



**Department of
Biological Sciences**

**UWM Biological Sciences
Spring Newsletter, May 2024**

Welcome from the Chair



Welcome to the spring 2024 newsletter of the Department of Biological Sciences. We appreciate the continued support of everyone for success of the department. Since our last newsletter, Assistant Professor Nadege Gouignard was awarded the Shaw Early Career Research Award by the University of Wisconsin Milwaukee Foundation. The award is intended to advance research in the fields of biochemistry, biological science, or cancer. Furthermore, Associate Professors Madhusudan Dey and Filipe Alberto were recommended for promotion to Professor. Dr. Sonia Bardy was selected as a Dean's Fellow to serve on the dean's team next academic year. Congratulation to all!

For more details, please visit us on our platforms:

Website: uwm.edu/biology

Facebook: facebook.com/UWMBioSci/

X: twitter.com/UWMBioSci

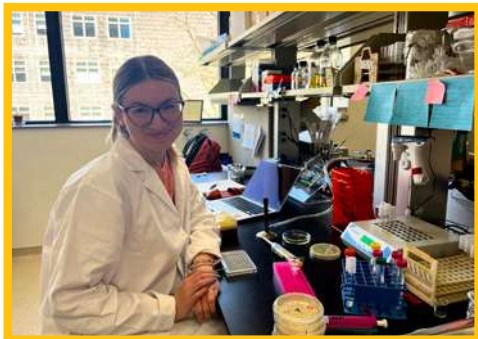
Please feel free to contact with us at biosci@uwm.edu if you have any news to share or would like to donate. We appreciate your support and look forward to hearing from you.

With best wishes!

Gyaneshwar Prasad,
Department Chair



Student Spotlight



Chloe Skinner is a Biology major and Chemistry minor who is graduating in the Fall of 2024. She has been a microbiology research assistant in Dr. Alita Burmeister's lab in the Biological Sciences Department since the Fall of 2022. In Dr. Burmeister's lab, Chloe has been working on bacteriophage resistance in *Escherichia coli*. Bacteriophage or "phage" are viruses that infect bacteria and could be a potential alternative to antibiotics. However, some bacteria can be resistant to phage. Specifically, Chloe has been researching the resistance mechanism known as mucoid and how it may impact phage therapy. She presented her research in the UWM Undergraduate Research Symposium, Riveredge Nature Center symposium, Research in the Rotunda, and the UWM Biological Sciences Symposium where she has won Best Undergraduate Poster Award in Microbiology.

She has been able to stay active in research through the SURF fellowship and Senior Excellence in Research award. Her future goals are to attend medical school to become a surgeon specifically in reconstructive surgery.

Research in the Rotunda



2024 marked the 20th anniversary of Research in the Rotunda. On March 6, outstanding undergraduate student researchers from across the Universities of Wisconsin, together with their faculty advisers, shared their research findings on a variety of important topics with legislators, state leaders, UW alumni, and other supporters in Wisconsin's Capitol Rotunda.

One of Dr. John Berges' interns in the "Freshwater @UW" program last summer (Noah Schrodt, UW-Madison, River Forest, IL) presented their work in a poster at the capitol Research in the Rotunda, "Finding Relationships Between Length, Mass, Carbon, Nitrogen, and Protein in the Invasive Crustacean *Hemimysis anomala*." To see an insert of the experience, view here: <https://www.wisconsin.edu/research-in-the-rotunda/>

Biological Sciences Association Club

The Biological Sciences Association (BSA) is a student-led organization that focuses on undergraduate student enrichment and involvement in the natural sciences.

Founded in 2022, Kailey Frank, President shared, "We aim to promote hands-on, educational opportunities to engage with the natural sciences to foster deeper understanding of, and appreciation for, the natural world. BSA's mission as an organization is to coordinate events that facilitate lasting relationships between students, professors, and experts in the field. In doing so, we hope that students re-approach their studies with newfound perspectives, passion, creativity, and knowledge to tackle tomorrow's scientific challenges. Events offered through BSA include lab skills sessions, campus garden bed planting, native seed projects, UWM Greenhouse tours, urban gardening explorations, faculty lecture and undergraduate research series, and more. All undergraduate students interested in the intricacies, complexities and fascinations of the biological sciences are welcome."

Graduate News

We are honored to welcome the following two, additional graduate students for Spring 2024:

Uyiosasere Aigbe (PhD)

Nicole Confare (MS Non-Thesis)



Graduate Student Spotlight



Gabriella (Gabby) Voit grew up in Milwaukee, WI and received her BS in Genetics from UW-Madison. She began her research journey as an undergraduate in Dr. Pelegri's lab at UW-Madison where her work contributed to two publications.

In the fall of 2021, Gabby joined the Gutzman lab to pursue a PhD in cellular and molecular biology. Her initial collaborative work, uncovering the role of extracellular matrix genes in tissue folding during zebrafish brain morphogenesis had an immediate impact. Gabby presented this work at the International Zebrafish Meeting in Montreal, Canada, and her contribution resulted in a publication in *Developmental Biology* in her first year as a graduate student.

Gabby received a Shaw Doctoral Fellowship and more recently the UWM Advanced Opportunity Fellowship to support her dissertation research which aims to uncover the biomechanical mechanisms that mediate brain morphogenesis in vertebrates during development.

Graduate Organization of Biological Sciences



The Graduate Organization of Biological Sciences (GOBS) is a registered student organization (RSO) that serves our graduate student population. President of GOBS, Claudia Rodriguez shared, "Besides hosting social events, GOBS has three main roles: welcome new graduate students in Fall, host an annual plant sale fundraiser and organize the annual Biological Sciences Research Symposium. This year, we were happy to successfully have all three of these events thanks to our four officers. Speaking of

officers, all four current GOBS officers will not be running for re-election for the 2024-2025 semester, and we are currently looking for enthusiastic graduate students to fill these roles, which are required to remain an RSO. Officer positions are President, Vice President, Treasurer and Secretary, who all work together to organize the events listed previously and social events."

If you are interested in learning more about being a GOBS officer or would like to nominate a student, please email gobs@uwm.edu.

Our Faculty and Facilities

Faculty Kudos

- Here's a fascinating interview with Ching-Hong Yang describing his innovative research to identify natural compounds, produced by microbes, that effectively control plant diseases such as citrus greening, citrus canker, and apple fire blight. The article, written by the President of the UWM Research Foundation, is worth reading. https://uwrmf.org/t3_bioscience_background/
- Provost and Vice Chancellor Andrew Daire congratulated Dr. Emily Latch in his February 2 Provost's Update: "I would like to appreciate Emily Latch (Biological Sciences) who was interviewed by the Larry Meiller Show on Wisconsin Public Radio about her research on badger ecology and genetics. Listen to the interview. Congratulations, Emily!"
- Assistant Professor Nadege Gougnard has been awarded the Greater Milwaukee Foundation Shaw Early Career Research Award.

Greenhouse



The Biological Sciences NWQ Greenhouse is home to ground-breaking NSF and USDA funded research and a unique instructional collection of over 672 different plant species from around the globe. The abundant examples of plant physiology, biodiversity, and evolution provide an ideal learning space for classes at all levels and bring biology to life, inspiring curiosity, and deeper exploration. During the Spring 2024 semester, more than 700 students from Biological Sciences and other departments including Geography, Architecture, and Art & Design utilized the greenhouse's dynamic, hands-on learning environment.

Several area high school groups including the M-Cubed program, Riverside High School, Northern Ozaukee, and others also toured this UWM treasure. To end the semester and celebrate Earth Week, the Greenhouse held its 6th Annual Open House, attended by more

than 353 guests, including 230 UWM current and former students, staff, and neighborhood residents. Many of the students had previously visited the Greenhouse for coursework and now returned to the Open House with their family and friends, showing off their newly gained knowledge. Also visiting were many families with small children. The wonder on those small faces when they fed blood worms to the *Dionaea muscipula* or crushed and sniffed the *Elettaria cardamomum* was priceless!

Research Symposium



GOBS officers were happy to host the Biological Sciences Research Symposium which was held on Friday April 12th. The event was a huge success with 10 talks and 20 poster presentations from undergraduate and graduate students in Biological Sciences. We also had over 50 attendees at the event and it was filled with amazing science and discussion. Our mascot, Frank the Bobcat also made an appearance and was happy to pose for photos. GOBS officers were able to obtain a delicious lunch from La Masa Empanadas with proceeds from the March plant sale and a generous donation from T3 BioScience. We were also happy to announce our six presentation winners, listed here:



- 1st Place Undergraduate Poster:** Katelyn Flitcroft
- 2nd Place Undergraduate Poster:** Parnian Vakili
- 1st Place Graduate Poster:** Madeline Opie
- 2nd Place Graduate Poster:** Gabriella Voit
- 1st Place (Tie) Oral Talk:** Madison Rittinger and Sara Seidita

CONGRATULATIONS to all!

Support for Undergraduate Research Fellows (SURF)

The SURF program is designed to foster faculty-student research collaborations, and, as such, they are particularly eager to fund work through which students have the opportunity to engage in thoughtful and progressively sophisticated work central to the overall research program of the principal investigator.

The Office of Undergraduate Research announced SURF Awards for Spring 2024 and we congratulate the following Biological Sciences awardees:

- Kleida Doci working with Jennifer Gutzman, “Identification of the Molecules That Regulate Tissue Forces during Zebrafish Brain Morphogenesis”
- Maja Malbasic working with An-Phu Tran, “Unraveling the Role of Rab-GTPases in LRRK2-Induced Neurotoxicity in Parkinson’s Disease”
- Andrew Pagel working with Claire De La Cova, “Modeling Noonan Syndrome Mutations in *C. elegans*”
- Hassan Richardson working with Emily Latch, “Environmental Conditions Predicting the Presence of the Critically Endangered Grenada Frog”
- Amelia Scheiber working with Jeffrey Karron, “Variation in Reproductive Success across the Flowering Season”
- Leo Vogel working with Jeffrey Karron, “Ecology of Flower Color Variation in Shooting Star”

Alum Spotlight



Veterinarian & Co-Founder, LatinX Veterinary Medical Association, Juan Orjuela ('17 BS Biological Sciences and Conservation & Environmental Science) did his independent study with Dr. Gerlinde Hoebel, worked at the Office for Undergraduate Research, and was one of Dr. John Berges' mentees in the WiscAMP program.

He also earned his DVM at the University of Guelph! He won a 2024 Graduate of the Last Decade (GOLD) Award from the UWM Alumni Association.

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