving them significant time and expense.

"A staff glassblower is an invaluable resource that enhances the efficiency and cost-effectiveness of our department's operations, while contributing to both our educational and research goals," said Dr. Steven Sucheck, a professor and chair of the Department of Chemistry and Biochemistry. "Scientific glassware is notoriously expensive, and many chemistry, biochemistry, biology and physics experiments require specialized glassware that cannot be easily purchased off-the-shelf. Additionally, glassware used in research and teaching laboratories is prone to breakage over time. Eamon plays a key role in repairing these items and in creating custom glassware, such as complex reaction vessels or other specialized equipment, tailored to the exact needs of the lab or specific experiments."

Scientific glassblowers rely on a different skillset than glass artists, who utilize furnaces to create the functional and sculptural works that can be found in galleries across Toledo.

Scientific glassblowing utilizes lathes and torches, employed to manipulate a tube or rod and create highly uniform pieces. Scientific glassblowers also pay close attention to the chemical makeup of their glass, with an eye toward factors like heat and chemical resistance.

King came to scientific glassblowing as an artist. He began working with glass at the furnace and the torch in high school and honed his skills through two independent study opportunities he created in Murano, Italy, while pursuing a bachelor's degree in art at UToledo.

He later picked up the scientific side of his craft under Steve Moder, his now-retired predecessor at UToledo, with whom he worked to design a glass-blowing curriculum to complete a master of liberal studies degree at UToledo.

King took up his scientific glassblower position at UToledo in 2021.

The opportunity to create the glass bowls that sit atop the Orange Bowl trophies came to King's attention through the connections in the American Scientific Glassblowers Society, although the bowls — despite their rigid parameters — required a non-scientific skillset.

King was commissioned in August, and spent the fall working on the three bowls and three backups in his days away from Bowman-Oddy. He used traditional furnace techniques to create them in the local studio of glassblower Mike Wallace, for whom King works as an assistant on Fridays. The two completely rebuilt Wallace's furnace lining ahead of the project to ensure the highest quality glass.

"I am extremely grateful that Wallace allowed me to create these pieces in his studio and was willing to help me make them a reality from the cleanest furnace in Ohio," King said.

For the largest bowls, the pair also enlisted the help of glass artists Tim Stover and John Booth.

Their work will be seen in Hard Rock Stadium in Miami on Jan. 9.

Fans can look for a 19-inch bowl that will be mounted on a base, filled with fresh oranges and presented to the victorious team, plus two matching 12-inch bowls that will be presented to the coach and Most Valuable Player.

"To be quite honest, I don't really watch sports at all," King said. "But I'm looking forward to seeing this game."

New Glass Artwork Honors Longtime Biochemistry Professor in Wolfe Hall

By Nicki Gorny, UTNews, February 2025, reprinted with permission

A new work of art recently installed in Wolfe Hall honors **Dr. Max Funk**, a Distinguished University Professor emeritus in the Department of Chemistry and Biochemistry.

"Elements of Life," an 18-by-18-inch glass cast work depicting a tree with curled branches and gnarled roots, hangs in the northeast atrium of Wolfe Hall adjacent to Room 1201. The work is created and presented by the celebrated artist Baker O'Brien, who learned to mix, melt and blow vividly colored glass under Dominick Labino, a late founding figure in the studio glass movement that originated in Toledo in the 1960s.

Labino developed and honed his interest in studio glass while working in the glass and fiber glass industry in Toledo. He took on O'Brien, also a jewelry artist, as his only apprentice and later successor at Labino Studio in Grand Rapids, Ohio.

O'Brien is now retiring from glass work after a nearly five-decade career. In addition to "Elements of Life," she bequeathed some of the inorganic chemicals she and her mentor used to create their distinctive colored glass to the Department of Chemistry and Biochemistry.

"Max Funk has been a supporter of the arts and a supporter of mine throughout my career," O'Brien said. "I thought this piece would be a nice way to honor him."

Funk is a long-time instructor and researcher at UToledo, where he arrived as an assistant professor in 1978. He dedicated 35 years to the Department of Chemistry and Biochemistry in the College of Natural Sciences and Mathematics and later also the Department of Medicinal Chemistry in the College of Pharmacy and Pharmaceutical Sciences before he accepted the title professor emeritus in 2013.

"Dr. Funk received the College of Natural Science and Mathematics' Excellence in Professional Service Award in 2012," said Dr. Steven Sucheck, a professor and chair of the Department of Chemistry and Biochemistry. "We're pleased to again recognize his excellence in scholarship and commitment to community with this work of art that students, faculty and staff will appreciate for years to come in Wolfe Hall."

UToledo Recognized with Carnegie R1 Classification

The University of Toledo was recognized in February 2025 as an R1 research institution in the Carnegie Classification of Institutions of Higher Education. The R1 designation classifies UToledo as a top-tier research university by achieving metrics of averaging at least $50 million in total annual research expenditures and awarding at least 70 research doctorates annually. Researchers across the university earned an impressive $72.2 million in external research funding in fiscal year 2024. UToledo now is included as one of 187 institutions in the United States with R1 status, and the seventh institution in Ohio.

Inaugural Arthur H. Black Science Education and Research Lecture

by Nicki Gorny, UTNews, February 2025, reprinted (in part) with permission

In February 2025 the department initiated the Arthur H. Black Science Education and Research Lecture to honor the late Professor Black who enjoyed a 60-year association with UToledo as a student, educator and administrator. Professor Black continued to teach chemistry throughout his career, retiring as associate dean of the then-named College of Arts and Sciences in 1983 and continuing to teach as a part-time instructor until 1996.

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The inaugural speaker was **Dr. Jared Anderson**, the Alice Hudson Professor of Chemistry at Iowa State University who was on faculty at UToledo from 2005 to 2015. Dr. Anderson spoke on the nanoscale ordering of ionic liquids and deep eutectic solvents for enhanced separation performance that he conducts with undergraduate and graduate students.

Prior to the lecture, Dr. Curtis Black, son of Professor Black and a Distinguished University Professor Emeritus in the Department of Pharmacy Practice, shared remarks ahead of the lecture on Professor Black's legacy at UToledo.

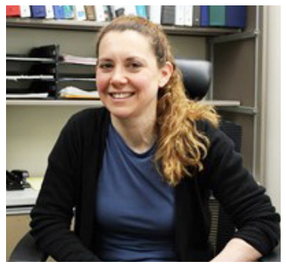
The Department continues to raise funds toward an endowed professorship named in honor of Arthur H. Black. To donate or for more information on the Arthur H. Black Professorship, please see page 19.

Frontiers in Chemistry and Organic Synthesis Lectures

Two additional prestigious lectureships were also held in 2024-2025. The Frontiers in Chemistry Lecture titled *Lanthanide Biochemistry: Fundamentals and Applications* was given by Professor Joseph Cotruvo, Jr., of Penn State University on April 7, 2025, while the Organic Synthesis Lectureship Series featured Professor Scott Denmark from the University of Illinois Urbana-Champaign on May 5, speaking on his work involving the *Mechanistic and Preparative Aspects of the Suzuki-Miyaura Cross-Coupling Reaction*.

Honors and Recognition

Faculty/Staff



Claire Cohen was selected as a Distinguished University Lecturer in spring 2024. The title of Distinguished University Lecturer is the highest honor for lecturers at the university and recognizes faculty for their outstanding contributions to the teaching and service missions of the university leading to the success of countless UToledo students. Claire joined the department in 2006 and has taught primarily in the general and organic chemistry programs including serving as the Director of General Chemistry for many years. She received the University of Toledo Outstanding Teaching Award in 2016.

The following faculty and staff received University of Toledo recognition awards for service years - 2023: **Mark Mason** (25) and **Nate Coleman** (5) and in 2024: **Joe Schmidt** (20), **Lisa Zhurova** (25) and **Jon Kirchhoff** (35).

Anna George recently published the book chapter *Exploring the Relationship Between Analytics and Big Data and New Populism* in the Encyclopedia of New Populism and Responses in the 21st Century.

Students

Madhu Chennapuram (Postdoctoral Associate, Lind-Kovacs) was recognized at the BCI Convention in Fort Lauderdale, FL, in April 2024, with the Battery Council International Poster Showcase award for his poster presentation titled *Design, Synthesis, and Structural Evaluation of Model Expander Molecules for Advanced Lead-Acid Battery Storage Applications*.

Uzoamaka "Clara" Bokolo (Ph.D. candidate, Sucheck) participated in GlycoMIP's 2024 Short Course: Glycomaterial Synthesis, held from June 11-13, 2024, at Virginia Tech University in Blacksburg, Virginia. As an in-person participant, she was awarded a $1,000 travel grant to support travel and lodging expenses.

She was also awarded a Sustainable Future Travel Grant to attend the 29th Green Chemistry and Engineering Conference in Pittsburgh, PA, from June 23-26, 2025. This competitive grant award will allow her to further her understanding of green chemistry and engineering, engage with leading experts in the field and network with peers from around the world.

Olutayo "Nate" Farinde (Ph.D. candidate, Young) received a 2025 Next Gen Leader in Chemistry Award from Merck Pharmaceuticals and was also awarded a $500 travel grant from the Toledo Section of the American Chemical Society to attend the Spring 2025 ACS National Conference in San Diego, CA, in April 2025.

Babatunde "Samuel" Obadawo (Ph.D. candidate, Sucheck) recently earned numerous professional development opportunities and recognition. He participated in 2024 GlycoMIP Summer School at the University of Georgia where he engaged in cutting-edge glycomaterials research, fostering collaborations to advance scientific innovation.

He also participated in the Eli Lilly ACS Bridge Program, which included lab tours and networking opportunities, and attended the Computational Chemistry School organized by Schrodinger and hosted by Novartis in Boston, MA, further enhancing his expertise and industry connections. In addition, he received an ACS Student Travel Award funded by the Division of Organic Chemistry in the amount of $600 to support his travel to the Fall 2024 ACS National Meeting in Denver, CO. At the ACS meeting Babatunde received the American Chemical Society's *Recognition of Excellence Award* for his pivotal role in promoting safer practices in chemical research, and at the 2024 NOBCChE ConneXions Poster Competition he received an award for research excellence sponsored by Pfizer, a global leader in vaccine development. In 2025, he was selected to attend the ACS Leadership Institute from January 31 to February 2, in Houston, TX, where the event focused on developing leadership and management skills for future leaders within the ACS. He also was awarded a $500 travel grant from the Toledo Section of the American Chemical Society to attend the Spring 2025 ACS National Conference in San Diego, CA, in April.

Umesha Kumbalathara (Ph.D. candidate, Sucheck) earned 2nd place in the Three Minute Thesis Competition hosted by the UToledo College of Graduate Studies in November 2024 and was the 1st place awardee in the Extended Seminar category at the 2025 Midwest Graduate Research Symposium at the University of Toledo in April 2025. Her award presentation was titled *Targeting Mycobacteria through a Trojan Horse Strategy using Pks13 Inhibitor-Trehalose Conjugates with Enhanced Properties*.

Jonathan Waller (B.S. '25) was selected as the UToledo Student Employee of The Year for 2024-2025. Jonathan served as a supplemental instruction leader in Academic Support Services where he assisted undergraduate chemistry students in their coursework.

Department Teaching Assistant of the Month

In 2024-2025 the department began recognizing exceptional performance each month by the hard-working teaching assistants. The recipients were **Manjula Kandage** (September), **Chloe Sebilleau** (October), **Jennifer Thornberg** (November), **Madison Erickson** (January) and **Aaron Grant** (February).

University of Toledo ACS Graduate Student Organization (GSO) Chartered

For many years the undergraduate student chapter of the American Chemical Society has represented the department with distinction at ACS national meetings. In Spring 2025, graduate students in the department established the first ACS graduate student organization. The founding members included **Babatunde Samuel Obadawo** (Chapter President), **Chloe Sebilleau, Uzoamaka Clara Bokolo, Mathieu Geremia, Umesha Kumbalathara** and **Olutayo Nate Farinde**. Serving as chapter advisor is **Professor Peter Andreana**. Joining the ACS GSO student chapter opens doors to valuable professional development, travel grants and community engagement opportunities in chemistry.

Student Success in Undergraduate Research

Undergraduate Summer Research Fellowships

Undergraduate students were very active in research in 2024-2025. Numerous Chemistry and Biochemistry undergraduate students were awarded Undergraduate Summer Research Fellowships from the Office of Undergraduate Research to perform research in the laboratories of faculty members in summer 2024 and 2025.

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Summer 2024 Awardees

First Year Summer Research Experience:

Neha Chenna (John Bellizzi)
Unlocking Nature's Toolbox: Exploring Halogenase Enzymes Using X-Ray Crystallography for Sustainable Chemical Synthesis

Victoria Ho (Michael Young)
Tackling the Opioid Crisis: Understanding Synthetic Opioid Interactions through Modern Synthetic Methods

Shailja Kela (Jianglong Zhu)
Stereoselective Synthesis of 2,3-Diamino-2,3-dideoxy-ß-mannoside via Cs_2CO_3-Mediated Anomeric O-Alkylation: Synthesis of the Tetrasaccharide Repeating Unit of CPS of Bacillus Stearothermophilusis

Summer Research and Creative Activities Program:

Anam Dewani (Dragan Isailovic)
Investigating the Significance of Anabaenopeptins in the Maumee Bay and Performing HPLC-PDA and NMR for Accurate Detection and Quantification

Summer 2025 Awardees

First Year Summer Research Experience:

Ava Barwiler (Michael Marszewski)
Testing High Entropy Oxides as Catalysts for the Conversion of Fatty Acids to Fuels

Kim Huynh (Wei Li)
Development of a Synthetic Protocol for Firefly Luciferin Analogs

Morgan Kay (Jianglong Zhu)
Synthesis of a Trisaccharide Repeating Unit of Pseudomonas aeruginosa O5 O-Antigen for Vaccine Development

Summer Research and Creative Activity Program:

Neha Chenna (John Bellizzi)
Unlocking Nature's Toolbox: Expressing, Purifying and Crystallizing Novel Halogenase Enzymes

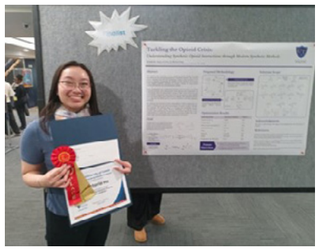
Elaina Hunkar (Michal Marszewski)
Carbonization of Lignocellulosic Materials

Shailja Kela (Jianglong Zhu)
Stereoselective Synthesis of 2,3-Diamino-2,3-dideoxy-ß-mannoside via Cs_2CO_3-Mediated Anomeric O-Alkylation: Synthesis of the Tetrasaccharide Repeating Unit of CPS of Bacillus Stearothermophilusis

Victoria Ho (Michael Young)
A Step Towards Precision Medicine: Developing Photocages for Catecholamines

University of Toledo Undergraduate Research and Creative Activity Exhibition

Undergraduate researchers displayed their research in several venues over the past year. On December 6, 2024, at the University of Toledo Undergraduate Research and Creative Activity Exhibition, eight chemistry and biochemistry students presented posters: **Victoria Ho** and **Carmen Rhinehalt** (Young), **Neha Chenna** (Bellizzi), **Shailija Kela** (Zhu), **Gavin Shine** and **Mary Eby** (Kirchhoff), **Anam Dewali** (Isailovic) and **Sanjna Singhal** (Lind-Kovacs). **Victoria Ho** (pictured right) earned the 2nd place award for her poster presentation *Tackling the Opioid Crisis: Understanding Synthetic Opioid Interactions through Modern Synthetic Methods* from over 80 contributions by undergraduate researchers.



2025 NSM Undergraduate Research Expo

The following students participated in the 2025 NSM Undergraduate Research Expo on April 10, 2025. Those included **Victoria Ho** (Young), **Neha Chenna** (Bellizzi) and **Gavin Shine** (Kirchhoff). **Neha Chenna** received the 2nd place award for her poster *Unlocking Nature's Toolbox: Exploring Halogenase Enzymes Using X-Ray Crystallography for Sustainable Chemical Synthesis*.

Pictured (L-R): Gavin Shine explains his research project to Research Expo judges Aaron Grant and Chinedu Okwuosa, graduate students in the Department of Chemistry and Biochemistry. Courtesy of Dan Miller.

Awards and Scholarships

The following awards and scholarships were presented at the **Spring 2024 and 2025 Honors Teas**. The Spring 2025 recipients are in italics:

Alfred F. Foster Health Science Award
Fall: Parian Tinab; *Kaitlyn Castilo*
Spring: Jiwon Hu; *Ashley Martin*

Analytical Chemistry Award
Chloe Villa; *Elaina Hunkar*

Andrew Jorgensen Outstanding Teaching Assistant Award
Recitation TA: Indunil Alahakoon, *Dimitra Georgoyiannis*
Laboratory TA: Alex Nguyen, *Manjula Madde Kandage*

Arthur H. Black Award in Analytical Chemistry
Juniors: Mary Eby, Cyrus Koogan; *Marissa Shook*
Seniors: Chloe McLeod, Paige Wlodkowski; *Mary Eby*

Arthur H. and Virginia R. Black Merit Scholarship
Gavin Shine; *Marissa Shook*

Biochemistry Award
Chloe Villa; *Sophia Durham*

Bodo Diehn Undergraduate Award
Zachary Miller; *Morgan Kay*

Chemical and Allied Industries of Northwest Ohio (CAI-NWO) Scholarship
Anthony Pham; *Joshua Macejko*

The Chemistry Faculty Scholarship: Leonard Brady Scholar (2024) and Claybourne Griffin Scholar (2025)
Elizabeth Verhoff; *Emily Hammond*

CRC Press Freshman Chemistry Achievement Award
Evan Rivera; *Achintya Pothireddy*

CV Wolfe Scholarship in Natural Sciences
Joy Asuma

David Dollimore Award in Chemistry
Jeffrey Chopp; *Noelle Ritter*

David R. Hostetler Memorial Scholarship
Hritik Dhar; *McKenzie Kidd*

Elmer R. & Gertrude M. Brigham Award
Emma Wainscott

Dr. Gene K. Richard Chemistry Department Scholarship
Torrance Henry; *Ahmed Salaheldin*

Henry R. Kreider Scholarship in Chemistry
Elaina Hunkar; *Elaina Hunkar*
Marissa Shook; *Kim Huynh*
Chloe Villa; *Lilly Spaethe*

Inorganic Chemistry Award
Chloe Villa; *Jonathan Waller*

James E. and Margaret M. Sander Scholarship in Chemistry
Jonathan Waller; *Neha Chenna*

Joseph A. and Mary A. Capobianco Memorial Scholarship
Amira Alkaissi, Glenn Chambers; *Cally Manske, Alaiyah Myles*

Organic Chemistry Award
Braden Gartee; *Jayden Chacko*

Organic Progress Fund Graduate Student Award
Matthew Lohman; *Geraud Valentin*

Outstanding First-Year Graduate Student/ Ramachandran and Potlapally Graduate Award
Yohan Sudusingha, Nithya Ariyasena; *Kowthaman Pathmanathan*

Outstanding Graduating Senior
Fall: Chloe McLeod; *Ela Verhoff*
Spring: Jonathan Troung; *Jonathan Waller, Chloe Villa*

Outstanding Graduate Student Research Paper of the Year
Sanduni Premathilaka; *Rashidat Bamidele*

Physical Chemistry Award
Jonathan Waller; *Cyrus Koogan*

William B. Silverman Scholarship
Mary Eby; *Glenn Chambers*

Spring 2025 Honors Tea Award Recipients

In the News

Professor Dragan Isailovic's research has received significant attention in the last two years highlighting his labs work on investigating issues related to harmful algae blooms and water sustainability. An overview of research being conducted at UToledo is available at:

- UTNews article dated 07.16.2024 (https://bit.ly/4kHiEcT)
- UTNews article dated 12.06.2024 (https://bit.ly/4kduRpE)
- YouTube/13ABC News interview (https://bit.ly/43M3RYy)

And with Professor Randy Ellingson in the Department of Physics and Astronomy, an international collaboration was developed to raise awareness about renewable energy and water sustainability with researchers in Serbia. The collaboration allowed graduate students Tyler Brau (Physics and Astronomy) and **Sanduni Premathilaka** (Chemistry and Biochemistry) to travel to Serbia to collaborate with Dr. Ivana Validzic and Dr. Nikola Ilic from Vinča Nuclear Research Institute in Belgrade and conduct community outreach promoting STEM education in Serbian elementary schools. (UTNews article dated 02.24.2025: https://bit.ly/4mOibaG)

Two additional important initiatives from the Isailovic lab include their collaboration with Lawrence Livermore National Laboratory (LLNL) in Livermore, CA, where together they are investigating the factors that lead to the growth of Lake Erie algal blooms. The main goal according to Dr. Isailovic is to "better understand and predict bloom dynamics and toxicity such that the negative effects of the algal blooms can be mitigated."

Dr. Dragan Isailovic, from left, is joined by doctoral candidate Sanduni Premathilaka and postdoctoral researcher Sharmila Thenuwara as co-authors on a recent research article in the International Society of Microbial Ecology Journal.

The Lawrence Livermore team is led by Dr. Xavier Mayali and with collaborators at The University of Toledo and the University of Michigan recently published their recent findings in the *The International Society of Microbial Ecology Journal* in 2024. The article titled ***Microbiome Processing of Organic Nitrogen Input Supports Growth and Cyanotoxin Production of Microcystis Aeruginosa Cultures*** explored how organic nitrogen upon entering the watershed through the decomposition of aquatic and terrestrial organisms or from organic fertilizers can fuel the growth of harmful algal blooms. **Sanduni Premathilaka** (Ph.D. '24) and **Sharmila Thenuwara** (Ph.D. '23) were co-authors on this research, as was **David Baliu-Rodriguez** (Ph.D. '21) who is currently a staff scientist at LLNL. The work was funded by LLNL's Laboratory Directed Research and Development Program.

A detailed feature by Nicki Gorny of UTNews can be found at: bit.ly/4dQH4OI and was also highlighted in a Blade article: bit.ly/4dTIacx

The second innovative project is also a collaboration. With **Assistant Professor Michal Marszewski** they demonstrated the use of corncobs as a renewable resource to remove microcystin toxins from water showing in preliminary experiments their corncob-based biochar and activated carbon were almost 100% effective in removing microcystins from water. The research was published in the journal ***Separations*** in 2024 and was titled ***Evaluation of Carbonized Corncobs for Removal of Microcystins and Nodularin-R from Water.*** A detailed feature by Nicki Gorny of UTNews can be found at: bit.ly/45LOOiY.

Dr. Michal Marszewski, Manjula Kandage, Hasaruwani Kiridena, Yohan Sudusingha, Dr. Sharmila Thenuwara and Dr. Dragan Isailovic evaluated carbonized corncobs for the removal of cyanotoxins from water in research published in Separations.

Student Success

Biochemistry Junior Focused on Organic Chemistry Earns Prestigious Goldwater Scholarship

by Nicki Gorny, UTNews, April 2024, reprinted with permission

Chloe Villa has presented her research on halogen bonding catalysis at two national chemistry conventions, and she co-authored an article on the use of olefin difunctionalization to synthesize a range of organic compounds of interest in drug development in the journal Organic Letters.

Even more impressive is that she's done it all in her first two years as an undergraduate student at The University of Toledo.

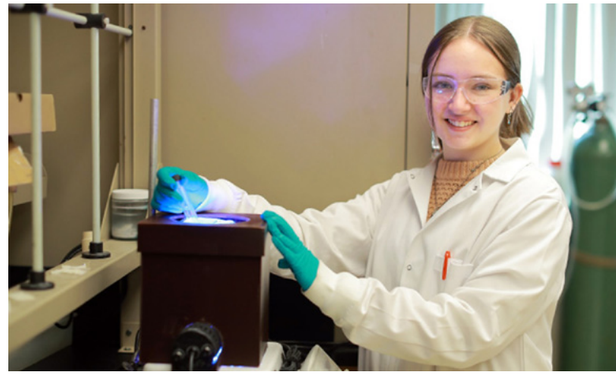
Villa connected with Dr. Wei Li in the Department of Chemistry and Biochemistry in her first semester at UToledo, and she's been working alongside him and a team of graduate and undergraduate students ever since to explore mechanisms to create molecules of potential medicinal value.

Now the second-year biochemistry student, who is on track to complete her undergraduate degree in three years thanks to the dual enrollment program College Credit Plus, which allowed her to earn college credits while a student at Sylvania Southview High School in Sylvania, is being recognized for her commitment to research discovery with a prestigious Barry Goldwater Scholarship.

The Barry Goldwater Scholarship and Excellence in Education Foundation was established by Congress in 1986 to honor the lifetime work of Arizona Sen. Barry Goldwater. It seeks to identify, encourage and financially support sophomores and juniors who show exceptional promise of becoming the country's next generation of research leaders in natural sciences, mathematics and engineering.

Villa is one of two UToledo students selected as a 2024 Goldwater Scholar. She's joined by Sophia Durham, a biology sophomore who works with Dr. Rafael Garcia-Mata in the Department of Biological Sciences. It is the first time the University has had two Goldwater Scholars named in the same year.

"I feel honored to receive the Barry Goldwater Scholarship," Villa said. "I am passionate about the work I do so it is nice to be recognized for it. It also



reinforces the idea that I have found a career path that is for me."

Villa is a second-generation Rocket, and she brought a keen interest in chemistry to campus when she arrived as a freshman in 2022. She was initially interested in channeling that interest into a medical career, she said, but her lab experiences during the past two years have shifted and solidified her aspirations toward research.

Li's lab was attractive to her because of its focus on organic chemistry and its potential application in drug development, as well as Li's positive reputation for supporting undergraduate researchers. They connected when he taught her first-semester organic chemistry class. Villa has since contributed to a variety of research projects in his lab, most of which focus on halogen bonding catalysis or olefin difunctionalization – both means of manipulating molecules to create new small organic molecules with a targeted set of traits.

She is currently working on a light-mediated reaction to achieve this end.

"Chloe is an extremely motivated and dedicated undergraduate researcher," Li said. "She is a trailblazer in my laboratory, often working on new chemistry at a graduate level as a freshman undergraduate student. She hopes to one day develop new medicines that can help cure disease and ease the pain for patients. What is unique about this young lady is that she does not seek attention or glory of her own, but always cherishes and enjoys the success of others."

Li's lab work has opened numerous opportunities to Villa, including attending the spring meeting of the American Chemical Society in 2023 and presenting

Continued from page 11

her research at both the National Organic Chemistry Symposium in 2023 and the spring meeting of the American Chemical Society in 2024. She also presented her research at UToledo's End of Summer Poster Session in 2023, following her participation in the First Year Summer Research Experience Program, which supports students who contribute to faculty members' research activities in the summer after their first year at UToledo.

The National Organic Symposium Conference was a particular highlight, she said.

"Because the conference is strictly focused on organic chemistry, I was able to speak with other researchers in depth about the field I want to go into," she said. "The questions they asked after my presentation were really stimulating."

Another highlight has been her co-authorship of a research article in Organic Letters in January: "Olefin Difunctionalization for the Synthesis of Tetrahydroisoquinoline, Morpholine, Piperazine, and Azepane." It explores the use of olefins – a type of hydrocarbon molecule – in the synthesis of a diverse array of N-heterocycles. N-heterocycles, which are compounds with a ring-structure containing at least one nitrogen atom, are key structural units in many drugs.

Outside of the lab, Villa has enjoyed involvement in the Jesup Scott Honors College and the UToledo American Chemical Society Student Chapter, where, as this year's president, she's overseen a regular schedule of socials, speakers and tutoring sessions. She's also been excited to develop a relationship between the chapter and Imagination Station in downtown Toledo.

Villa plans to intern with the chemical manufacturer Huntsman International this summer before returning to campus ahead of a projected graduation in Spring 2025. Then she plans to continue toward a doctorate in chemistry and ultimately a career in pharmaceutical research.

Goldwater Scholarships are highly competitive, with students participating in their schools' internal competitions before receiving consideration from the Goldwater Foundation. Villa and Durham join, most recently, Derek Kluczynski who was named a Goldwater Scholar in 2023, Jacob Connolly in 2021 and Nathan Szymanski in 2018.

Networking Opportunity Lands Chemistry Senior Important Internship

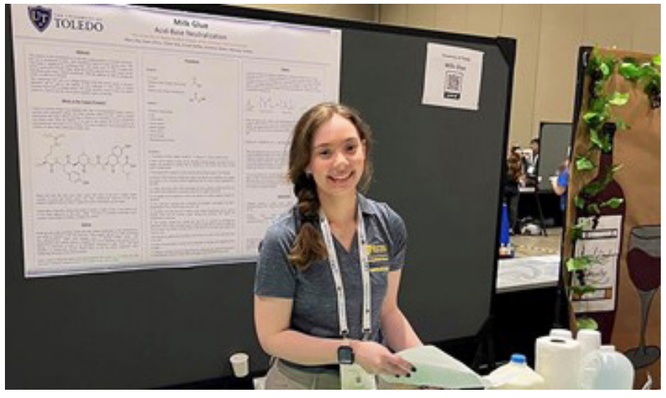
by Natalie Burgess, UTNews, November 2024, reprinted with permission

This summer, senior chemistry student **Mary Eby** found herself with a unique internship opportunity.

"From my experience and from what I have learned from others, it can be particularly difficult to find an internship in chemistry," said Eby, who is scheduled to graduate next May. "There is not a lack of internships, but rather a lack of advertisement. I was extremely grateful to have found this opportunity as I felt I already knew I wanted to work in industry; however, I did not want to enter the workforce without knowing it was truly the path for me, and this was a way to test that."

Alongside two other interns, Eby worked in the research and development department at BASF Corp. in Wyandotte, Michigan.

"I worked as the sole intern on the structure elucidation team, characterizing and identifying components and contaminants in manufactured products," she said.



"It was amazing to see industrial applications of the things I had learned in an academic setting, and I was able to take the knowledge of those applications back to the University and my research there as well."

Eby first heard about the opportunity through her association with UToledo's student chapter of the American Chemical Society (ACS).

"I had attended an event with the Detroit chapter of the American Chemical Society and met a chemist there who was employed at BASF in Wyandotte," she said. "We had struck up a conversation about my education and it led to the realization that I was looking for an internship and that her department at BASF was looking for interns with a solid education in chemistry."

The American Chemical Society has allowed Eby to experience myriad new opportunities for students in her major.

"I had the opportunity to attend the Spring 2024 ACS National Conference this past academic year," she said. "I was able to travel with a group of my peers to New Orleans and attend seminars on how to further my career, research symposiums and so many other beneficial events. Attending the conference and presenting a demo was definitely a memorable experience and I was able to gain so much from the trip."

Dr. Jon Kirchhoff, a Distinguished University Professor in the Department of Chemistry and Biochemistry, has worked closely with Eby throughout her education.

"Mary is a dedicated student in the classroom and research laboratory," Kirchhoff said. "She has taken advantage of many opportunities in the chemistry and biochemistry program including performing undergraduate research in analytical chemistry since her freshman year. This experience has positioned her not only for the success she achieved in her summer internship at BASF, but also will benefit her future career in science. Mary has become an exceptionally talented and insightful scientist with her hard work leading to her presenting her research at the upcoming Spring 2025 ACS National Conference."

Eby said the most important aspect of college for her was to get involved.

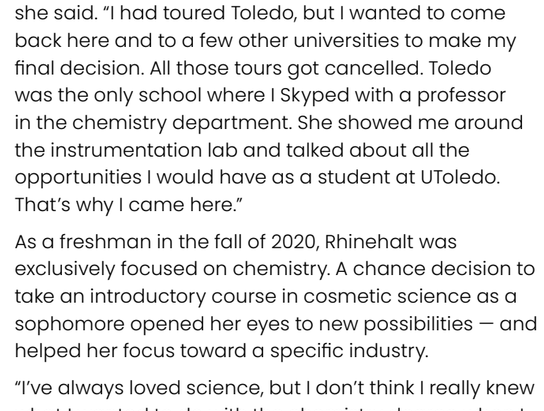
"The best thing I ever did for myself was to build connections," she said. "Taking time to email professors and talk to them after class allowed me to build connections with faculty, which opened up future opportunities. Joining a lab and conducting undergraduate research helped me to refine my skills from the very beginning while receiving support from faculty and graduate students."

Love of Science Leads Undergraduate to Double Major

by Tyrel Linkhorn, UT News, December 2024, reprinted with permission

Finishing high school at the height of COVID-era precautions meant **Carmen Rhinehalt** didn't get a chance to celebrate with a traditional graduation ceremony.

She'll make up for that this weekend, when she walks for the second time at The University of Toledo.



Rhinehalt, a double major in chemistry and cosmetic science and formulation design, participated in UToledo's spring commencement earlier this year after wrapping up her chemistry work. She'll walk again on Saturday to mark the completion of her cosmetic science degree.

A native of northeast Ohio, Rhinehalt chose The University of Toledo in large part because of the efforts of a chemistry faculty member to make a personal connection with her as she narrowed down her choices in a higher education environment that had been thrown into upheaval.

"Because of COVID, I had to choose a college online," she said. "I had toured Toledo, but I wanted to come back here and to a few other universities to make my final decision. All those tours got cancelled. Toledo was the only school where I Skyped with a professor in the chemistry department. She showed me around the instrumentation lab and talked about all the opportunities I would have as a student at UToledo. That's why I came here."

As a freshman in the fall of 2020, Rhinehalt was exclusively focused on chemistry. A chance decision to take an introductory course in cosmetic science as a sophomore opened her eyes to new possibilities — and helped her focus toward a specific industry.

"I've always loved science, but I don't think I really knew what I wanted to do with the chemistry degree when I started," she said. "When I found the cosmetic science

Continued from page 12

program, that's when I finally knew. I didn't want to give up chemistry because I knew I could apply both areas to my future career, so I decided to do both. It probably would have been a lot easier to choose one, and I would have graduated in four years, but I don't have any regrets."

Rhinehalt credited two faculty members in particular for their mentorship and help ensuring she was successful in both programs — Dr. Gabriella Baki from the College of Pharmacy and Pharmaceutical Sciences and Dr. Michael Young from the College of Natural Sciences and Mathematics.

Rhinehalt spent two years doing research alongside Young, an associate professor of chemistry, while Baki, director of the undergraduate Cosmetic Science and Formulation Design Program and an associate professor of pharmacy practice, helped her see the potential of cosmetic science and encouraged her to pursue a double major.

"Double majoring in chemistry and cosmetic science allowed Carmen to deepen her technical knowledge in both personal care product chemistry and product formulation with the bonus of approaching ingredient structure and function from a slightly different angle," Baki said.

Having that dual chemistry and cosmetic science background helped Rhinehalt land a summer internship with Cargill Inc., the largest privately held company in the United States.

Cargill is well known for its agribusiness endeavors, but the Minneapolis-based company also has a small personal wellness division. As a beauty research and development intern, Rhinehalt got to do hands-on work formulating mascara while also interfacing with key executives.

"It was interesting because I got a lot of experience in the industry, but I also learned how businesses work — especially really, really big businesses," she said. "And cosmetics is such a niche part of Cargill that even though I was at a big company, the cosmetics team was small, so I had a lot of unique opportunities. High-level Cargill executives also came to see our internship presentations, which was a very exciting experience."

Rhinehalt said part of what attracted her to the cosmetic science program was the breadth of career opportunities the degree prepared her for. Whereas chemistry is focused on hard science, the cosmetic science program touches on marketing, sales and industry regulation in addition to the hands-on formulation work students do.

"With a base knowledge in color theory and understanding how to create aesthetically appealing products, she is well-skilled to overcome a variety of challenges at the bench," Baki said. "And the business courses she has taken allow her to communicate technical issues and potential solutions to the business units within companies."

Though Rhinehalt is focused on finding an opportunity where she can work in ingredient synthesis, she liked the additional career paths available should she one day choose to step away from the lab.

"Having to decide where to go to college when I couldn't see them again felt like one of the hardest decisions I've had to make. And I know now I made the right one," she said. "I was as involved as I could be with a sorority and research and two majors. I have thrown myself into The University of Toledo and it's given me many opportunities in return."

Alumni Updates

Births

Sunayana Kapil (Ph.D. '18, Sucheck) welcomed a son, Krish Ayyadevara, on May 20, 2024.

Career News

Padam Acharya (Ph.D. '19, Zhu) joined the Department of Chemistry at Eastern Kentucky University in August 2024 and started his independent career as a tenure-track assistant professor. Padam was a postdoctoral associate at the University of North Carolina at Chapel Hill.

Sandhya Adhikari (Ph.D. '23, Kirchhoff) accepted a new position as R&D Analytical Scientist III with ThermoFisher Scientific at Hunt Valley, MD.

Tatyana Barkhimer (Ph.D. '04, Kirchhoff) started a new position as Clinical Pharmacist at St. Charles Mercy Hospital in Oregon, OH, January 2024.

Samantha Bouhall (M.S. '15, Sucheck) recently celebrated her 8th work anniversary with Cayman Chemical in Ann Arbor, MI. She is a scientist in the Bioanalytical Chemistry Group focused on lipid and small molecule analysis in biological samples by LC-MS/MS. In her free time, Samantha, her husband and two sons (age 2 and 4) can be found exploring the science museum.

Anam Dewani (B.S. '24) was accepted into Medical School at the University of Toledo.

Ximena Fernandez (B.S. '24) accepted a position at Eurofins Environment Testing in Barberton, OH as a GC analyst specializing in the analysis of water and solid samples. She uses gas chromatography with a flame ionization detector to detect and quantify Diesel Range Organics (DRO), PCB's and Pesticides for various clients. Ximena was one of the first two students at UToledo to earn the new Certificate in Analytical Chemistry.

Vishwanath Gaitonde (Ph.D. '15, Sucheck) is Associate Project Manager/Principal Scientist I, Chemical R&D at Cambrex High Point, Inc in High Point, NC, entering his 10th year. During his career at Cambrex he has worked on several programs from early to late phase API manufacturing. With this valuable experience, he transitioned to a project management role overseeing programs in Chemical R&D, and Clinical and Commercial manufacturing space contributing towards the drug substance supply chain and positively impacting the health care industry.

Prem Gurung (Ph.D. '24, Zhu) successfully defended his dissertation and received his Ph.D. degree in August 2024.

Sunayana Kapil (Ph.D. '18, Sucheck) is a Senior Scientist at Pfizer in Pearl River, NY, where she leads the development and optimization of conjugation processes for carbohydrate-based conjugate vaccines. Sunayana has pioneered new methods and collaborated with cross-functional teams to enhance scalability and yield in vaccine manufacturing. Prior to Pfizer she held senior and principal scientist positions at Execupharm (Merck) and Quanta BioDesign where she focused on enzyme-driven processes and synthetic chemistry in drug development. Sunayana was on sabbatical, caring for her newborn son, during 2024.

Partha Karmaker (Ph.D. '15, Sucheck) is currently working as Manager, Chemistry R&D at Abzena in Bristol, PA. His research has led to two patent filings entitled *Near Infrared Fluorescent Dyes, Formulations and Related Methods* (US12121596B2, October 22, 2024) and *Compounds for Cancer Therapy and Imaging* (US20230365516A1, November 16, 2023).

Robert Kernstock (Ph.D. '04) recently founded Kernstock Consulting, LLC and in spring 2025 taught the undergraduate biochemistry lab as a part-time instructor for the department.

Hasaruwani Kiridena (Ph.D. '24, Isailovic) is a postdoctoral associate at University of Michigan Medical School in Ann Arbor, MI.

Sydney Kohler (B.S. '22) was recently promoted to Lab Coordinator at Perstorp Polyols in Toledo, OH.

Lilyann Lawson (B.S. '21) is working at Perstorp Polyols in Toledo, OH, and recently became engaged.

Qinfeng "Sarah" Liu (Ph.D. '05, Kirchhoff) was promoted to Professor in the Department of Pharmaceutical and Clinical Sciences in the College of Pharmacy and Health Sciences, Campbell University, Buies Creek, NC.

Haiden Nguyen (Ph.D. '16, Zhu) joined the Department of Chemistry, Biology & Health Sciences at South Dakota Mines in August 2024 and started his independent career as a tenure-track assistant professor. Haiden was a postdoctoral associate at Duke University.

Leonard Nyadong (M.S. '05, Averill) is a Senior Scientist at Philips 66 in the Energy Research and Innovation Organization focusing on challenging research in the petroleum field. He began his career at UToledo with the intent to study organic synthesis but soon learned his interests were in the field of analytical chemistry. After earning his M.S. degree, Leonard moved to Georgia Institute of Technology to study ambient ionization techniques in mass spectrometry in the laboratory of Professor Facundo Fernandez. Following his Ph.D. studies, he served as a postdoctoral associate at the National High Magnetic Field Laboratory at Florida State University working with Professor Alan Marshall's laboratory.

Thilini Perera (M.S. '18, Isailovic) graduated with a Ph.D. from University of Illinois Chicago in 2024 and continued her career as an Oak Ridge Institute for Science and Education (ORISE) fellow at the FDA.

Leo Roberts (B.S. '23) began medical school at UToledo's College of Medicine in Fall 2024.

David Baliu-Rodriguez (Ph.D. '21, Isailovic) was promoted from a postdoctoral position to a research scientist at Lawrence Livermore National Laboratory (LLNL) in Livermore, CA, and received funding to continue his research project at LLNL.

Sharmila Thenuwara (Ph.D. '23, Isailovic) began a postdoctoral position in the Mass Spectrometry Core in the Lumigen Instrument Center at Wayne State University in Detroit, MI.

Patricia (Reynolds) Tucker (B.S. '08) joined Henkel in

Continued from page 16

2020 as a Scientific Associate at the Madison Heights, MI, site where she developed sustainable surface treatment technologies for metal packaging. She was recently promoted to Technical Manager and is managing a small team of chemists and technicians, dedicated to new product development and global surface treatment technology. Patricia received her Ph.D. at Florida State University in Solid State Inorganic Chemistry, focusing on intermetallic growth of rare-earth transition metals and characterization of the resultant crystallographic structures and physical behavior. Right after graduation she joined Guardian Glass in 2012 as a Research Scientist working on Vacuum Insulated Glazing or VIG and then furthered her career as a Research Project Lead, responsible for sputtered film technology for emerging markets. She has three published journal articles, four granted patents, four patent applications and two provisional applications, spanning multiple technologies.

Sri Kumar Veleti (Ph.D. '16, Sucheck) was promoted to Senior Module Development Engineer at Intel Corporation in Hillsboro, Oregon.

Chloe Villa (B.S. '25) recently was awarded a prestigious NSF Graduate Research Fellowship for her graduate work in chemistry at Princeton University where she will enroll this fall after completing a summer internship at Merck.

Paige Wlodkowski (B.S. '24) accepted a position as an Analytical Chemist at American Glass Research (AGR) in Maumee, OH, July 2024. Paige was one of the first two students to earn the Certificate in Analytical Chemistry along with her B.S. degree.

New Alumni (Fall 2023-Spring 2025)

B.A.

Kern Baxter
Justin Strang

B.S.

Mohamed Ahmed
Amira Alkaissi
Malik Almasri
Thomas Antoine
Alexandra Basich
Emily Boes
Emma Curran
Anam Dewani
Alex Dumminger
Cassidie DiBacco
Tan Ton Dong
Mary Eby
Aaron Ellis
Michael Ferguson
Ximena Fernandez Paucar
Lily Fojtik
Allison Gottshall
James Grondin
Fateh Haris
Elijah Harris
Gregory Hunt
Zoe Kinney
Cyrus Koogan
Victoria Kremenets
Sydney Kutcher
Chloe McLeod
Zachary Miller
Alyssa Murral
Taylor Nichols
Alice Ou
Anthony Pham
Carmen Rhinehalt
Xavier Robida
Gavin Shine
Alexander Silecky
Alexandra Simpson
Landon Stehlik
Angela Tetteh
Jonathon Truong
Elizabeth Verhoff
Chloe Villa
Chase Walczak
Jonathan Waller
Paige Wlodkowski
Ernest Wolke
Nicklaus Fleming
Md. Mahbubul Haque Hasan
Livina Iheme
Veronica Martin
Ankita Mishra
Abiodun Oshinowo
Nithini Rajakaruna
Brandon Russell

M.S.

Omoniyi Awe
Ashlee Bartlett-Niese

Ph.D.

Indunil Alahakoon Mudiyanselage
Abdullah Almalki
Akanksha Chhikara
Sanduni Meegahamadiththe Gedara
Prem Gurung
Hasaruwani Kiridena
Amendra Liyanarachchi
Matthew Lohman
Koshala Olupothage
Leart Sejdarasi
Kendra Shrestha
Sharmila Thenuwara
Ihala Gedara Ubayasena
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Chemistry Progress Fund
David Dollimore Award in Chemistry
David R. Hostetler Memorial Scholarship
Dr. Andrew Jorgensen Outstanding Teaching Assistant Award
Dr. Gene K. Richard Chemistry Department Scholarship
Dr. Nina McClelland Laboratory for Water Chemistry & Environmental Analysis Fund
Frontiers in Chemistry Lecture Series
Henry R. Kreider Scholarship
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Thank you to everyone who has made, or is considering making, a contribution to support chemistry and biochemistry students who are working to become the next generation of chemists, teachers and medical professionals. Through your generosity and thoughtfulness, many dreams have been and will be achieved. The impact of every contribution is felt by all our students.

Alumni Recognition

Joe Cotruvo (B.S. '63) presented the short course "*Water, Water (Isn't) Everywhere: But is it Safe to Drink?*" at UToledo in the Department of Chemistry and Biochemistry from June 16-18, 2025. The intensive three-day course addressed a wide range of critical topics including water quality, treatment technologies, regulatory policy, toxicology and risk assessment drawing on his 50+ year career which included serving 25 years at the U.S. EPA, directing both the Drinking Water Standards Division and the Risk Assessment Division. Since retiring, he has continued contributing globally through his consulting firm and ongoing roles in academia and public health. Attendees included students, water system operators and educators. The course was certified for Ohio EPA operator training credits.

Recognizing Our Donors

The chemistry department recognizes and thanks all donors who generously made gifts from July 1, 2023 to June 30, 2025. Donors are listed alphabetically.

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For more information about giving, including setting up scholarships or additional gift funds, please contact Brittanie Kuhr, Director of Development, College of Natural Sciences and Mathematics, at 419.530.5418 or brittanie.kuhr@utoledo.edu.

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Chemical Storekeeper II, Tony Kaminski (B.A. '02), operates the grill at the 2nd annual department mid-summer "recycling" picnic. Tony organized the collection and recycling of two truckloads of old laboratory freezers, refrigerators and miscellaneous equipment that were past their usable lifetime. The funds generated were then further recycled into food and drinks for a nice summer break for faculty, students and staff!