

VOL. 4 | SPRING 2022

# BIOLOGY (NUCLEO)TIDINGS

News from the Biology Department at Northeastern Illinois University



# Northeastern

ILLINOIS UNIVERSITY

Stay in touch! Email us at [biology@neiu.edu](mailto:biology@neiu.edu) with news, updates, and stories you'd like to share!



## Department Happenings

**April 6th:** Alternative Spring Break Presentations (open to all)

**April 23rd:** Annual Biomedical Research Conference for Minority Students Spring Symposium (free to attend!)

**April 27th:** #ProudToBeNEIU fundraiser

**May 6th:** Dr. John Sargon Albazi Research and Creative Activities Symposium

**May 13th:** Commencement Ceremony



If you're a current student looking for opportunities, summer internships, and more, use this QR code to check out some options!

Interview with Isaiah Thomas

### Why did you choose NEIU?

I initially came to NEIU to finish science and math prerequisites for medical school, but had the opportunity to volunteer on a research project with Dr. Schirmer and Dr. Bolterstein during the summer of 2019. The experience gave me a different perspective on my future career possibilities. Instead of leaving NEIU with the completion of my science prerequisites, I decided to attain a Biology degree from NEIU and, currently, am researching graduate school programs in Bioinformatics/ Computational Bio to attend in the Fall of 2023.

### What has been your favorite biology class so far?

Biochemistry has been my favorite Biology class to date. However, I am planning to take Genomics and Proteomics in the near future and I suspect it may take the #1 spot!

### What new method are you most excited about learning?

I am super excited about learning to clone a gene this semester. I will have two opportunities to make a gene construct in Research Skills 2 with Dr. Voisine and in Molecular Biology with Dr. Stojkovic! Hopefully, I come out an expert!



## Undergraduate Student Spotlight

**Isaiah Thomas** is a Biology major at NEIU and was recently awarded the Dr. Wamucii Njogu Outstanding Student Award!

## Graduate Student Spotlight

**Arleta Thursby** is getting her Masters degree in Biology at NEIU.



### Why are you getting a Masters in Biology?

My main reason is to be able to teach biology in community colleges. My interest in biology, and specifically human physiology, has been evolving for many years and it deepens with every human physiology-related class I've taken. A community college environment was where I started the process of my career overhaul many years ago, and I would like

to give back to these types of institutions to hopefully give others a chance to pursue their dreams.

### What is your favorite class you've taken at NEIU?

It's hard to pick just one! I am currently taking Advanced Immunology and cannot wait to learn more!

### What would you say to current undergraduates who are considering graduate studies in Biology?

If you are reasonably confident at the end of your undergraduate studies that biology is where your interests lie, graduate studies will give you a chance to dive so much deeper! Primary literature, although it can be hard to read, will make the textbook-obtained knowledge alive, letting you see the thought processes and experiments that shaped what we know today. If you have a chance to work along researchers in a lab, you will learn so much not only

about your topic of interest, but also about research techniques. In addition, a graduate degree in biology opens your doors to so many other possibilities, whether you choose to stay in academia or go on to jobs in healthcare, environment or other fields that require biological education.

## Alumni Spotlight

**James Frale** graduated with a Biology degree from NEIU in 2021.

### Tell us about your current job!

I work as a quality control analyst performing microbiological tests on starches, sugars, vegetable oils and syrups. This testing is to detect any pathogenic bacteria or mold in these products. We make almost all of our media in house, set up and incubate all test samples, as well as read and record any of the results. It's been a great experience so far that I'm very grateful for.

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## Faculty/Staff Spotlight: Dr. Sue Mungre



**Dr. Sue Mungre** is a professor in the NEIU Biology Department.

### What is your favorite part of doing science?

I enjoy working with students in the class and in my lab-

especially showing them how the science they learn relates to their everyday life. It is very satisfying to see students have that "aha" moment!

### How has your research influenced you as a teacher?

Research has helped me bring the current developments in the field into my teaching and explain to students how new material builds upon the basic concepts they learn. When students are learning new techniques, I share my

experiences in the lab over the years with them, letting them know that everybody goes through a learning process.

### What is your lab known for working on?

My lab works in two different areas. First, we explore why neuron-like cells die under diabetic conditions, which leads to neuropathy in diabetic patients. The other area is to determine the amount of antibody in mother's milk that provides protection to the infant from pathogens.

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Continued from spotlight about Dr. Sue Mungre

## Who are the students in your lab group?

Currently, I have two students, Alexa Perez and Lydia Sabbah, working in my lab. They are both working on determining at the antibody and lactoferrin level in breast milk and have presented their work in the NEIU Research and Creative Activities Symposium in 2021. Both Alexa and Lydia are great fun to work with and keep the lab lively. They plan to eventually enter a health-related field.

Continued from spotlight about James Frale

## How do you apply the skills you learned while getting your biology degree to your job?

The skills I learned while pursuing my Biology degree are applied every day I am at work. Many of the fundamentals such as pipetting, aseptic technique, dilution series, statistical analysis, etc. constantly pertain to my daily activities.

## What was your favorite class at NEIU?

My favorite class at NEIU was General Microbiology. That class was the reason I wanted to pursue a career in

microbiology.

## What do you think is important for current undergraduates to know about getting a job in Biology?

There is a huge pool for biology-related jobs and a great way to see which avenue you want to take is to do an internship. Many different opportunities from labs, hospitals, schools, businesses, all have internships for biology-related careers. It's a great way to get your foot in the door and see if this is the path you want to go down.

## Positive Feedback Loops

**Isaiah Thomas** won the Dr. Wamucii Njogu Outstanding Student Award!

**Haider Mehdi, Alexis Leach, and Mahnoor Jeerwa** participated in NEIU's Alternative Spring Break Program, along with **Dr. Beth Reinke!**

**Cassandra Ceballos** received a Graduate Research Scholars Fellowship for the Freshwater and Marine Science PhD Program at UW Madison!

**Mario Medrano** started a new job with STAT Analysis Corp!

Five biology students presented at the Louis Stokes Alliance for Minority Participation Conference and ALL won awards! Congrats to **Helena Puccini de Castro, Michelle Vargas, Jennifer Parral, Alexis Leach, and Christian Torres!**

**Rut Ortiz** will join the Pathobiology & Mechanisms of Disease PhD program at Columbia University!

**Haider Mehdi** was accepted to an internship with UIC!

**Erica Belloso** was accepted into University of Illinois at Urbana Champaign Plant Biology PhD Program on a full fellowship!

**Dr. Aaron Schirmer** was awarded an NSF grant titled "STEM Research on Non-model Genomes Network"!

**Nkosi Evans** (Class of '21) received a research fellowship to get a Masters in botany at UW-Madison!

**Viri Leon, Isaiah Thomas, and Luis Aldama** (Class of '21) visited the Linac Coherent Light Source Facility with Dr. Stojkovic!

**Cassandra Ceballos** received a Sigma Xi Research grant to help fund her Masters thesis research!

**Alexis Leach** presented at the Wisconsin Wetlands Association Conference!

## Transcriptional Activity

### Publications from NEIU Biology students and faculty

**Epiney, Derek G., Charlotte Salameh, Deirdre Cassidy, Luhan T. Zhou, Joshua Kruithof, Rolan Milutinović, Tomas S. Andreani, Aaron E. Schirmer, and Elyse Bolterstein.** 2021. "Characterization of Stress Responses in a *Drosophila* Model of Werner Syndrome" *Biomolecules* 11, no. 12: 1868.

Mitchell, Chandani, **Vada Becker**, Jordan DeLoach, Erica Nestore, **Elyse Bolterstein**, and Kathryn P. Kohl. 2022. "The *Drosophila* Mutagen-Sensitivity Gene *mus109* Encodes DmDNA2" *Genes* 13, no. 2: 312.

Cayuela, Hugo... **Beth A. Reinke** et al. 2022. "Sex-related differences in aging rate are associated with sex chromosome system in amphibians." *Evolution*.

Follow us to learn more about what is happening in Biology!

@NEIUBiology



## Become a MARC scholar!

Are you a current student interested in pursuing Ph.D. programs in the biomedical and behavioral sciences after graduation?

The MARC program is recruiting juniors and seniors. Benefits include tuition waivers, conference travel, training, and a stipend!

Contact Dr. Emina Stojkovic to apply by March 25, 2022 (e-stojkovic@neu.edu)