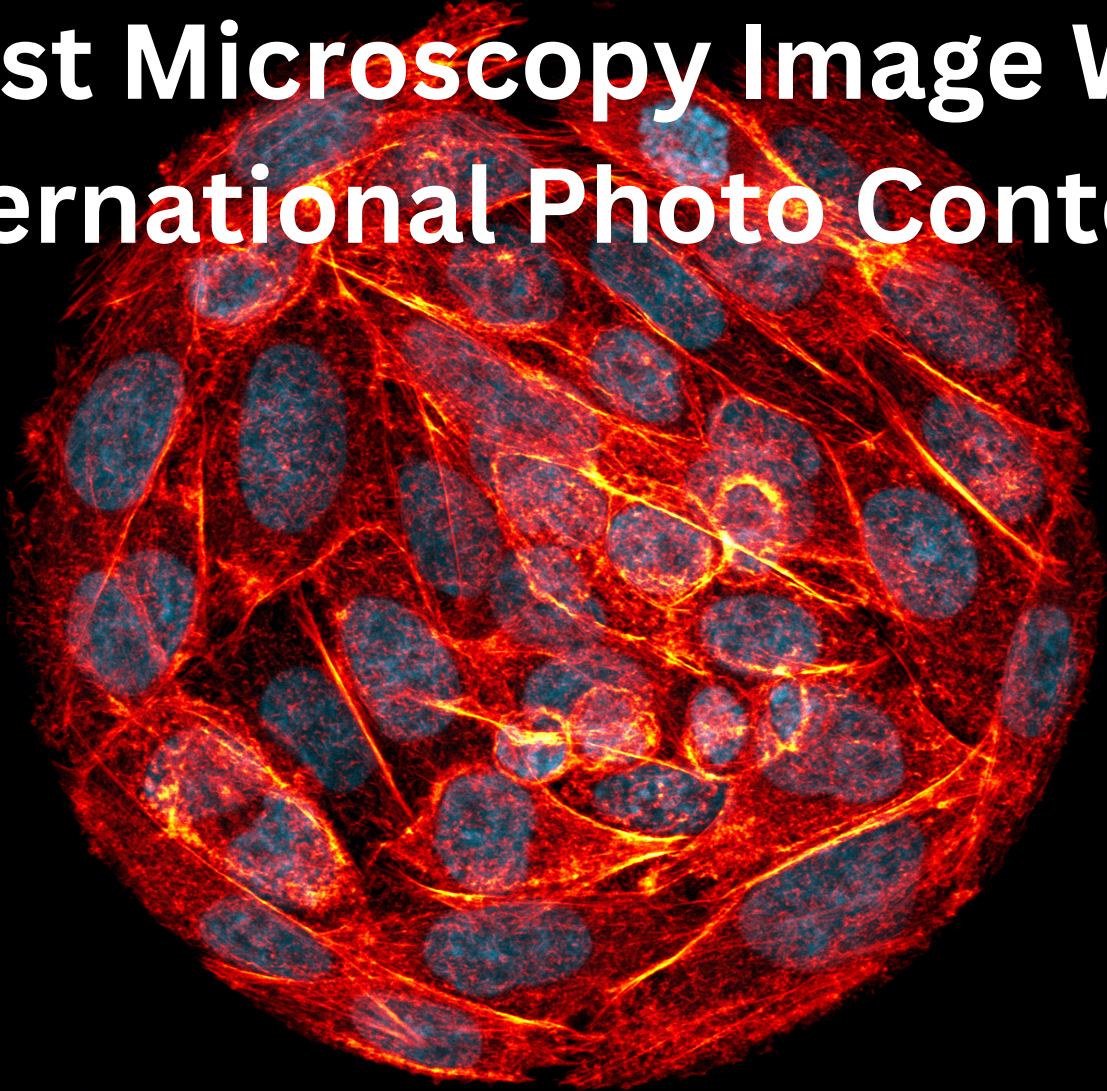


MARIST

SCHOOL OF SCIENCE

Marist Microscopy Image Wins International Photo Contest



20 μm

Featured in this Issue

- Introduction of New Faculty
- Study Abroad and Student Summer Research Experiences
- Faculty Participate in National Success Initiatives

Fall 2024

MARIST

SCHOOL OF SCIENCE

Fall 2024 Newsletter

FEATURED IN THIS ISSUE

- Introduction of New Faculty
- Highlights of Study Abroad and Summer Research Experiences
- Outstanding Licensing Exam Pass Rates for Allied Health Graduates
- Faculty Participate in National Success Initiatives
- Awards and Recognitions

Seven New School Faculty Members Welcomed for 2024-2025 Academic Year

"Our newest colleagues bring diverse perspectives and years of teaching, clinical, and research experience that will enhance the academic journeys of our students in the [School of Science](#). I am very pleased to welcome them to the School of Science and Marist community and look forward to all the powerful ways in which they will impact our students." - [Dean Alicia Slater](#)

[Dr. Ramesh Laungani](#), *Associate Professor of Environmental Science*. Dr. Ramesh Laungani comes to Marist College after serving as the Chair of Science at Poly Prep Country Day School in Brooklyn, NY. Prior to this role, he was an Associate Professor of Biology at Doane University, a small liberal arts college in Nebraska. He holds a BA from New York University and a PhD from the University of Nebraska-Lincoln. His academic focus includes plant ecology and nutrient cycling, with particular emphasis on carbon and nitrogen cycling, as well as climate change solutions. In the classroom, he encourages students to take intellectual risks and become agents of change within their communities. He hopes to empower his students to investigate the unknown using their own ideas, enabling them to address significant challenges and contribute to a more just and equitable world.



[Jeanne Devine](#), *Visiting Lecturer of Biology*. Jeanne Devine is an experienced clinical genetic counselor who has worked in diverse settings including large public hospitals, small community health centers, private practices, genetic testing laboratories, and patient advocacy foundations. Prior to coming to Marist, she spent over 20 years educating patients, providers, community members, and students about genetic disease and personal risk. Along with her clinical roles, she has taught biology and genetics to undergraduate and graduate students at several colleges and universities. She is excited to use her experiences as a genetic counselor and educator to teach students everything from DNA replication in simple single-celled organisms to the technology and ethics of genetic engineering in humans. She holds an MS in Genetic Counseling from Mount Sinai School of Medicine and a BA in Biology, Genetics, and Development from Cornell University.



Matthew Bolssen, *Professional Lecturer of Medical Laboratory Science*. Before joining the Marist community, Matthew Bolssen provided testing and vaccination access in underserved communities in Arlington, Virginia during the COVID-19 pandemic. Prior to that, he was involved in various laboratory and public service positions in Arlington and Fairfax Counties in Virginia. He holds a BS in Clinical Laboratory Science from Michigan Technological University and an MBA with an emphasis on healthcare management from Walden University. In his free time, he enjoys spending time with his family, playing golf, and cheering on his hometown team, the Green Bay Packers.



Dr. Navneet Kaur, *Visiting Lecturer of Chemistry*. Dr. Navneet Kaur completed her PhD at Guru Nanak Dev University (India) synthesizing and analyzing silver selective macrocycles, followed by a postdoc at the University of Central Florida synthesizing anticancer drugs and their selective delivery to different cancer cells. As a medicinal chemist, she has designed, synthesized, and evaluated many new chemical entities as anticancer, anti-diabetic, anti-metastatic, anti-tuberculosis, and anti-inflammatory bowel disease drugs using structure-activity relationship (SAR).

Dr. Matthew Pennachio, *Visiting Lecturer of Chemistry*. Dr. Matthew Pennachio is a versatile chemist with a robust background in both organic and inorganic chemistry. His expertise spans materials chemistry, organometallic chemistry, and the exploration of carbon-based materials for advanced energy storage applications. Throughout his academic career, he has contributed to the field with multiple first-author publications in prestigious journals and has been a frequent presenter at national conferences, including those hosted by the American Chemical Society. Dr. Pennachio holds a BS in Chemistry from the State University of New York, Geneseo, and a PhD in Chemistry from the State University of New York, Albany.



Dr. Katherine (Kate) Weiss, *Assistant Professor of Environmental Science*. Dr. Kate Weiss is an urban wildlife ecologist and conservation scientist. She studies urbanization's impact on mammal communities, species interactions, and human-wildlife coexistence. Her past work has used trait-based approaches to understand how mammals respond or are flexible to urban environments, and how this influences human-wildlife conflict and management. Dr. Weiss has also conducted work to support conservation decision-making and recovery planning of threatened and endangered wildlife species. She holds a BS in Environmental Science and Policy: Biodiversity and Conservation Biology from the University of Maryland, and a PhD in Environmental Life Sciences from Arizona State University.



Dr. Bill Zhao, *Visiting Lecturer of Chemistry*. Dr. Bill Zhao obtained his PhD in Physical and Analytical Chemistry from Syracuse University. He has worked in the field of surface chemistry and biochemistry for many years. His current research interest is focused on vibrational circular dichroism (VCD) spectroscopy and chemical imaging. He uses VCD spectroscopy and chemical imaging techniques to study bio-samples, such as eye-lens crystallin and pharmaceutical molecules for various purposes, such as components analysis.

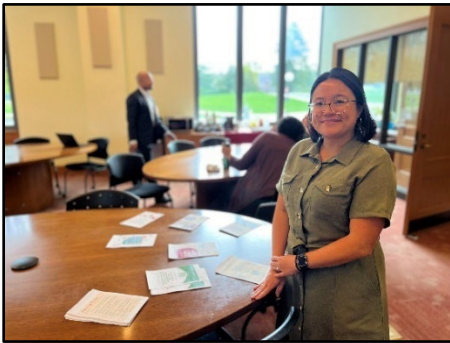
SOS Faculty and Staff Earn Promotions and New Positions for 2024-2025

In addition to welcoming new faculty members to the School of Science, we would also like to extend our congratulations to the following faculty and staff who earned promotions and new positions for the new year!

- [Dr. Alicia Slater, PhD](#), Dean, School of Science and Professor of Biology, promoted to *Senior Associate Provost for Operations*
- [Kevin Henry, MEd, ATC](#), Senior Professional Lecturer of Athletic Training, named *Assistant Dean, School of Science* (Interim from 2022-2024)
- [Dr. Kristin Mende, PT, DPT](#), promoted to *Clinical Associate Professor of Physical Therapy*
- [Jeffrey \(Jeff\) Midgley, MS, PA-C](#), Director of Physician Assistant Program, promoted to *Clinical Associate Professor of Physician Assistant Studies*
- [Dr. Heather Schiller, PhD](#), hired as a *Lecturer of Biology* (Visiting Lecturer in 2023-2024)

Dr. Christina Fojas Appointed to Lead New Marist Center for Teaching & Learning

Over the summer, Provost and Dean of Faculty [Dr. Catherine \(Katie\) Gunther Kodat](#) announced that [Dr. Christina Fojas](#) will serve as the interim Director for the Center for Teaching and Learning. Dr Fojas joined the Marist faculty in 2016 and is currently an Assistant Professor of Physical Therapy and the Director of the Gross Anatomy Laboratory. She teaches Gross Anatomy in the SOS graduate programs, and has taught First-Year Seminar, Anthropology, and Biology courses to undergraduates. Her research interests are closely aligned with



enhancing student learning experiences, focusing on self-regulated learning, metacognition, and learning environments. She has presented her educational research at numerous venues, with a [recent scholarly pursuit](#) published with student co-authors. Dean Alicia Slater remarked, "*Christina's commitment to providing an exceptional learning experience to our PA and DPT students has been evident to those of us in the School of Science for years. I am thrilled that she will be able to share her expertise in educational research and teaching and learning with the campus more broadly in her new position.*"

Faculty Continue Developing Strategies for Success via *Gateways to Completion*

For the second year, Biology Department faculty participated in the *Gateways to Completion* project, which is a collaboration with the [John N. Gardner Institute for Excellence in Undergraduate Education](#). The project will span three years and involves a team of faculty and other stakeholders who analyze data on student success and design classroom interventions intended to increase student success in gateway science courses, first-year retention, and, ultimately, six-year graduation rates. A team of faculty in the biology department has been conducting and analyzing data and student responses surrounding Key Performance Indicators from the Gardner Institute in six categories, including Learning, Faculty, Improvement, Policy, Students & Support, and has formulated a plan for changes to the BIOL 130 General Biology I course that are being implemented in Fall 2024.

Taking Marist Science to the World!

This year saw two new attachment courses to Coastal Alaska and Paris, France which provided opportunities for students to deepen their connection to environmental issues and collaborate with international students.

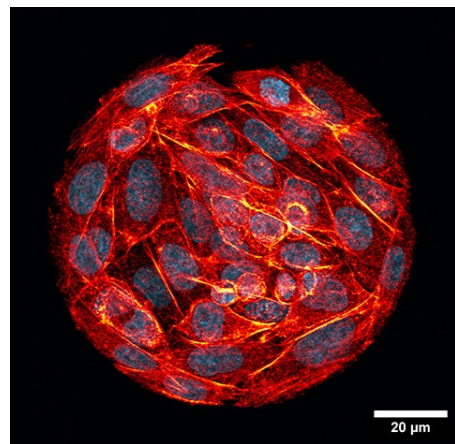
The Coastal Alaska experience used a social-ecological systems (SES) framework to examine environmental systems, adverse impacts of human activities upon them, and how society deals with the impacts. The course helped students develop a sense of place for the Hudson River Valley and coastal Alaska through an exploration of the areas' culture, people, ecosystems, and landscapes. They also studied how these systems have changed through time and how this understanding can be used to project the trajectory of these diverse systems under global climate change. The course emphasized cross-disciplinary learning that bridged the natural sciences, such as ecology, geology, hydrology, and climatology, with additional material from the social and political sciences, economics, and environmental ethics.



The primary goal of *Microscopy in Paris* was to expose students to research in Biology in an international context in Paris, France. Students worked collaboratively with master's students from Cergy Paris University to learn the core concepts of microscopy and develop and execute a research project using state of the art microscopes. The group used microscopy imaging to test a working hypothesis they developed, and made visits to the Louvre and Marie Curie Museums.

Student-Faculty Team Win International Contest for Microscopy Image

[Dr. Michel Becuwe](#), Assistant Professor of Biology, won the *People's Choice Award* for an image he submitted to "*An Artistic Odyssey Through Science*," a competition organized by the U.S. French Embassy's Department for Science and Technology. He was recently honored with the award at the France Science Summit in Washington, D.C. The image (at right) shows Chinese hamster ovary cells in a circular pattern. It illustrates how cells adapt their shape and organization to their environment. The image was taken with a confocal microscope, which uses lasers and pinhole to capture high-resolution images at 200x magnification. This was part of a collaboration between Marist students and their French counterparts at the Cergy Paris University during their summer attachment course. "*This course demonstrates connections made in college can impact your life long-term,*" said Dr. Becuwe. "*We developed a collaborative workshop pairing Marist students with Cergy master's students to work on biology research projects using advanced microscopes. I'm thrilled that one of the images from this course won the photo competition.*"



Science Students Participate in Summer Research Opportunities



School of Science students continue to engage in high-impact summer research and internship opportunities both on-campus and across the country. Students were supported by grants, gifts, and endowments devoted to supporting faculty-mentored research at Marist, as well as externally funded grants to support their research at labs, rivers, and industries beyond our campus.

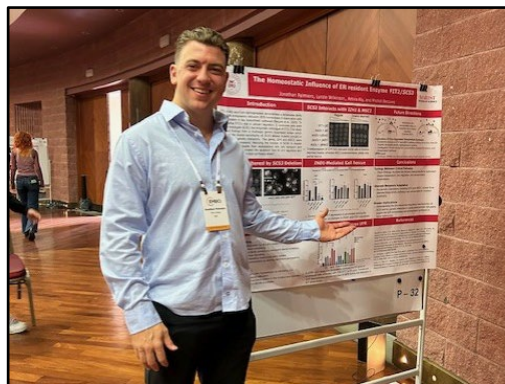
Lynzie Wilkinson '25 (funded by the *Dr. J. Richard LaPietra '54 Sponsored Student Research Fund to Enhance Excellence in Chemistry Studies*) and **Amira Aly '27** (funded by the *National Science Foundation S-STEM program, Award # 2130073*) pursued an eight-week research internship in the Summer of 2024 under the direction of [Dr. Michel Becuwe](#), Assistant Professor of Biology. Amira and Lynzie worked on the regulation of lipid homeostasis in the endoplasmic reticulum, an organelle specialized in lipid synthesis and storage in the cell. The data collected during this internship will be part of an upcoming publication focusing on the role of zinc in endoplasmic reticulum lipid homeostasis and will be presented at local, national and international conferences.

Angelica Hibbert '25 (funded by the *Simon Summer Undergraduate Research Experience*), studied the effect of *Metarhizium brunneum* on plant growth and its ability to ward off pests under the mentorship of Assistant Professor of Biology [Dr. Jennifer Han](#), and **Logan Adelson '26** worked with [Dr. Nelson Silvers](#), Lecturer of Physics, on an astronomy-related project (funded by the *NSF S-STEM program, Award # 2130073*).

Erin Novobilsky '26 received a [Polgar Fellowship](#) from the Hudson River Foundation. She investigated how additional beaver dams and pond structures, currently expanding in prevalence across the Hudson River watershed, may influence the downstream formation of harmful algal blooms. Erin collected samples from beaver pond complexes around the Hudson Valley, and then used these samples in the lab to see the community assemblage of algal types that developed, and the potential of certain types to release cyanotoxins. **Shannon Hickey '25** received funding from the Marist School of Science to study flood hydrology along the Fall Kill, providing data to help with community flooding concerns in Poughkeepsie and Hyde Park. She also completed the last phases of her related Marist Honors thesis research on local perspectives on flood risk, flood insurance, and housing security under climate change, which she is analyzing and compiling into a report to share back with local community leaders, under the advising of [Dr. Zion Klos](#), Associate Professor of Environmental Science.

Student-Mentored Research Presented at Workshop in Italy

Jonathan Palmiero '26 (pictured right) presented a research poster on the role of zinc in endoplasmic reticulum lipid homeostasis in cells at the European Molecular Biology Organization (EMBO) workshop titled, [Endoplasmic Reticulum - Guardian of Cellular Homeostasis](#) in Barga, Italy. Accompanying Jonathan was [Dr. Michel Becuwe](#), Assistant Professor of Biology, who also presented a research poster on the role of endoplasmic reticulum - mitochondria membrane contact sites on lipid homeostasis, with data acquired by **Sereen El Jamal '24** and **Rosie Walek '24**. Dr. Becuwe commented, "Many new collaborations will spark from this, and scientific editors who attended the conference are very interested in our work for future publication in their journals."



Allied Health Students Continue Success on National Licensing Exams

The [Master of Science in Physician Assistant Studies Program](#) graduated 52 students in May of 2024, all of whom passed the Physician Assistant National Certifying Examination. Marist's PA program has achieved an admirable 97.6% first-time pass rate across their first seven cohorts and a 100% overall pass rate. Twenty percent of the Class of 2025 completed their undergraduate degrees at Marist, which is the largest amount of Marist graduates to ever matriculate in one cohort!



Over 80% of the Class of 2023 graduates of the [Medical Laboratory Science Program](#) passed the American Society for Clinical Pathology Board of Certification (ASCP BOC) credentialing exam within their first year of graduating. The program boasts an overall 93.8% pass rate on the ASCP Board Exam over the past three years, and a remarkable 96.9% of graduates have found related employment and/or are continuing their education!

The [Department of Athletic Training](#) announced that 100% of the Class of 2024 passed their Board of Certification (BOC) Exam to become credentialed Certified Athletic Trainers. **The Marist Athletic Training Program is one of only nine programs, out of over 300 programs nationally, to achieve a 100% first time pass rate on the national board exam for eight of the last ten years.**



The first four cohorts of graduates (2020 – 2023) from the [Doctor of Physical Therapy \(DPT\) Program](#) have **attained an aggregate 94.3% first-time pass rate** on the National Physical Therapy Examination (NPTE).

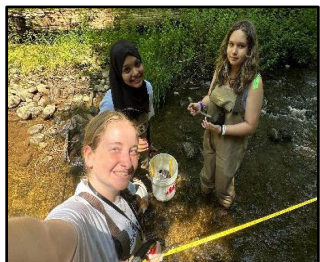
SOS Team Attends STEM Faculty Advancement Conference

In July, [Dean Alicia Slater](#), [Dr. Megan Dennis](#) – Associate Professor of Biology, [Dr. Elizabeth Godin](#) – Lecturer of Biology, and [Dr. Nelson Sivers](#) – Lecturer of Physics, were accepted to the 2024 [AAC&U Institute on Reframing Institutional Transformation to Advance Non-Tenure-Track Faculty](#). The goal of the institute was to provide a space for attendees to build their own individual and institutional capacities for identifying, understanding, and addressing the root causes of professional disparities between tenured (track) and non-tenure track STEM faculty. Focus was placed on interrogating institutional traditions, policies, and practices and setting a new course by which they all work to advance non-tenure track STEM faculty. All participating teams received expert institutional development coaching to build compelling cases for culturally responsive institutional change strategies that impact the quality of the workplace environment for non-tenure track STEM faculty.



Environmental Science Partners with Cary Institute for Youth Scientist Program

Marist continued its long-standing collaboration with the Cary Institute of Ecosystem Science to sponsor the [Mid-Hudson Young Environmental Scientist \(MH-YES\) program](#) this past summer. MH-YES is an opportunity for high school students local to Dutchess County, New York – mentored by three undergraduate students, one high school teacher, and three scientists – to work together in the field and lab to design and conduct research



projects focused on both terrestrial and aquatic components of local watersheds. The mission of MH-YES is to pique the interest of high school students in studying and working in environmental science, especially those from groups traditionally underrepresented in STEM. The high school students receive training in team-based science, data visualization, applied statistics, and science communication, and the undergraduate students, including **Erin Novobilsky '26** (in photo left, with students), receive experience in education and mentorship best practices.

Awards and Recognitions

Dr. Alicia Slater, Dean of Science and Professor of Biology, was elected to serve on the Board of Directors for the [American Conference of Academic Deans](#) and is now serving on the Executive Board for the [New York chapter](#) of the American Council on Education (ACE) Women's Network. She was also selected for the [American Academic Leadership Institute's](#) highly competitive Senior Leadership Academy, a year-long program that is co-sponsored by the Council for Independent Colleges. Dean Slater was also highlighted recently in a [feature article](#) of *Inside Marist*.



Dr. Victoria Ingalls, Professor of Biology, was honored this past May with the **Award for Academic Advising**. This award recognizes the full-time faculty member who has exhibited exceptional commitment and dedication to the academic advising experience. The award recipient will have exhibited strong accessibility to students, deep knowledge and dissemination of the Marist academic policies and programs, effective and proactive progress monitoring, and engagement in developmental advising practices. Dr. Ingalls is pictured (left) with **Ange Uwimana '17**.



The award for **Innovative Pedagogy among the Part-Time Faculty** was presented to **Donald Meltz**, part-time faculty member in the Department of Environmental Science & Policy. This award recognizes exceptional and innovative instruction and a dedication to student success from among the ranks of Marist's part-time faculty members. The award recipient demonstrates engaged and innovative approaches in the classroom as well as high-quality instruction that meets the needs of the Marist student body at the undergraduate or graduate level.

Faculty and Students Publish and Present High-Impact Research in 2023 – 2024

Students and faculty in the School of Science had another productive year of research collaborations in 2023-2024. A comprehensive list of all student and faculty publications and presentations can be found by visiting:

<https://www.marist.edu/documents/d/guest/2324-publication-presentation-list>

Chemistry Alum Lauded for Sustainable Chemistry Research

Patrick McShea '21 (BS in Biochemistry) (center, in photo below) was awarded the prestigious [Michael Gebel Award](#) at UC Irvine where he is currently a second-year graduate student. Pat's research focuses on providing

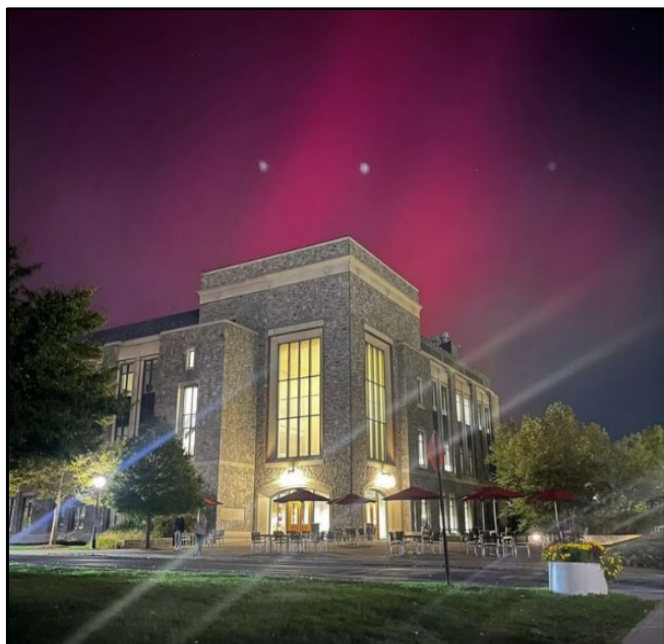


new mechanistic insights for previously undetectable organometallic intermediates with FLIM (Fluorescence Lifetime Imaging Microscopy) and comparing these findings with complementary techniques (e.g., SEM, TEM, & EDS). These new mechanistic understandings may help improve the reaction rate, efficiency, and selectivity bench-scale synthesis of pharmaceutical drug candidates. His graduate work in collaboration with others in the [Blum Group](#) has already resulted in the publication of two papers, including one in [Angewandte Chemie](#)!

Medical Laboratory Science Grads Earn Workplace Promotions

- **John Haumaier '13**, promoted to Blood Bank Supervisor at Vassar Brothers Medical Center
- **Edmund Jasewicz '12**, promoted to Microbiology Manager at Ellis Hospital (Schenectady, NY)
- **Hannah Johnson '19**, promoted to Point-of-Care Coordinator at Vassar Brothers Medical Center
- **Megan Yost '19**, promoted to Blood Bank Manager at Mid-Hudson Regional Hospital

Images from the School of Science



Student Olivia Gesler '25 captured this image of the Aurora Borealis above the Science & Allied Health Building in October 2024.



Chris Lopez '25 works with a patient as part of the Marist DPT Stretching Clinic, which is a learning opportunity for students to work with community members who have Parkinson's disease.

School of Science Undergraduate Award Winners Highlight Class of 2024

Merit Award: **Marissa Leombruno**

The Merit Award recognizes a graduating student who has completed 60–89 credits of study at Marist and has attained the highest grade point index in the class.

The Spirit of Adult Education Award: **Amber Haqu**

This award honors the unique academic commitment required by the adult student, who is often juggling their academic studies, family responsibilities, career, and community involvement. It is given to a graduating adult who has excelled in their course work; engaged in the academic process, including building relationships with faculty and peers; and demonstrated leadership both in and out of the classroom.

The Hermitage Community Service Award: **Sydney Haddad**

This award is presented to the graduating student who has compiled an impressive record of volunteer activity on- and/or off-campus, demonstrating the College's traditional values of concern for the disadvantaged and service to the community.

Alumni Leadership Award: **Avalon Johnson**

Awards are given to two graduates who exemplify the true spirit of Marist College. Recipients will have made a significant contribution to the Marist community and show promise as a loyal and supportive member of the Alumni Association.

The Mary Lou Gantert Award for Excellence in Science: **Jessica Bluit**

The Boehringer Ingelheim Award for Excellence in Scientific Research: **Tinsley Stewart**

The Glenn Marinelli Award for Excellence in Athletic Training: **Nicholas Sume**

The Barnes & Noble College Bookstores Award for Excellence in Biology: **Rosie Walek**

The Andrew A. Malloy '51 Award for Excellence in Chemistry: **Amber Haqu**

The CH Energy Group, Inc. Award for Excellence in Environmental Science: **Avalon Johnson**

The J&J Clinical Diagnostic Award for Excellence in Medical Technology: **Marissa Leombruno**



Honors Medal Recipients, Class of 2024

August Boland, BS in Biomedical Sciences
Geena Loretta Burkich, BS in Biomedical Sciences
Anthony J. Citera, Jr., BS in Biomedical Sciences
Sereen El Jamal, BS in Biomedical Sciences
Lauren Hope Fontana, BS in Biomedical Sciences
Mia Therese Hemme, BA in Biochemistry
Avalon Johnson, BS in Biology, Environmental Science
Andrew Thomas Maglaras, BS in Biomedical Sciences
Anthony Donald Perpetua, BA in Biochemistry
J Pinkans, BS in Biology
Nyssa Rajappan, BS in Biology
Garrett Smith, BS in Chemistry
Tinsley Stewart, BS in Chemistry
Isabel Marci Van Gyzen, BS in Biology
Ryan Francis Wise, BS in Biomedical Sciences



Sigma Zeta National Science and Mathematics Honors Society, Class of 2024

Basma Khaled Awadallah
Jessica Leigh Bluitt
Kaitlyn Margaret Bogucki
August Boland
Amanda Erin Brosnan
Margaret Mary Bulger
Geena Loretta Burkich
Amanda Naomi Caldarelli
Ashley N. Chieng
Anthony Joseph Citera, Jr.
Marlena Cwalina
Sarah Jessica Dill
Samantha J. Ferrante
Lauren Hope Fontana
Nicole Marie Gallagher
Benjamin Labetti Hanneman
John Patrick Ignacz
Julia Theresa Iorio
Mikaela Elizabeth Kadian
Isabella Kaloz
Nicholas Chad Koresec

Andie Elizabeth Lee
Andrew Thomas Maglaras
Madison Elizabeth Opalinski
Anthony Donald Perpetua
Nyssa Rajappan
Emili Rose Serratore
Garrett Michael Smith
Brunella Belen Tissoni
Isabel Marci Van Gyzen
Korey Arbor Weiss
Ryan Francis Wise
Amanda Jaime Zeno



Graduate Programs Represented at NY News Outlets



Students and faculty from the Physician Assistant and the Doctor of Physical Therapy Programs joined peers and colleagues in New York City this past October in an effort to promote their professions.

About the School of Science

The School of Science prepares students for successful careers in the natural and physical sciences and health professions. Students in the school benefit from top facilities, as well as opportunities for study abroad, internships, clinical rotations, and hands-on research, along with small class sizes. After graduation, our alumni are prepared to make their mark in the sciences and health professions.

To learn about giving to Marist College and the School of Science, please contact **Mike Byerley**, Associate Vice President of Development, at mike.byerley@marist.edu.

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