



CHICAGO STATE  
UNIVERSITY

Biological Sciences

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# Newsletter

## Feature Story

Welcome to the 2023-2024 academic year!

We hope you had an enjoyable summer and are ready to conquer the Fall semester.

### Chairperson's Corner

Welcome to the Fall 2023 semester. I hope you had an exciting, productive, and relaxing summer. I am happy to start the new academic year with you. Together, let us strive to build a strong sense of community in the department.

Our department graduated 12 students with B.S. and two with M.S. in the 2022-2023 academic year (page 3). For the first time, we had 20 students who participated in on and off campus summer internships at various Universities and Institutions including Northwestern University, University of Chicago, Purdue University, and the Field Museum. Also, for the first time, four of our biology students were recognized with top awards at the university, which included the Presidential Cup (Adaeze Olikagu), Outstanding Senior (Korvell Russell), Outstanding Sophomore (Valeria Vizcaino) and Graduation Speaker (Dominick George). I am so proud of the students' accomplishments. I appreciate our dedicated faculty and staff who contributed immensely to student success.

The student run club, Biological Society, participated in several activities throughout the year (page 7, 9 and 10). I encourage all students to become active member of the Biological Society and take advantage of leadership and service opportunities as resume builders. Visit the department's website news and events site to learn of student leaders (<https://www.csu.edu/bioprehealth/news.htm>).



### Announcements:

Graduation application deadline for undergraduate and graduate students is **September 29, 2023**.

**Apply to Scheinbuchs Scholarship:** The deadline is September 29, 2023, at 4:00 p.m. The requirements are a minimum cumulative grade point average of 3.0 on a 4.0 scale; has completed one full semester at CSU; can demonstrate a commitment to scholarship and achievement in Biology; are willing to volunteer as a participant in university activities; has not received the award more than once. For additional information, please contact Dr. Andrew Maselli, [amaselli@csu.edu](mailto:amaselli@csu.edu) for further information.

**Apply for paid research opportunities as an LSAMP Scholar:**  
(<https://www.csu.edu/ILSAMP/scholars.htm>).

Contact Dr. Christopher Botanga,  
[cbotanga@csu.edu](mailto:cbotanga@csu.edu).

Follow the department on social media:  
Twitter(@ChicagoStateBio), Instagram  
(chicagostatebio)

## Announcements continued:

Are you interested in a career in teaching? There is a shortage of Science Teachers in Illinois. Contact Dr. Karel Jacobs, [kjacobs@csu.edu](mailto:kjacobs@csu.edu) for more information.

Graduate students interested in graduating at the end of Fall 2023 need to upload their thesis to ProQuest by October 27, 2023. Contact Dr. Erhart, [merhart@csu.edu](mailto:merhart@csu.edu) for more information.

## Awards

### Dr. Julian Scheinbuks Scholarship

Dr. Julian Scheinbuks was a part of the Department of Biological Sciences faculty at CSU from 1989-2003. His great love was teaching and working with students. He taught various biology courses for 13 years. In 2003, he was appointed the Director of Distance Learning. Under his leadership, a small and developing operation was transformed into a successful department within the Library and Instruction Services. Upon Dr. Scheinbuks passing, he donated \$1 million dollars towards student scholarships for the department. As a memorial to Julian, the campus community has planted a native burr oak tree. A leaf from that tree is the symbol of the Scholars Program. Every year, the department gives scholarships to students through an application process, applicants are awarded based on academics and service.

### Scheinbuks Scholarship Recipients 2022-2023



**(Undergraduates \$2,000 each)**

**Ebony Banks  
Adaeze Olikagu  
Korvel Russell  
Valeria Vizcaino**

**(Graduate \$2,000)**

**Graduate Student:  
Akilah Davis**



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# Newsletter



## Congratulations 2022 to 2023 Graduates

BS: **Biology, General Biology Option**

Andrea Brown  
Dominick S. George  
Carlette Y. Johnson  
Cinderella McKinney  
Josue Puente  
Aleah T. Wilson

**Biology, PreMed/PreDent Option**

Miata K. Bracey  
Laura Giron  
Andriana L. Malone  
Adaeze Olikagu  
Korvell Russell

MS: **Biology, Applied Physiology**

Chanel Norphlet

**Biology, Environmental**

Steven Philott



## Where Are the Class of 2022-2023?

**Uzoma Emeakoroha** MS. 2021; PharmD 2023.

**Dominick S. George** BS. 2022; Started Ph.D. Program, Fall 2023 at Rochester University, NY.

**Josue Puente** BS 2023; Started Doctor of Optometry Program, Summer 2023, at Rocky Mountain School of Optometry.

**Cinderella McKinney** BS 2023; Started a Master's Program at DePaul University, Summer 2023.

**Laura Giron** BS 2023; Started Research Technician position at The Field Museum.

**Steven Philpott** MS. 2023; Started Ph.D. Program, Fall 2023, at North Carolina State University.

**Korvell Russell** BS 2023; Will start a Research Technician position at Northwestern University.

**Adaeze Olikagu** BS 2023; Scored 99% in Medical College Admissions Tests (MCAT). Adaeze is busy with the medical school application process.



# Newsletter

## The SLOAN Foundation Grant Summer Program

**Joyce Ache Gana** and **Kristy Mardis** launched the SLOAN Foundation Grant Summer Program at CSU. Students spent six weeks at CSU and three weeks at Purdue University. Gana and Mardis took students on Field Trips to STEM related workforce sites including the US-EPA, MWRD, BESI, and BIG Marsh.

11 CSU students (nine Biology and two chemistry students) participated in the Summer Program.



## The SLOAN Foundation Grant Summer Program (continued)

**Joyce Ache Gana** and SLOAN mentees engaged in Dr. Patrice Boyles' Continuing Education Summer Camp 2023 with greenhouse/pizza garden hands-on activity.



Faculty that led hands-on activities in the CSU-SLOAN Summer Program are:

**Andrew Maselli (Biological Sciences):** Light and Electron Microscopy/Pollen

**Melvin Daniels (Biological Sciences):** Microbiology/Bacteria

**Yukto "Ty" Tsang (Biological Sciences):** Cadaver/Human Anatomy

**Valerie Goss (Chemistry):** Atomic Force Microscopy

**Rob Richter (Chemistry):** Water Chemistry

**Tekleab Gala (Geography):** Remote Sensing

**Elaina Khasawneh (Math):** Data Science/Personal Finance



## Arbor Day

Dr. Karel Jacobs with others organized the Arbor Day tree-planting event on May 28, 2023.



### **Leadership in Biological Society:**

Past President: Korvell Russell

Past Vice President: Adaeze Olikagu

Current President: Vivian Cox



## Off-Campus Summer Internship Participants

The following students did off campus summer internships/programs:

1. **Luis Garcia:** Northwestern University Core Facility
2. **Madalyne Juarez:** Northwestern University Core Facility Internship
3. **Alayjah Harshaw:** The Field Museum
4. **Trinity Thomas:** Northwestern University American Heart Association Internship
5. **Idris Mohammad:** University of Chicago, Neuroscience
6. **Quiana Smith:** University of Chicago, Environmental Health
7. **Denesha Gorman:** University of Chicago
8. **Vivian Cox:** Purdue University, West Lafayette
9. **Ebony Banks:** Mental Health Internship with the VA, through IAmAbel Foundation
10. **Xavier Lyon:** The Field Museum
11. **Christopher Northington** - The Field Museum
12. **Valeria Vizcaino** - Northwestern University (NU-CURE Program)
13. **SLOAN Mentees** - Chicago State University and Purdue University
  - **Oluchukwu Akujieze**
  - **Kevin Bulley**
  - **Zyra Clark**
  - **Gabrielle Cole**
  - **Meisha Daniels**
  - **Meakaela Disanka**
  - **Marco Garcia**
  - **Tajanae Reed**
  - **Destiny Span**
  - **Kenya Williams**
  - **Kaylynn Wilson**





## The Big Marsh

**Joyce Ache Gana** and **Molly McDonough** along with Biology students participated in the Calumet Is My Backyard (CIMBY) Earth Day Event at BIG MARSH Park on April 21, 2023 promoting the Biological Sciences Department to many of the high school students in attendance.





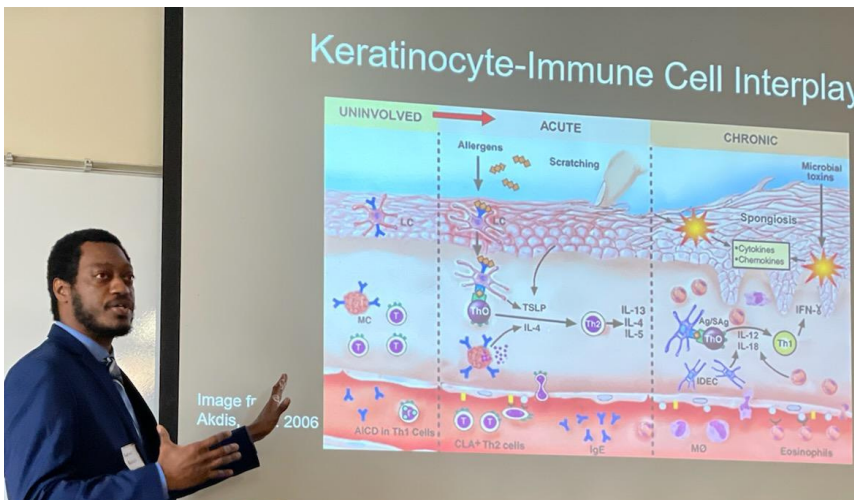
### Biological Society Leaders Presenting at Different Events



Chicago Symposium Series



Field Museum Members Night



Tri-Beta Oral Presentation



Tri-Beta Poster Presentation

#### Tri-Beta Poster Inductees

- Dominick George
- Alayjah Harshaw
- Ciarra Lindsey
- Andrianna Malone
- Adaeze Olikagu
- Taylor Reese
- Korvell Russell





## Health Sciences Summer Program

**Byeong Gyu Park, Yukto "Ty" Tsang, and Leonel Leoza** engaged the Health Professions Explorers Summer Camp 2023 students with various hands-on activities, which included light microscopy, greenhouse, and human anatomy.





## Faculty and Staff Activities

### Grants (Submitted and/or Received)

#### Grants Activities (Submitted, Approved, Mentoring)

**Dr. Botanga** received NSF award of \$695,538 to support postbaccalaureate for students to conduct research in STEM.

**Dr. Botanga** submitted two NSF proposals in December 2022 and January 2023 to the NSF, seeking \$494,540 and \$5,000,000; respectively.

**Dr. Botanga's** continuation grants are:

- Botanga, C., "NSF INCLUDES Alliance: Engineering PLUS (Partnerships Launching Underrepresented Students)," Sponsored by National Science Foundation, Federal, \$901,588.00. (July 29, 2021 - August 31, 2026).
- Botanga, C. (Co-Principal), Botanga, C. (Co-Principal), Scott, Z. (Principal), Morgan, D. (CoPrincipal), "Louis Stokes STEM Pathways and Research Alliances: The Illinois LSAMP STEM Pathway and Research Alliance (ILSPRA)," Sponsored by National Science Foundation, Federal, \$4,000,000.00. (September 1, 2019 - August 31, 2026).

**Dr. Erhart** is faculty mentor for the NIH grant "Institutional Research and Academic Development Award at the University of Chicago" (CSU – University of Chicago joint project) (faculty mentor; funded September 2023 – August 2026).

**Dr. Erhart** is faculty participant for the NSF grant "Illinois post-baccalaureate research experiences for LSAMP students (IPRELS)" (faculty mentor; funded October 2022).

**Dr. Erhart** received a CSER pilot grant in January 2023 for the topic "mouse model for hereditary spastic paraplegia."

**Dr. Maselli** submitted a collaborative National Institutes of Health, NINDS Interdisciplinary Team Science Grant titled "A projectome of the mouse brain" Co-PI (Submitted Oct. 2022).

K Acheson-Clair, S Gardner, **JA Gana**, K Mardis, P Paschou (CSU/PURDUE Universities). 2022. Partnering in Research Mentoring with Minoritized Students in STEM (PReMMiSS). SLOAN Research Foundation grant, \$249,723.00.



## Faculty and Staff Activities (continued)

### Published Abstracts and Presentations

Dominick S. George, Narayanan 'Bobby' Kasthuri; **Andrew G. Maselli**. 2022. The Density of Nuclear Pores in Neurons of Adult Mouse and Macaque Cortex. November 2022 Society for Neuroscience – Neuroscience 2022.

Dominick S. George, Narayanan 'Bobby' Kasthuri; **Andrew G. Maselli**. 2022. Cross-species Comparison of the Surface Density of Nuclear Pores in Adult Mouse and Macaque Cortical Neuron, November 2022 Annual Biomedical Research Conference for Minoritized Students (ABRCMS).

**Swier Kevin**. 2022. The folic acid receptor (*far1*) regulates early development in *Dictyostelium discoideum*. Poster, American Society for Cell Biology Annual Meeting, Washington DC, December 3-7.

**Swier Kevin**. 2022. A sabbatical report. CSU Department of Biological Sciences Seminar series. November 16, 2022.

**Dr. Botanga**. 2023. Guest Speaker, Faculty & Staff Institute Day. (January 12, 2023).

Garcia L, Juarez M, Lyons X, Lindsey Ciarra, Thomas T, Williams A, **McDonough M**. 2023. The effect of prairie restoration on *Peromyscus maniculatus* population in Chicago area parks. Poster Presentation. Illinois LSAMP SYMPOSIUM. February 24th & 25th. Lisle, IL.

Giron L, Brashear W, Dowler R, Feldheim K, Ferguson A, Maddox, **McDonough M**. 2023. Kinship and space use patterns in a Texas population of the white-backed hog-nose skunk (*Carnivora*, *Mephitidae*, *Conepatus leuconotus*). Poster Presentation. Illinois LSAMP SYMPOSIUM. February 24th & 25th. Lisle, IL.

Harshaw A, Ferguson A, **McDonough M**. 2023. Novel bat host reveals Southern African clade for alpha-coronaviruses. Poster Presentation. Illinois LSAMP SYMPOSIUM. February 24th & 25th. Lisle, IL.

Muhammad I, Kasthuri NB, Wildenberg G, **Maselli A**. 2023. A pilot study to determine if volume electron microscope data sets will be useful in visualizing changes in the mitochondria after traumatic brain injury. Poster Presentation. Illinois LSAMP SYMPOSIUM. February 24th & 25th. Lisle, IL.

Puente J, Philpott S, Torres Y, **Gana JA**. 2023. Comparing growth habits of industrial hemp strains (*Cannabis sativa*) in a greenhouse environment. Poster Presentation. Illinois LSAMP SYMPOSIUM. February 24th & 25th. Lisle, IL.



## Faculty and Staff Activities (continued)

Berry M, **Al-Ghoul**. 2023. Role of Tafazzin in apoptosis: an investigation in cardiomyocytes in vitro with Tafazzin siRNA. Illinois LSAMP SYMPOSIUM. February 24th & 25th. Lisle, IL.

Davis A, **Maselli A, Botanga C**. 2023. Analysis of (1,3;1,4)- $\beta$ -D. glucan content in barley (*Hordeum vulgare* L.) endosperm. Poster Presentation. Illinois LSAMP SYMPOSIUM. February 24th & 25th. Lisle, IL.

### Other Faculty and Staff Activities

**Dr. Chris Botanga** had a successful four-day Conference for the 2023 NSF LSAMP PIs/PDs from June 1-4, at the Capital Hilton Hotel, Washington D.C. In attendance were PIs/PDs from LSAMP Alliances across the country along with stakeholders. The conference covered many topics including best practices, funding, evaluation, sustainability, future directions, and recognition of the 20th anniversary of the NSF LSAMP Bridge to the Doctorate (BD) activity and the impact of the BD fellowship on the success of diverse STEM talent/workforce.

**Dr. Chris Botanga** and two undergraduate students attended and participated at the 13th International Undergraduate Research Symposium (IURS 13) held at Jaramogi Oginga Odinga University of Science and Technology (JOOUST), Bondo, Kenya from June 12- 17, 2023. The CSU biology student reported that this international experience was life changing for her.

**Dr. Chris Botanga** also gave the Keynote Presentation at IURS 13, in Kenya, June 2023.

**Dr. Chris Botanga** co-organized the Illinois LSAMP SYMPOSIUM held in Lisle IL (February 24 & 25, 2023).

**Dr. Molly McDonough** was a guest speaker at Darwin Day Celebration, Chicago, IL. On February 10, 2023.

**Dr. Molly McDonough** supervised six mentees (High school student and undergraduates) and one CSU graduate student in independent research projects at The Field Museum Summer 2023.

**Dr. Molly McDonough** spent one month conducting field research in Angola in the Namib Desert, Africa Summer 2023.

**Dr. Mark Erhart** participated as a panelist at the ILLSAMP on the topic Partnering with students to support stem success and inclusive learning spaces (February 24&25, 2023).

**Dr. J A Gana** participated in the recruitment mini college fair event at Malcom X College (March 22, 2023).



## ALUMNI

### Dr. Mila Kellen Marshall

- 2009 CSU BS Environmental Biology, 2022 Ph.D. University of Illinois - Dissertation: *Applying a socio-ecological justice framework for researching ecosystem services in segregated Chicago.*



**Dr. Mila Kellen Marshall** is an environmental professional and journalist with a passion for advancing sustainability in all sectors. Her passion is directed towards urban food systems in segregated cities. Her work seeks to identify and communicate the importance of healthy air, land and water for people and agricultural commodities. She pivoted towards cannabis as the industry emerged in 2019, is the Education Committee VC of the National Cannabis Industry Association, creator of the BIPOC Banking & Cannabis Summit and current editor of Cannabis Corner for Chicago News Weekly.

### Dr. Herve Nyenti

- 2014 CSU Biology M.Sc., graduated in 2023 summer with a Dr. of Clinical Laboratory Sciences degree from the University of Texas, Galveston. Herve works full time as a Technical Supervisor for blood bank and transfusion services at the University of Texas Medical Branch (UTMB) in Galveston.



### Dr. Chiamaka Uche

2018 CSU BS Biology graduate; Graduated from Ohio State Medical School in May 2023 and started residency in the Department of Anesthesiology at Washington University in St. Louis.





## Graduate Corner

### Proposal Defenses:

**Kevin Swier**; as Chair of **Richard Brown** Master's Thesis committee, along with faculty committee members (**Andrew Maselli** and **Melvin Daniels**) guided Richard through the master's thesis process to a successful Masters' thesis defense in July 2023.

**Title of thesis: "Characterization of a Dictyostelium ADP-ribosyltransferase knockout."**

**Richard Brown** accepted a position as lab technician in the Dicty Stock Center at Northwestern University.

**Joyce Ache Gana**, **Mark Erhart**, and **Andrew Maselli** were **Steven Philpott** Master's Thesis Committee members who mentored him through the master's thesis process to a successful Masters' thesis defense in May 2023.

**Title of thesis: Using Cryo-SEM and Portable High-Performance Liquid Chromatography to Measure Variations in Trichome Morphology and Density compared to Cannabinodiolic Acid in Cannabis sativa L.**

**Steven Philpott** was admitted to the Ph.D. Programs at Cornell University and North Carolina State University. Steven accepted the NC State University Provost's Doctoral Fellowship and starts his Ph.D program this Fall 2023.

**Joyce Ache Gana**, **Walid Al-Ghoul**, **George Smith Jr.** are **Nicholas Moody** Master's Thesis Committee members who guided him to give a department Thesis Progress Report Seminar in July 2023.

**The title of the Masters' Progress Report Seminar: Exploring Polycystic Ovary Syndrome in African American Women.**

**Nicholas Moody** was accepted to do a summer research program at Northwestern University but later decided to pursue a summer program at the University of Chicago Hospital.

### Retirement:

**Mr. Darryl Frazier**, Animal Facility Lab Technician, Retired May 2023.

**Dr. Nicholas Halm-Lutterodt**, Full-Time Lecturer, Retired May 2023.

### Appointments:

**Dr. Megan Garfinkel** - came to CSU as an Assistant Professor, Tenure Track Faculty Member, August 2023. Dr. Garfinkel will be teaching Ecology and Biometrics Fall 2023.

**Mr. Leonel Loeza** - was hired as a Natural Science Laboratory Assistant III, June 2023. Mr. Loeza will be working in the Animal Facility with Dr. Erhart and he will also be working in the Greenhouse.