

THE CHI BETA PHI RECORD



2024-2025

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The Chi Beta Phi Record is published annually by the Grand Chapter of the Chi Beta Phi National Science Honorary and is the official publication of Chi Beta Phi.

Editor: Michelle Mabry

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CHI BETA PHI

Is a national science honorary whose purpose is to promote interest in science and give recognition to scholarly attainment in and outstanding contributions to the fields of science.

Scientia Omnia Vincit

SCIENCE CONQUERS ALL

Chi Beta Phi Chapters

Chapter	Year	Location
Alpha	1916	Randolph-Macon College, Ashland, VA
Beta	1921	The College of William and Mary, Williamsburg, VA
Gamma	1921	Hampden-Sydney College, Hampden-Sydney, VA
Delta	1921	Emory University, Atlanta, GA
Epsilon	1923	Morris Harvey College, Barboursville, WV (now University of Charleston, Charleston, WV)
Zeta	1925	Davis & Elkins College, Elkins, WV
Eta	1925	Presbyterian College, Clinton, SC
Theta	1925	Wofford College, Spartanburg, VA
Iota	1925	University of Alabama, University, AL
Kappa	1925	Marshall University, Huntington, WV
Lambda	1925	West Virginia Institute of Technology, Montgomery, WV (now West Virginia University Institute of Technology, Beckley, WV)
Mu	1926	Wilmington College, Wilmington, OH
Nu	1928	Furman University, Greenville, SC
Xi	1929	University of Buffalo, Buffalo, NY
Omicron	1930	Centre College, Danville, KY
Pi	1930	Concord College (now Concord University), Athens, WV
Rho	1935	West Liberty State College (now West Liberty University), West Liberty, WV
Sigma	1935	Austin College, Sherman, TX
Tau	1935	Southwestern College (now Rhodes College), Memphis, TN
Upsilon	1940	University of North Carolina Chapel Hill, Chapel Hill, NC
Phi	1947	Memphis State University (now University of Memphis), Memphis, TN
Chi	1948	Columbia College, Columbia, SC
Psi	1948	Bridgewater College, Bridgewater, VA
Omega	1948	Lynchburg College (now University of Lynchburg), Lynchburg, VA
Alpha Alpha	1951	Parsons College, Fairfield, IA (college now closed)
Alpha Beta	1952	Lenoir-Rhyne College (now Lenoir-Rhyne University), Hickory, NC
Alpha Gamma	1953	East Carolina University, Greenville, NC
Alpha Delta	1953	Franklin College, Franklin, IN
Alpha Epsilon	1954	Keuka College, Keuka Park, NY 14478
Alpha Zeta	1955	William Carey College (now William Carey University), Hattiesburg, MS
Alpha Eta	1957	Newberry College, Newberry, SC
Alpha Theta	1963	Indiana State University of Pennsylvania, Indiana, PA
Alpha Iota	1964	Glenville State College (now Glenville State University), Glenville, WV
Alpha Kappa	1964	Athens State College (now Athens State University), Athens, AL
Alpha Lambda	1967	Whitworth College, Brookhaven, MS (college now closed)
Alpha Mu	1968	Alderson-Broadus College (Alderson-Broadus University; now closed), Philippi, WV
Alpha Nu	1968	Spalding College (now Spalding University), Nazareth, KY
Alpha Xi	1969	St. Francis College, Brooklyn, NY

Alpha Omicron	1969	North Carolina Wesleyan College, Rocky Mount, NC
Alpha Pi	1970	Rio Grande College (now Rio Grande University), Rio Grande, OH
Alpha Rho	1973	Arkansas College (now Lyon College), Batesville, AR
Alpha Sigma #1	1932	Agnes Scott College, Decatur, GA
Alpha Sigma #2	1975	Molloy College, Rockville Centre, NY (now Alpha Sigma)
Alpha Tau	1984	Rust College, Holly Springs, MS
Alpha Upsilon	1985	Shenandoah College (now Shenandoah University), Winchester, VA
Beta Sigma	1935	University of Alabama, University, AL
Gamma Sigma	1934	Marshall University, Huntington, WV
Delta Sigma	1937	Davis & Elkins College, Elkins, WV
Epsilon Sigma #1	1939	University of Charleston, Charleston, WV (now Epsilon)
Epsilon Sigma #2	1965	State University of Oneonta, Oneonta, NY (now Epsilon Sigma)
Zeta Sigma	1939	Furman University, Greenville, SC
Eta Sigma	1939	Concord College (now Concord University), Athens, WV
Iota Sigma	1941	Radford College (now Radford University), Radford, VA
Kappa Sigma	1945	Mary Washington College (now The University of Mary Washington), Fredericksburg, VA
Theta Sigma	1941	Limestone College Gaffney, SC
Alpha Phi	2012	University of Mobile, Mobile, AL
Alpha Chi	2015	University of Colorado-Boulder, Boulder, CO

GRAND CHAPTER OFFICERS 2025-2027

PRESIDENT

Dr. Shalika Silva
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HISTORIAN/MARSHALL

Vacant

www.chibetaphi.org

75th Chi Beta Phi National Conference
Zeta Chapter, Host
Davis & Elkins College

8:30 – 9:00	Registration Eshleman Science Center 4 th floor lobby Refreshments Eshleman Science Center, Room 412
9:00	Session I Eshleman Science Center Room 400
10:00 – 10:30	Committee Meetings
10:30 – 11:00	Break Eshleman Science Center, Room 412
11:00- 11:30	Keynote Speaker Eshleman Science Center, Room 400 “A brief history of Zeta Chapter on its centennial” Michelle Mabry
12:00 – 12:45	Lunch Eshleman Science Center Room 412
1:00 – 1:30	Session II Eshleman Science Center, Room 400 Conclusion of old business New business Awards Committee Report National Officer Elections
1:30-	Session III Research Presentations and Posters Presentations: Eshleman Science Center, Room 400 Posters: Eshleman Science Center, 4 th floor hallway Presentation Committee deliberation Award announcements
Adjournment	

Roll call of chapters and proxies

Chapter	Chapter Report	Delegate or Proxy
Alpha	no	
Gamma	Yes	Larry Baker
Epsilon	Yes	Ashton Dean
Zeta	Yes	Shawn Stover
Rho	No	
Kappa Sigma	Yes	Ridwan Oloyede
Phi	No	
Chi	No	
Alpha Beta	Yes	Skyler Davis
Alpha Delta	Yes	Ariona Plumley
Alpha Epsilon	Yes	Nathanial Johnson
Alpha Zeta	No	
Alpha Eta	No	
Alpha Iota	Yes	Wenwen Du
Alpha Xi	No	
Alpha Rho	No	
Alpha Sigma	Yes	Rajan Adheji
Alpha Phi	No	
Alpha Tau	No	
Alpha Chi	No	

Minutes of the Chi Beta Phi 75th National Conference

The meeting was called to order by Shawn Stover at 9:04 am by providing an opening welcome. We then proceeded to the roll call of chapters, chapter reports, and proxy assignments. The national officers in attendance then gave brief reports: the vice president said that two Meadors grant applications were received and approved since the last national conference and the secretary stated that she worked on updating the website, preparing the Record, and assisting with organization of the national conference. The president and treasurer could not attend due to unexpected events. We then asked for volunteers to be on the presentation, award, and election committees.

The committees met briefly before lunch, and the awards committee reported to the secretary. We were able to move the agenda ahead of schedule with the keynote address "A brief history of Zeta Chapter on its centennial" and lunch early.

Oral presentations and posters followed in the afternoon. The presentation committee met afterwards and reported to the secretary. The afternoon concluded with awards announcements; there was no new business or old business discussed. All current national officers were reelected to another two year term.

Awards:

- Outstanding chapter: Epsilon, University of Charleston
- Most improved chapter: Kappa Sigma, University of Mary Washington
- Blackwell distance award: Alpha Iota, Glenville State University
- Host chapter: Zeta, Davis & Elkins College
- Outstanding advisor: Michelle Mabry, Zeta, Davis & Elkins College

Presentations:

- Oral 1st place Jaden Bender, "Isolation of Outer Membrane Vesicles as the Potential Method of Transport of the Bacterial Genotoxin Colibactin" Zeta Chapter
- Oral 2nd place Nathaniel Addai Gyarteng "Unlocking Secrets — The Story and Science of Cryptography" Alpha Iota Chapter
- Poster 1st place Ashton Dean "The Role of N-Myc Downstream Regulated 1 (NDRG1) in clear cell Renal Cell Carcinoma" Epsilon Chapter
- Poster 2nd place Trang N. Bui "Dielectrophoretic sorting of differentiated stem cells for tissue regeneration." Epsilon Chapter

At the end of the meeting, Zeta chapter was presented with a wooden plaque of the Chi Beta Phi seal in gratitude for hosting. The meeting was adjourned at 2:00.

Respectfully submitted,

Michelle Mabry, Ph.D.

National Secretary, Chi Beta Phi

**The 75th Chi Beta Phi National Conference
Host Zeta Chapter
Davis & Elkins College
October 25, 2025**



The newly-constructed Eshleman Science Center, 1973

A private college of liberal arts and professional studies, Davis & Elkins values curiosity and thoughtfulness, while fostering social, emotional, spiritual and physical well-being. Toward those ends, the College provides a friendly and supportive environment for curious, engaged and freethinking students of diverse backgrounds. We emphasize “hands-on,” experiential learning through internships, practica, service projects, field research, travel and study abroad programs, and classes that explore experimental subjects in unexpected locales. Some of our finest students arrive without direction only to find their path at D&E, thanks to the opportunities for intellectual growth that abound on our campus. These opportunities extend beyond the classroom. As one of the East Coast’s premier mountain colleges, D&E offers unparalleled access to winter sport

centers and other forms of extracurricular recreation: camping, biking, canoeing, hiking, skiing and snowboarding. Safe and supportive, stimulating and friendly, Davis & Elkins College encourages students to approach their adventure in education as a journey of self-discovery.

Keynote Address: “A brief history of Zeta Chapter on its centennial”

Michelle Mabry, Ph.D., Professor of Biology, Davis & Elkins College

Zeta Chapter Co-advisor, Chi Beta Phi National Secretary.

The Zeta Chapter of Chi Beta Phi at Davis & Elkins College celebrated 100 years of science, scholarship, and a surprising amount of chaos- in the best possible way.

Founded in 1925 after a chance hunting trip sparked interest in the national science honorary, Zeta quickly became a major part of campus life. Over the decades, members built observatories, sponsored variety shows, improved science facilities, and even helped create the Talbott Nature Walk. Early photos showed students doing classic hands-on science: dissecting sharks, studying chemistry, investigating centrifugal force, and proudly posing in lab coats with very serious expressions.

The presentation highlighted plenty of unforgettable moments. There was the merger of the men’s and women’s chapters in the 1940s, a peak membership boom in the late 1940s, and some truly wild mid-century initiation traditions involving lab coats, test tubes, carved apples, and- somehow- a goldfish carried around all day. Science was clearly rigorous, but apparently also weirdly entertaining.

Then came one of the most dramatic moments in campus science history: the 1956 fire in Albert Hall of Science, caused by lightning that occurred during final exams. Historic photos of the building engulfed in flames served as a reminder that the chapter has endured through both celebration and catastrophe. Thankfully, science at D&E rebuilt and continued to grow.

The later decades brought the construction of the Eshleman Science Center, more research opportunities, national conference attendance, and continued student leadership in the sciences. And while the equipment and buildings changed, the spirit of Zeta stayed remarkably consistent: curiosity, community, and enthusiasm for discovery.

The presentation ended by bringing things full circle- today’s Zeta members are still doing what science students do best: conducting research, presenting posters, serving the community, supporting one another, and occasionally just having fun with science and math. Most importantly, Zeta alumni continue to go on to impressive careers and often return to inspire the next generation.

One hundred years later, Zeta remains proof that science at D&E is not just about labs and lectures- it's about building a lasting community of curious people who ask good questions, work hard, and occasionally carry a goldfish in the name of tradition. Here's to the next century.

CHAPTER REPORT

Chapter: **Gamma Chapter**

Dates of chapter report: October 21st, 2025

Mailing Address:

We don't have a unique mailing address, but mail can be sent to our advisor at the chemistry department at Hampden-Sydney College.

Advisor(s) and email addresses: Dr. Herbert J. Sipe, Jr. (hsipe@hsc.edu)

Current officers and email addresses:

- President: Seth Spickard (spickards26@hsc.edu)
- Vice-President: Jacob Messinger (messingerj27@hsc.edu)
- Secretary-Treasurer: Austin Apesa (apesaa27@hsc.edu)

Current number of members:

- Student: 29
- Faculty: 3

Please add any additional information or comments below.

The chapter met last semester to elect new members on March 4th and held an initiation ceremony and elections on March 27th with a makeup initiation ceremony on April 29th.

CHAPTER REPORT

Chapter: Epsilon (University of Charleston)

Dates of chapter report: Fall 2024 – Spring 2025

Mailing Address:

Deborah Amos

2300 MacCorkle Avenue, SE, Charleston, WV 25304

Advisor(s) and email addresses:___

Dr. Deborah Amos: deborahamos@ucwv.edu

Dr. Mark Watson: markwatson@ucwv.edu

Current officers and email addresses:

- President: Budur Rashrash (budurrashrash@ucwv.edu)
- Vice-President: Abigail Anderson (abigailanderson@ucwv.edu) ___
- Secretary: Ituria Kelley (Ituriakelley@ucwv.edu) ___
- Treasurer: Ashton Dean (avadean@ucwv.edu) ___
- Advertising Officer: Alyssa Gabbert (alyssagabbert@ucwv.edu) ___

Officers for next year if determined (Current Fall 2025 – Spring 2026 Officers):

- President: Ashton Dean (avadean@ucwv.edu) ___
- Vice-President: Trang “Moon” Bui (trangbui@ucwv.edu)
- Secretary: Brandon Alderson (brandonalderson@ucwv.edu)
- Treasurer: Meredith Frame (meredithframe@ucwv.edu)
- Advertising Officer: Macey Smith (maceysmith@ucwv.edu) ___

Current number of members:

- Students:18
- Faculty: 2
- Pledges: None
- Active alumni: 1_

Frequency of meetings: ____

Once every two weeks alongside a special event (usually community service based) once a month.

Function or purpose of meetings and descriptions:

☒ Chapter business

☐ Fund raising

☒ Social ____

☐ Presentations

☐ Conference planning

☐ Other ____

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

None attended as part of a chapter meeting.

Social activities of chapter:

September 2024-Members went out to eat with some of the Natural Sciences faculty in order to get to know each other better for the upcoming semester. This helped to create an environment where students would not be as afraid to ask for help later in the school year.

October 2024- Groups of students went out a week prior to Halloween and passed out fliers for "Trick or Treat for Canned Goods" (This has become an annual tradition for our chapter). Fliers informed local residents that Chi Beta Phi members would be collecting canned goods during trick or treat. Students had a lot of fun dressing up, collecting over 90 non-perishable items, and sending them to a local shelter for those in need.

November 2024- Members went to the Ronald McDonald house to cook a meal for families staying at the time. Some parts of the meal were made using a few of the canned goods collected from "Trick or Treat for Canned Goods". Some of the canned goods were also collected from donation bins set up on campus. This acted as good community service project, while also acting as a bonding experience for members.

December 2024- Chi Beta Phi hosted a study session for finals week that also acted as a Christmas party. Members wore Christmas attire and food was ordered for the students in attendance. Along side studying, members also wrote Christmas cards to faculty.

February 2025- Chi Beta Phi purchased items to make valentines bags for young children in the hospital for Valentine's Day (same as last year). Bags included a hand-written Valentine, stuffed animal, candy (suitable for those with allergies), and much love. Items were delivered by one member for the good of the group due to hospital procedures to protect the children from potential bacteria/viruses.

March 2025- Members went to a local high school to preform science experiments with the students. These experiments were based around the specific class that was visited. In this case, all of the experiments were physics-based. This acted as an opportunity to directly impact teens in the community by being able to perform experiments they would not have been able to otherwise do.

Also in March, the Epsilon chapter hosted an induction for new members. This was conducted alongside a bonfire, where members were able to have s'mores after the induction.

April 2025- Chi Beta Phi hosted a graduate school panel, where UC alumni that are currently in a medical-based graduate school (MD, Pharm, PA, etc) returned to campus to give advice to current students. The alumni each gave an introduction to the entire group before they split off so that there was one alumni per table. Then about 5 current students would choose a table to go to and discussion in a small group with an alumni. This allowed for more personal interactions and questions to be asked. Then after 10-15 minutes, groups were rotated. This event was available to the entire school.

In April, the Epsilon chapter also ran another science experiment at a different local high school. This experiment was for a biology class, and the members helped students to perform a gel electrophoresis experiment. This went extremely well and will be an annual tradition to visit this specific school.

Honors awarded to chapter members:

No national Chi Beta Phi honors presented.

Other chapter activities and descriptions:

☐ Efforts to reactivate a chapter or establish a new one

☐ Fund raising

☒ Service to school (include any awards by chapter)

☒ Service to community

☐ Trips or other activities

Please add any additional information or comments below.

Our chapter was extremely satisfied with how active we were this year and will maintain this level of activating in the upcoming years. Our goal is to maintain this level of activity to hopefully be recognized by the national organization as an outstanding chapter.

CHAPTER REPORT

Chapter: Epsilon (University of Charleston)

Dates of chapter report: Fall 2023 – Spring 2024

Mailing Address:

Deborah Amos

2300 MacCorkle Avenue, SE, Charleston, WV 25304

Advisor(s) and email addresses:___

Dr. Deborah Amos: deborahamos@ucwv.edu

Dr. Mark Watson: markwatson@ucwv.edu

Current officers and email addresses:

- President: Morgan Hoppe (morganhoppe@ucwv.edu)
- Vice-President: Erik Ulvaeng (erikulvaeng@ucwv.edu)
- Secretary: Grace Estep (graceestep@ucwv.edu)
- Treasurer: Abigail Anderson (abigailanderson@ucwv.edu) ____

Officers for next year if determined:

- President: Budur Rashrash (budurrashrash@ucwv.edu)
- Vice-President: Abigail Anderson (abigailanderson@ucwv.edu) ____
- Secretary: Ituria Kelley (Ituriakelley@ucwv.edu) ____
- Treasurer: Ashton Dean (avadean@ucwv.edu) ____
- Advertising Officer: Alyssa Gabbert (alyssagabbert@ucwv.edu) ____

Current number of members:

- Student:14
- Faculty: 2
- Pledges: None
- Active alumni: 1____

Frequency of meetings: ____

Once every two weeks.

Function or purpose of meetings and descriptions:

☒Chapter business

☐Fund raising

☒Social ____

☐Presentations

☐Conference planning

☐Other ____

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

None attended as part of a chapter meeting.

Social activities of chapter:

October 2023- Groups of students went out a week prior to Halloween and passed out fliers for "Trick or Treat for Canned Goods." Fliers informed local residents Chi Beta Phi members would be collecting canned goods during trick or treat. Students had a lot of fun dressing up, collecting over 70 non-perishable items, and sending them to a local shelter for those in need.

November 2023- Members wrote Christmas cards to the Recovery House which is a religiously funded haven for individuals who have been addicted to drugs/alcohol to receive treatment and abide in a location away from their temptations. Christmas cards were given and later a sock drive was organized and carried out. It may sound odd, but clean and suitable socks were in need at the time.

February 2024- Chi Beta Phi purchased items to make valentines bags for young children in the hospital for Valentine's Day. Bags included a hand-written Valentine, stuffed animal, candy (suitable for those with allergies), and much love. Items were delivered by one member for the good of the group due to hospital procedures to protect the children from potential bacteria/viruses.

March 2024- Chi Beta Phi members organized a drive /collected clothes for adults and children in need within the Charleston community. To the members' surprise, over 4 barrels were collected through ~1 month. Clothes were sorted bi-weekly and then happily received and made available to the community through a local organization.

Entire Year- Tab collection for the Ronald McDonald House (RMH). Chi Beta Phi has strived to get UC involved in collecting tabs the organization with much success. This year, we will expand to the residence halls once official approval has been given.

Honors awarded to chapter members:

No national Chi Beta Phi honors presented. —

Other chapter activities and descriptions:

☐Efforts to reactivate a chapter or establish a new one

☐Fund raising

☒Service to school (include any awards by chapter)

☒Service to community

☐Trips or other activities

—

Please add any additional information or comments below.

CHAPTER REPORT Zeta

Chapter report for 2023 through 2025.

Mailing Address Davis & Elkins College 100 Campus Dr. Elkins, WV 26241

Advisor – Michelle Mabry

Email Address mabrym@dewv.edu

Shawn Stover

stovers@dewv.edu

Current Officers:	Name	Email address
President	_____	
Vice-President	_____	
Secretary	_____	
Treasurer	_____	
Other	_____	

Officers for next year if determined:

President	_____
Vice-President	_____
Secretary	_____
Treasurer	_____
Other	_____

Current number of members

student 4 faculty 2 pledges _____ active alumni _____

Frequency of meetings: 1-2 times a semester

Function or purpose of Meetings:

chapter business ☒ fund raising ☒ social ☒
presentations _____ conference planning ☒ other _____

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

- Sponsor a speaker each spring for the Biology, Environmental Science, and Sustainability Forum. The campus community is invited to attend.

Activities relative to the Annual Theme:

Social Activities of Chapter:

- Sponsored 5th and 6th annual Pi Day dessert bar at the college cafeteria



Honors Awarded to Chapter Members:

- Carter McKenna graduated *Summa Cum Laude* 2025
- Dacey Arbogast graduated *Magna Cum Laude* 2025
- Cyrena King and Victoria Sturm graduated *Cum Laude* 2025
- Olivia Cook received a departmental academic achievement award 2025
- Victoria Sturm received the American Chemical Society Junior and the Outstanding Senior Student Life awards 2025
- Multiple members on the Dean's and President's lists
- Shelby Craig, Mia Ely, Kyle Hawthorne, and Gabriele Pealer graduated *Cum Laude* 2024
- Cyrena King, Dacey Arbogast, and Victoria Sturm received departmental academic achievement awards 2024
- Mia Ely received the Outstanding Senior Student Life Award 2024
- Several members participated in WV-INBRE internships

Other Chapter Activities:

Efforts to reactivate a chapter or establish a new one:

Fund raising

Service to school (include any awards by chapter)

Service to community

Adopt-A-Highway roadside cleanups



Trips or other activities

Please add any additional information or comments below.

- We typically invite 20-25 eligible members to join in the fall.
- 2025 is the Zeta Chapter centennial, so we're looking forward to celebrating at the national conference in October.
- Awarded Outstanding Chapter and Most Improved Chapter at the 2023 Chi Beta Phi conference.

CHAPTER REPORT - Kappa Sigma Chapter

Chi Beta Phi National Conference

Saturday October 15th,

Chapter report for October 2022-October 2023

Mailing Address:

Randall Reif
Jepson Science Center
University of Mary Washington
1301 College Avenue
Fredericksburg, VA 22401

Current Officers:

Incumbent Advisors:

Randall Reif
rreif@umw.edu

April Wynn
awynn@umw.edu

President:

Kaitlin Saal
ksaal@mail.umw.edu

Vice President:

Hannah Lee

hlee3@mail.umw.edu

Events Coordinator/Faculty Award Chair:

Vacant

Treasurer:

Vacant ____

Current number of members:

Students 22 Faculty 2 Inductees 8 Active Alumni 0

Frequency of meetings: ---Monthly

Function or purpose of meetings:

- At each meeting, the officers go over chapter rules and regulations.
- The officers address how to stay in good standing with the chapter.
- Each student makes sure to fill out the attendance forms and any new meeting opportunities and activities are introduced.

Social activities of chapter:

- Aside from the monthly meetings, chapter members have participated in various social events throughout last year.

- Every month, there were 1-2 Physics and Chemistry colloquiums with guest speakers where members had a chance to meet and discuss different topics.
- Chi Beta Phi also co-hosted a University wide “Women in Stem” event, where students and professors could discuss how the female presence in the field has evolved over time.
- Members had the chance to connect with their faculty and peers during the Professor Picnic as well as the Physics Club telescope nights.
- When new biology and physics faculty members were being hired last year, members had the chance to attend hiring lectures.
- The club held several powerpoint STEM nights to promote the collaboration between different STEM fields.

Honors awarded to chapter members:

Induction Ceremony for new Inductees: April 20th, 2023

Award Ceremony for graduating seniors: April 20th, 2023

Most Active Senior of the Kappa Sigma Chapter of Chi Beta Phi – Addison Norden

Service to school

- Addie Norden, who was most active as a senior in the chapter, was given a pin for the most service to the school.
- Many students who are part of the chapter spend significant time volunteering and tutoring other groups of students across campus.

Service to community

- STEM Night volunteering: members were able to volunteer at a STEM night put on by our school's Optica chapter at Anne E Moncure Elementary School.

Members conducted and explained demos of fun science experiments to the elementary school students.

- Hospital Volunteering: Members volunteer to perform administrative work on the inpatient wards and serve as liaisons between the patients and medical staff.
- Moss Free Clinic: Members volunteer to be either a medical screener or medical scribe at our local free outpatient clinic.
- Emergency Services: Members volunteer as paramedics and volunteer for a rescue squad.

Research Conducted by Members

- Summer Science Institute: Students participate in full-time, individual research over the summer months.
- Research Works:
 - “Knockdown of PVR and its Relation to DM1 Muscle Wasting in *Drosophila*” conducted by Madeline Brunt
 - “Characterization of *Toxoplasma gondii* Calcium regulator proteins TGGT1_253640 and TGGT1_222060 for *Toxoplasma gondii* growth and invasion” conducted by Gabriella Nguyen
 - “The Effect of Myoglianin Knockdown on DM1 Symptoms in *Drosophila*” conducted by Charlotte Russell
 - “The Changes of TOB in Response to Chronic Social Stress” conducted by Hannah Stottlemeyer
 - “The Relic Abundance of Dark Matter and Indirect Detection” conducted by Abigail Swanson
 - “The effect of Procrastination and Social Jet Lag on Chronotype” by Sofia Taylor

CHAPTER REPORT - Kappa Sigma Chapter

Chi Beta Phi National Conference

Monday March 9th, 2025

Chapter report for October 2023-October 2024

Mailing Address:

Randall Reif
Jepson Science Center
University of Mary Washington
1301 College Avenue
Fredericksburg, VA 22401

Current Officers:

Incumbent Advisors:

Randall Reif
rreif@umw.edu

April Wynn
awynn@umw.edu

President:

Emma Jones
ejones23@mail.umw.edu

Vice President:

Carleigh Wood

cwood4@mail.umw.edu

Events Coordinator/Faculty Award Chair:

Mallory Thompson

mthomp@mail.umw.edu

Treasurer:

Vacant ____

Current number of members:

Students 10 Faculty 2 Inductees 21 Active Alumni 0

Frequency of meetings: ---Monthly

Function or purpose of meetings:

- At each meeting, the officers go over chapter rules and regulations.
- The officers address how to stay in good standing with the chapter.
- Each student makes sure to fill out the attendance forms and any new meeting opportunities and activities are introduced.

Social activities of chapter:

- Aside from the monthly meetings, chapter members have participated in various social events throughout last year.

- Every month, there were 1-2 Physics and Chemistry events with guest speakers where members had a chance to meet and discuss different topics.
- Chi Beta Phi members also attended events such as Red Cross blood drives with other groups such as the UMW Pre-Health Society and American Chemical Society.

Honors awarded to chapter members:

Induction Ceremony for new Inductees: April 23rd, 2024

Award Ceremony for graduating seniors: April 23rd, 2024

Most Active Senior of the Kappa Sigma Chapter of Chi Beta Phi – Madeline Brunt

Service to school

- Madeline Brunt, who was most active as a senior in the chapter, was given a pin for the most service to the school.
- Many students who are part of the chapter spend significant time volunteering and tutoring other groups of students across campus.

Service to community

- STEM volunteering: members were able to volunteer at a Red Cross Blood drive in order to donate blood or help other members of the community to donate blood.
- Hospital Volunteering: Members volunteer to perform administrative work on the inpatient wards and serve as liaisons between the patients and medical staff.
- Moss Free Clinic: Members volunteer to be either a medical screener or medical scribe at our local free outpatient clinic.
- Emergency Services: Members volunteer as EMTs and volunteers for a rescue squad.

Research Conducted by Members

- Summer Science Institute: Students participate in full-time, individual research over the summer months.
 - Projects include:
 - Iaroslavna Kovalenko - "Synthesis of Cyclen - an Artificial Carbonic Anhydrase for Reduction of Carbon Dioxide"
- Research Works: Students work in collaboration with various faculty members and peers to conduct research throughout the school year.
 - Field include:
 - Neuroscience
 - Genetics
 - Muscle Dystrophy
 - Biochemistry
 - Cancer

CHAPTER REPORT - Kappa Sigma Chapter
Chi Beta Phi National Conference
Monday March 13th, 2025
Chapter report for October 2024-October 2025

Mailing Address:

Randall Reif
Jepson Science Center
University of Mary Washington
1301 College Avenue
Fredericksburg, VA 22401

Current Officers:

Incumbent Advisors:

Randall Reif

rreif@umw.edu

April Wynn

awynn@umw.edu

President:

Carleigh Wood

cwood4@mail.umw.edu

Vice President:

Jessica Bronski

jbronski@mail.umw.edu

Events Coordinator/Faculty Award Chair:

Angelina Nguyen

anguyen3@mail.umw.edu

Treasurer:
Vacant

Current number of members:

Students 27 Faculty 2 Inductees 20 Active Alumni 0

Frequency of meetings: Monthly

Function or purpose of meetings:

- At each meeting, the officers go over chapter rules and regulations.
- The officers address how to stay in good standing with the chapter.
- Any new meeting opportunities and activities are introduced.
- Each student makes sure to fill out the attendance forms to verify participation

Social activities of chapter:

- Aside from the monthly meetings, chapter members have participated in various social events throughout last year.
- Chi Beta Phi hosted a talk with a UMW faculty member, who discussed her decision between an MD and a PhD and elaborated on her experience obtaining a PhD
- Chi Beta Phi hosted a STEM trivia night for the members
- Every month, there were 1-2 Physics, Biology, and Chemistry events with guest speakers where members had a chance to meet and discuss different topics.
- Chi Beta Phi members also attended events such as Red Cross blood drives with other groups such as the UMW Pre-Health Society and American Chemical Society.

Honors awarded to chapter members:

Induction Ceremony for new Inductees: April 24th, 2025

Award Ceremony for graduating seniors: April 24th, 2025

Service to school

- Many students who are part of the chapter spend significant time volunteering and tutoring other groups of students across campus.
- For example, Iaroslavna Kovalenko volunteered at Mary Washington's "Titration Tournament" fostering participation in Chemistry

Service to community

- General STEM volunteering:
- Red Cross Blood Drives: Members help other members of the community to donate blood.
- Hospital Volunteering: Members volunteer to perform administrative work on the inpatient wards and serve as liaisons between the patients and medical staff.
- Mary Washington Hospice: Members volunteer to assist patients and families, as well as members of the community that are experiencing the grief of losing a loved one
- Emergency Services: Members volunteer as EMTs and volunteers for a rescue squad.
- Specific Member Experiences:
- Emma Jones served as an EMT in the local Fredericksburg community - Carleigh Wood volunteered with Mary Washington Hospice.
- Lucca Muta, Mallory Thompson, and Ella Schmidt served at Mary Washington Hospital.
- Ileana Perez Ruiz volunteered as a Hackathon mentor and organizer.

- Rebecca Cherian volunteered as a Peer Health Educator with the UMW Student Health Center researching and raising awareness for stigmatized medical conditions.
- Genevive Benton volunteered at the Em Ford Native Plant Festival

Research Conducted by Members

- Summer Science Institute: Students participate in full-time, individual research over the summer months.
- Projects include:
 - Jillian Pabalan - "Improved Synthesis of Indazole-Based Sulfonamides"
 - Research Works: Students work in collaboration with various faculty members and peers to conduct research throughout the school year.
- Fields include:
 - Neuroscience
 - Genetics
 - Myotonic Dystrophy
 - Biochemistry
 - Cancer
- Specific Member Projects:
 - Delaney Humphrey and Carleigh Wood on Iditarod's effect on DM1 disease progression in a *Drosophila melanogaster* model
 - Emma Jones on the Effect of Proton Pump Inhibitors on Growth of Jurkat T Lymphocytes.
 - Emilee Leaman on 3D Printed Solar Still
 - Jessica Bronski and Madison Bauserman on Effects of Myotonic Dystrophy Type 1 (DM1) in Vascular Degeneration.
 - Emily Wills and Lucca Muta on Discovering Gene Function in Phage Zapner.
 - Mallory Thompson on The Role of Methionine Restriction in Breast Cancer Immunogenic Cell Death.

- Eleni Kepler on The Effects of Myoglianin Knockdown on *Drosophila melanogaster* with Myotonic Dystrophy Type One.
- Jillian Pabalan on Bi- and Tridentate Ligand Complexes of Iron and Nickel as Catalysts in Ammonia Borane Dehydrogenation.
- Sasha Murphy on Neurotoxic Effects of Monoethyl Phthalate in CD-1 Mice.

CHAPTER REPORT

Chapter: Alpha Beta

Dates of chapter report: 9/18/2024

Mailing Address:

Dr. Judy Moore, 2023-24 Chi Beta Phi Advisor

Dr. Leslie Heffron, 2024-25 Chi Beta Phi Advisor

LRU Box 7925

625 7th Ave NE

Hickory, NC 28601

Advisor(s) and email addresses:___

Dr. Judy Moore – judy.moore@lr.edu

Current officers (2023-24) and email addresses:

- President Demmi Ramos demmi.ramos@my.lr.edu
- Vice-President Salma Ramirez Sanchez salma.ramirezsanchez@my.lr.edu ____
- Secretary Lynn VanStaalduinen lynn.vanstaalduinen@my.lr.edu
- Treasurer Reagan Womack reagan.womack@my.lr.edu
- Historian Christina Fisher christina.fisher@my.lr.edu

Officers for next year (2024-25) if determined:

- President Isaac Riggs isaac.riggs@my.lr.edu____
- Vice-President_ @my.lr.edu
- Secretary @my.lr.edu
- Treasurer @my.lr.edu

- Historian @my.lr.edu ____

Current number of members (as of April 2024):

- Student (active; local and national dues paid) 23
- Faculty 3
- Pledges 2
- Active alumni 0

Frequency of meetings: 3x per semester

Function or purpose of meetings:

- ☐ Chapter business ☒
- ☐ Fund raising
- ☐ Social ☒
- ☐ Presentations ☒
- ☐ Conference planning
- ☐ Other ____

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

- 1) North Carolina Academy of Science (Winston-Salem State University, April 5-6, 2024): two day annual meeting with student, faculty and other presentations, including presentations by our members. Our Chi Beta Phi chapter has a student group membership in this organization, at which many of our members present their undergraduate research work and win awards, and several members are officers in the undergraduate division of the academy.
- 2) Dr. Keith McDade, presenter. Learn, Connect, Help, and Enjoy: Reflections on sustainability lessons learned as a peace corps volunteer in The Gambia, West Africa, 30 years ago and today. November 1, 2023.
- 3) Reagan Womack, Demi Ramos, Maty Mbye: Experiences in Summer Undergraduate Research (REU) Opportunities. How you can apply. October 2023.
- 4) Various faculty members: What to expect in graduate school, how, when and how to choose where to apply, and experiences to expect as a graduate student.

April 15, 2024.

Social activities of chapter:

Fall recruitment picnic, spring awards banquet

Honors awarded to chapter members:

NCAS Awards for outstanding undergraduate research presentations:

1st place Demmi Ramos, Reagan Womack, Cheyenne Kimberlin, Christina Fisher

2nd place Bethany Perry, Lynn Van Staaldin

3rd place Kayla Dietz, Diego Sanjuan, Erica Schulz.

Lenoir Rhyne undergraduate research symposium: 1st place, Isaac Riggs ____

Other chapter activities:

- Efforts to reactivate a chapter or establish a new one N/A

- Fund raising N/A

- Service to school (include any awards by chapter) Promoted and assisted with preparations for the College of Natural Sciences and Math Career Exploration Night in October 2023.

- Service to community N/A

- Trips or other activities: Trip to NCAS Annual Meeting described above.

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Please add any additional information or comments below.

CHAPTER REPORT

Chapter: Alpha Beta

Dates of chapter report: 9/25/2025, covering the 2024-2025 academic year

Mailing Address:

Dr. Leslie Heffron, 2024-25 Chi Beta Phi Advisor
LRU Box 7925
625 7th Ave NE
Hickory, NC 28601

Advisor(s) and email addresses:

Dr. Leslie Heffron – leslie.heffron@lr.edu

Current officers (2024-25) and email addresses:

- President Isaac Riggs, isaac.riggs@my.lr.edu
- Vice-President Grace Chatham, grace.chatham@my.lr.edu
- Secretary Connor Lachesky, connor.lachesky@my.lr.edu
- Treasurer Hannah Elrod, hannah.elrod@my.lr.edu
- Historian Christina Fisher, christina.fisher@my.lr.edu

Officers for next year (2025-26) if determined:

- President Anna Alexander, anna.alexander@my.lr.edu
- Vice-President Grace Chatham, grace.chatham@my.lr.edu
- Secretary Naomi Manea, naomi.manea@my.lr.edu
- Treasurer Kayla Hifko, kayla.hifko@my.lr.edu
- Historian Everly McNeil, everly.mcneil@my.lr.edu

Current number of members (as of April 2025):

- Student (active; local and national dues paid) 13
- Faculty 1
- Pledges 9
- Active alumni 0

Frequency of meetings: 2x per semester

Function or purpose of meetings:

☐ Chapter business ✓

☐ Fund raising

☐ Social ✓

☐ Presentations ✓

☐ Conference planning

☐ Other

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

- 1) North Carolina Academy of Science (Fayetteville State University, March 28-29, 2025): two-day annual meeting with student, faculty and other presentations, including presentations by our members. Our Chi Beta Phi chapter has a student group membership in this organization, at which many of our members present their undergraduate research work and win awards, and several members are officers in the undergraduate division of the academy.
- 2) Undergraduate Research and Medical Professionals Workshop (Elon University) November 16, 2024, one day meeting with students and faculty from various universities representing professional schools and research opportunities for students. Many of our members attended.

Social activities of chapter:

Fall recruitment hot-chocolate social, spring awards banquet

Honors awarded to chapter members:

NCAS Awards for outstanding undergraduate research presentations:

1st place Hannah Elrod

2nd place Christina Fisher

Additional presenters: Demmi Ramos, Jackson Owens.

Lenoir Rhyne undergraduate research symposium: SOURCE, a similar number of Chi Beta Phi students presented at SOURCE this past spring, Christina Fisher was awarded 3rd place in the Honors Thesis category.

Demmi Ramos and Christina Fisher were 2025 Distinguished Scholar Awardees from the Fritz Honors College of Lenoir-Rhyne University.

Other chapter activities:

- Efforts to reactivate a chapter or establish a new one N/A
- Fund raising N/A
- Service to school (include any awards by chapter): Our students promoted and assisted with preparations for the College of Natural Sciences and Math Career Exploration Night in February 2025. ○ Helped to coordinate College Holiday party, assisted in planning, setup and entertainment (college and holiday trivia) December 2024.
- Service to community N/A
- Trips or other activities: Trip to NCAS Annual Meeting in the Fall and in Spring as described above.

CHAPTER REPORT ALPHA DELTA

Chapter report for Fall 2024 through Fall 2025

Mailing Address 101 Branigin Blvd., Franklin, Indiana 46131

Advisor – Arbin Thapaliya Email Address AThapaliya@franklincollege.edu

Current Officers:	Name	Email address
President	<u>McKenzie Musser</u>	<u>MMusser@franklincollege.edu</u>
Vice-President	<u>Kate Pankl</u>	<u>KPankl@franklincollege.edu</u>
Secretary	<u>Kaylee Rhoton</u>	<u>KRhoton@franklincollege.edu</u>
Treasurer	<u>Kendall Lowry</u>	<u>KLowry@franklincollege.edu</u>
Other	_____	

Officers for next year if determined:

President	_____
Vice-President	_____
Secretary	_____
Treasurer	_____
Other	_____

Current number of members

student 16 faculty 1 pledges _____ active alumni _____

Frequency of meetings: 2

Function or purpose of Meetings:

chapter business ** fund raising _____ social **
presentations _____ conference planning _____ other _____

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

1

Activities relative to the Annual Theme:

1

Social Activities of Chapter:

2

Honors Awarded to Chapter Members:

Name, honor

Other Chapter Activities:

Efforts to reactivate a chapter or establish a new one:

Fund raising

Service to school (include any awards by chapter)

Service to community

Trips or other activities

Please add any additional information or comments below.

CHAPTER REPORT

Chapter: Keuka College, *alpha epsilon* chapter

Dates of chapter report: 10/18/2023

Mailing Address: 141 Central Ave, Keuka Park, NY 14478

Advisor(s) and email addresses:

- Michael V Keck: mkeck@keuka.edu
- Dominique Derminio: dderminio@keuka.edu

Current officers and email addresses:

- President: Devyn Scheidt, dcscheidt@keuka.edu
- Vice President: Sydnee Raymond, sraymond@keuka.edu
- Secretary: Rage Conklin, rconklin@keuka.edu
- Treasurer: Isaiah Simpson, isimpson@keuka.edu
- Other: Jess Majo (Student Senate Representative), jmajo@keuka.edu Rachel Amico (Historian), ramico@keuka.edu

Officers for next year if determined: N/A

- President
- Vice-President
- Secretary • Treasurer • Other

Current number of members:

- Student: 15
- Faculty: 2
- Pledges: 0
- Active alumni: 1

Dr. Derminio, current society co-advisor, is a Keuka College alumna and Chi Beta Phi member.

Frequency of meetings: Meetings occur biweekly or more frequently as needed.

Function or purpose of meetings:

- ☒ Chapter business
- ☒ Fund raising
- ☒ Social
- ☐ Presentations

Conference planning

Other

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

A primary focus of the Keuka College chapter of Chi Beta Phi is to elevate the presence and prominence of science on campus and within the greater Keuka community. An important component of this focus has been the initiation and sponsorship of the annual Keuka College Chi Beta Phi lecture each spring. Hosting a prominent scientist on campus, in addition to elevating the presence of science, affords students the opportunity to meet and interact with this person to learn about various aspects of being a scientist, such as potential career paths and opportunities, research, other scientific experiences, and much more. It also increases the exposure of Keuka College and its science program to people and entities outside of campus.

On April 27, 2023, for the second annual Chi Beta Phi lecture, we hosted Dr. Mary Carroll, the Dwane W. Crichton Professor of chemistry at Union College and 2023 President Elect of the American Chemical Society. She gave a great presentation about her research on aerogels, and was a tremendous example of the success of women in science, the impact you can make at a PUI, and so much more.

We are currently in the planning stages for the 3rd annual Chi Beta Phi lecture, which will again be a campus-wide event for all students, faculty, staff, and community members to attend. As we did last year, we plan to invite local high school teachers and students as well as an outreach to those individuals and groups.

Social activities of chapter:

A project of this year's Chi Beta Phi officers and members is to establish a volunteer tutoring program that is accessible to most if not all introductory science and mathematics courses here on campus. The goal is to try and aid the underclassmen students in mastering their coursework and meeting their scientific goals through efficient and engaging assistance provided by Chi Beta Phi.

Additionally, Chi Beta Phi officers and members have been striving to incorporate

the local community into the sciences. The goal is to try and host an event where local kids/students 5th grade and below can visit the science building where we can do some science experiments or demonstrations for the students as a part of the local school. The main objective of this event would be to expose young elementary school students to the sciences in a fun, interactive, unique, and memorable manner to try and influence students into the sciences, or at least contribute to a positive attitude toward the sciences.

Later in the year, a social event for all current and future members of Chi Beta Phi will be held for some sort of social event to conclude a successful year.

Honors awarded to chapter members:

Chi Beta Phi does not have any awards specifically designated to the chapter.

However, as an honors society, our members demonstrate high academic rigor and success. Many of our members have been recipients of Keuka College awards. Some notable examples from the past year are as follows:

- **Devyn Scheidt, Sydnee Raymond, and Isaiah Simpson** were inducted into Sigma Lambda Sigma (SLS), the college-wide honor society into which only 10-15 of the College's top rising seniors are inducted each spring.
- **Austin Glazier** - earned divisional honors for his research and thesis entitled "Molecular Identification and Prevalence of *Wolbachia spp.* Infection on Freshwater Crayfish Species from the Keuka Lake NY Watershed"
- **Aliyah Brewer** - Biology Outstanding Senior Award
- **Lauren Hill** - ACS Senior Chemistry Award
- **Jenah Edwards** - Environmental Science Award
- **Devyn Scheidt** - Hazel Ellis Loomis Award for Outstanding performance in the biological sciences by a junior
- **Devyn Scheidt** - Dr. F. Marion Lougee Scholarship for outstanding performance by a student majoring in the sciences.

Other chapter activities:

- o Efforts to reactivate a chapter or establish a new one:

- o Fund raising: At least 1 fundraiser will be held for Chi Beta Phi. There are some current ideas that have been brainstormed by members, but a fundraising event is yet to be set in place.
- o Service to school (include any awards by chapter): Volunteer tutoring services offered to the introductory level mathematics and science courses.
- o Service to community: Incorporating elementary school students into the sciences through exposure to numerous scientific demonstrations.
- o Trips or other activities:

Please add any additional information or comments below.

CHAPTER REPORT

Chapter: Keuka College, *alpha epsilon* chapter

Dates of chapter report: 10/24/2024

Mailing Address: 141 Central Ave, Keuka Park, NY 14478

Advisor(s) and email addresses:

- Michael V Keck: mkeck@keuka.edu
- Dominique Derminio: dderminio@keuka.edu

Current officers and email addresses:

- President: Sarah O'Brien, sjobrien@keuka.edu
- Vice President: Olivia Gudeahn, oggudeahn@keuka.edu
- Secretary: Lily McLaughlin, lgmclaughlin@keuka.edu
- Treasurer: Gabriella Hall, gihall@keuka.edu
- Other: Evan Pellerito, ejpellerito@keuka.edu (Senate Representative); Jesse Bolster, jcbolster@keuka.edu (Historian)

Officers for next year if determined: N/A

- President
- Vice-President
- Secretary • Treasurer • Other

Current number of members:

- Student: 19
- Faculty: 2
- Pledges: 0
- Active alumni: 1

Dr. Derminio, current society co-advisor, is a Keuka College alumna and Chi Beta Phi member.

Frequency of meetings: Meetings occur monthly or more frequently as needed.

Function or purpose of meetings:

- ☒ Chapter business
- ☒ Fund raising
- ☒ Social
- ☐ Presentations

Conference planning

Other

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

A primary focus of the Keuka College chapter of Chi Beta Phi is to elevate the presence and prominence of science on campus and within the greater Keuka community. An important component of this focus has been the initiation and sponsorship of the annual Keuka College Chi Beta Phi lecture each spring. Hosting a prominent scientist on campus, in addition to elevating the presence of science, affords students the opportunity to meet and interact with this person to learn about various aspects of being a scientist, such as potential career paths and opportunities, research, other scientific experiences, and much more. It also increases the exposure of Keuka College and its science program to people and entities outside of campus.

On March 27, 2024, for the third annual Chi Beta Phi lecture, we hosted Dr. Robert A. Raguso, a professor of neurobiology and behavior at Cornell University. Dr. Raguso gave a great presentation about his research on the importance of flowers as microcosms in the environment.

We are currently in the planning stages for the 4th annual Chi Beta Phi lecture, which will again be a campus-wide event for all students, faculty, staff, and community members to attend. As we did last year, we plan to invite local high school teachers and students as well as an outreach to those individuals and groups.

Social activities of chapter:

Additionally, Chi Beta Phi officers and members have been striving to incorporate the local community into the sciences. The goal is to try and host an event where local kids/students 5th grade and below can visit the science building where we can do some science experiments or demonstrations for the students as a part of the local school. The main objective of this event would be to expose young elementary school students to the sciences in a fun, interactive, unique, and memorable manner to try and influence students into the sciences, or at least contribute to a positive attitude toward the

sciences.

Later in the year, a social event for all current and future members of Chi Beta Phi will be held for some sort of social event to conclude a successful year.

Honors awarded to chapter members:

Chi Beta Phi does not have any awards specifically designated to the chapter. However, as an honors society, our members demonstrate high academic rigor and success. Many of our members have been recipients of Keuka College awards. Some notable examples from the past year are as follows:

- **Devyn Scheidt** (SP24 grad) Biology Outstanding Senior Award: Awarded to a Senior student that has demonstrated outstanding performance in upper-level biology courses.
- **Devyn Scheidt** (SP24 grad) American Chemical Society (ACS) Senior Chemistry Prize: Awarded to a Senior student that has demonstrated outstanding performance in upper-level chemistry courses.
- **Lily McLaughlin** - Hazel Ellis Loomis Award for outstanding performance in the biological sciences by a junior
- **Gabriella Hall** (newly inducted SP24) James E. White Award for outstanding academic performance in the introductory biology sequence
- **Erin Schock** (newly inducted SP24) Judd Prize for outstanding work in Precalculus and Calculus
- **Ethan Drinon** inducted into Sigma Lambda Sigma, the highest honor society at Keuka College to which only 10-15 rising seniors are chosen each year.
- **Olivia Gudeahn** inducted into Sigma Lambda Sigma, the highest honor society at Keuka College to which only 10-15 rising seniors are chosen each year.

Other chapter activities:

- o Efforts to reactivate a chapter or establish a new one:
- o Fund raising: At least 1 fundraiser will be held for Chi Beta Phi. There are some current ideas that have been brainstormed by members, but a fundraising event is yet to be set in place.
- o Service to school (include any awards by chapter): Volunteer tutoring services offered to the introductory level mathematics and science courses.

- o Service to community: Incorporating elementary school students into the sciences through exposure to numerous scientific demonstrations.

CHAPTER REPORT

Chapter: Alpha Iota Chapter: Glenville State University

Dates of chapter report: Fall 2024 – Spring 2025

Mailing Address:

C/o Larry R. Baker/Wenwen Du

Glenville State University

200 High St.

Glenville, WV 26351

Advisor and email addresses: ____

Co-Advisor – Larry R. Baker – Larry.Baker@glenville.edu

Co-Advisor – Wenwen Du – Wenwen.Du@glenville.edu

Current officers and email addresses:

- President – Madison DeVaughn – DeVaughn.MadisonR@gsu.glenville.edu
- Vice-President – Doris Agyemang – Agyemang.Doris@gsu.glenville.edu
- Secretary – Skylar Davis – Davis.SkylarF@gsu.glenville.edu ____
- Treasurer – Ridwan Oloyede – Oloyede.RidwanO@gsu.glenville.edu ____
- Historian – Maddox Bowers – Bowers.MaddoxE@gsu.glenville.edu ____

Officers for next year if determined: Current officers are serving Fall 2024 to Spring 2025.

Current number of members:

- Students – 8
- Faculty – 3
- Pledges – 0
- Active alumni – 0 __

Frequency of meetings: Every 4 Weeks ____

Function or purpose of meetings and descriptions:

☒ Chapter business

☒ Fund raising

☒ Social ____

☐ Presentations

☐ Conference planning

☐ Other ____

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

Last semester we sponsored a seminar on preparations for medical school. We provided refreshments and helped set up for the occasion. In Fall 2024, we also sponsored a WVU Medical School lecture with refreshments.

Activities relative to the Annual Theme:

Social activities of chapter:

In the spring of 2025, we had a luncheon to celebrate the end of the school year. We went to a local diner and had lunch and socialized with each other.

Our chapter holds an annual rose sale event for Valentine's Day. This year was a success in which we raised \$204.

Honors Awarded to Chapter Members: Name, honor____

Other chapter activities and descriptions:

☐ Efforts to reactivate a chapter or establish a new one

☒ Fund raising

☒ Service to school (include any awards by chapter)

☒ Service to community

☐ Trips or other activities

Please add any additional information or comments below.

New members as of Spring 2025:

Ridwan Oloyede

CHAPTER REPORT

Chapter: Alpha Sigma 1975 Molloy University, Rockville Centre, NY

Dates of chapter report: October 13, 2024

Mailing Address: 1000 Hempstead Ave. Dept. of Biology

Rockville Centre, NY 11571

Advisor(s) and email addresses: Li Li, PhD lli@molloy.edu

Current officers and email addresses:

- President: Lynn Jacques LJacques@lions.molloy.edu
- Vice-President Natalie Moussa NMoussa@lions.molloy.edu
- Secretary Kayla Melgar. Kmelgar1@lions.molloy.edu
- Treasurer Cristhian Granda. CGranda@lions.molloy.edu
- Other _____

Officers for next year if determined: N/A

- President _____
- Vice-President _____
- Secretary _____
- Treasurer _____
- Other _____

Current number of members:

- Student 5
- Faculty 1
- Pledges 2
- Active alumni _____

Frequency of meetings: once a semester

Function or purpose of meetings:

☐ Chapter business X

- ☐ Fund raising
- ☐ Social x
- ☐ Presentations
- ☐ Conference planning
- ☐ Other

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

Social activities of chapter:

Induction ceremony, April 16, 2024

With the presence of parents, Chi Beta Phi cords and certificates were presented to each new member.

Honors awarded to chapter members:

-

Other chapter activities:

- Efforts to reactivate a chapter or establish a new one
 - selected officials for the chapter
 - planned the activities for the 2024-25 academic year
- Fund raising
- Service to school (include any awards by chapter)

- Service to community
- Trips or other activities

Please add any additional information or comments below.

CHAPTER REPORT

Chapter report for Alpha Sigma 1975 through October 21, 2025

Mailing Address Molloy University

Dept. of Biology, Chemistry and Environmental Science

1000 Hempstead Ave.

Rockville Centre, NY 11571

Advisor – Li Li, PhD

Email Address lli@molloy.edu

Current Officers:	Name	Email address
-------------------	------	---------------

President Lynn Jacques ljacques@lions.molloy.edu

Vice-President Natalie Moussa nmoussa@lions.molloy.edu

Secretary Kayla Melgar Kmelgar1@lions.molloy.edu Treasurer

Cristhian Granda. CGranda@lions.molloy.edu Other _____

Officers for next year if determined:

President Selin Kayaoglu

Vice-President _____

Secretary _____

Treasurer

Other _____

Current number of members student. 14 faculty 1 pledges
active alumni

Frequency of meetings: once a semester

Function or purpose of Meetings:

chapter business X fund raising social X
presentations conference planning other

Presentations, lectures, seminars, etc. attended or as part of chapter meeting:

Activities relative to the Annual Theme:

- selected officials for the chapter

- planned the activities for the 2025-26 academic year

Social Activities of Chapter:

Induction ceremony for 9 new members, April 25, 2025

Honors Awarded to Chapter Members:

Name, honor

Other Chapter Activities:

Efforts to reactivate a chapter or establish a new one:

Fund raising

Service to school (include any awards by chapter)

Service to community

Trips or other activities

Please add any additional information or comments below.

Presentation Abstracts

Metabolic Adaptations to Training Phases by Male and Female Cross-Country Athletes

Carter McKenna, Shawn Stover. Davis & Elkins College, Department of Biology, Environmental Science, and Sustainability.

Preparatory endurance training is characterized by high volume training at relatively low intensity. During competitive training, workout intensity is increased significantly to facilitate peak performance. Transitional training is normally associated with a decrease in training volume and intensity to prepare an athlete for the next training cycle. The present study investigated the hypothesis that adaptations in Resting Metabolic Rate (RMR) and Respiratory Quotient (RQ) would be apparent during different phases of an endurance training regimen for collegiate cross-country athletes. Furthermore, it was hypothesized that there would be metabolic differences between male and female athletes at the different phases of training. Initial data were collected early in the cross-country season, when athletes were in the preparatory phase. The second data collection point was during the teams' competitive phase of training, just before the conference championship. The final collection point occurred after the cross-country season had ended. RMR and RQ were determined via indirect calorimetry. Results indicated significant differences between RMR values ($p = .049$), and between RQ values ($p = .034$). Data specifically suggested that females exhibit RMR and RQ values lower than those of their male counterparts, but only during the competitive phase of training. However, when RMR was calculated per kilogram of body weight, significant differences were not detected ($p = .084$). Furthermore, values representing lipid ($p = .166$) and carbohydrate ($p = .210$) utilization per kilogram of body weight did not differ significantly, suggesting that body mass had a larger impact than sex in determining resting metabolism. *(Supported by NIH grant P20GM103434 to the West Virginia IDeA Network of Biological Research Excellence)*

Isolation of Outer Membrane Vesicles as the Potential Method of Transport of the Bacterial Genotoxin Colibactin

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Colibactin is a bacterial genotoxin that is produced in certain strains of Gram-negative bacteria by a group of enzymes encoded in the *pks* gene island. The presence of *pks*+ *E. coli* has been linked to a predisposition to early onset of colorectal cancer. It has been hypothesized that the mechanism by which colibactin gets into the cells of the digestive tract is via a transit system based on outer membrane vesicles (OMVs). OMVs are liposomes that are secreted from the outer membrane of Gram-negative bacteria and are used to transport different metabolites, including toxins. This project aims to isolate these outer membrane vesicles from different *E. coli* bacterial strains and use mass spectrometry to gauge any chemical differences among them. So far, we have isolated and quantified OMVs, and their quantities are on par with the typical yields. Extraction of the OMV metabolites will be done using two protocols (i.e., C18 columns, AMICON 100K filtration) to confirm the presence of known metabolites related to colibactin. The suite of experiments to be performed includes but is not limited to SDS-PAGE, reverse phase HPLC and mass spectrometry (e.g, Q-ToF, MALDI-ToF). This analytical exploration of OMVs may ultimately determine compounds linked to the effects of colibactin on the cells of the digestive tract. *(Supported by NIH Grant P20GM103434 to the West Virginia IDeA*

Network for Biomedical Research Excellence)

Nathaniel Addai Gyarteng

Glenville State University Abstract:

Unlocking Secrets — The Story and Science of Cryptography

From secret messages in ancient times to the encryption that protects your phone today, cryptography has always been about one thing: keeping information safe. This presentation takes the audience on a journey through time, starting with the simple Caesar Cipher, moving to the more advanced Vigenère Cipher, and ending with modern RSA encryption that powers secure communication around the world. Along the way, we'll explore how these methods work, why they mattered in their time, and how the same mathematical ideas still shape cybersecurity today. The session will include short, fun demonstrations and live Python code to show how secret messages are created and protected in real time. By the end, the audience will see cryptography not just as a complex field of computer science, but as a fascinating story of human creativity : how we've always found new ways to protect our secrets and redefine trust in the digital age.

Keywords: Cryptography, Caesar Cipher, Vigenère Cipher, RSA Encryption, Cybersecurity

Dielectrophoretic sorting of differentiated stem cells for tissue regeneration.

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Mesenchymal stem cells (MSCs) are a promising cell source for tissue engineering and regeneration. However, due to the heterogeneity of MSCs, in vitro induced MSCs contain a large number of undifferentiated cells, which may lead to complications after transplantation, as undifferentiated cells may prevent safe transplantation. A new label-free microfluidic platform sorting technology based on dielectrophoresis (DEP) can solve this problem by generating a homogeneous differentiated MSC population. This highly selective technology relies on the distinct dielectric properties of undifferentiated stem cells and their differentiated counterpart, leveraging electric-field-induced dipole forces to separate differentiated MSC subpopulations of interest. This study explores the measured and estimated dielectric properties during characterization experiments, examines their changes for high-throughput DEP separation parameters, and evaluates alterations in mRNA and protein expression of differentiation markers (chondrogenesis, adipogenesis, and osteogenesis) in undifferentiated versus differentiated MSCs. The expected results will reveal a clear association between DEP parameter and specific-lineage differentiation of MSCs, suggesting that DEP technology can be used to purify differentiated MSCs in the future to achieve high-quality tissue regeneration. *(Supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence)*

The Role of N-Myc Downstream Regulated 1 (NDRG1) in clear cell Renal Cell Carcinoma

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In the United States, over 600,000 people are living with kidney cancer. Over 90% of kidney cancer cases are clear cell renal cell carcinoma (ccRCC), which is a tumor that originates from proximal tubular epithelial cells. N-Myc Downstream Regulated 1 (NDRG1) is a phospho-protein that we recently published is overexpressed in clinical ccRCC samples relative to pair-matched normal renal tissue. We hypothesize AKT mediated phosphorylation of NDRG1 promotes the survival and proliferation of ccRCC cancer cells. We utilized the 786-0 human ccRCC cancer cell line to determine the role of NDRG1 and its phosphorylated form (pNDRG1) on cancer cell proliferation. We used short interfering RNA (siRNA) specific for NDRG1 to reduce expression of NDRG1 in 786-0 cells. Controls were transfected with non-targeting siRNA. Lipofectamine reagent was used to transfect siRNAs into cells. Western blot analysis was used to measure siRNA-mediated knockdown of NDRG1 and pNDGR1. The number of viable and dead cells were determined by trypan blue exclusion and automated cell counting. The results showed that NDRG1 siRNAs reduced NDRG1 protein, respectively within 24 and 6 days of treatment. Reduced expression of NDRG1 was associated with reduced 786-0 proliferation relative to control cells. Given that NDRG1 is upregulated in ccRCC, these data provide insight into the role of this phospho-protein in the progression of this cancer. (Supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence)

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