

# THE CHI BETA PHI RECORD



**2015**

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## 2015

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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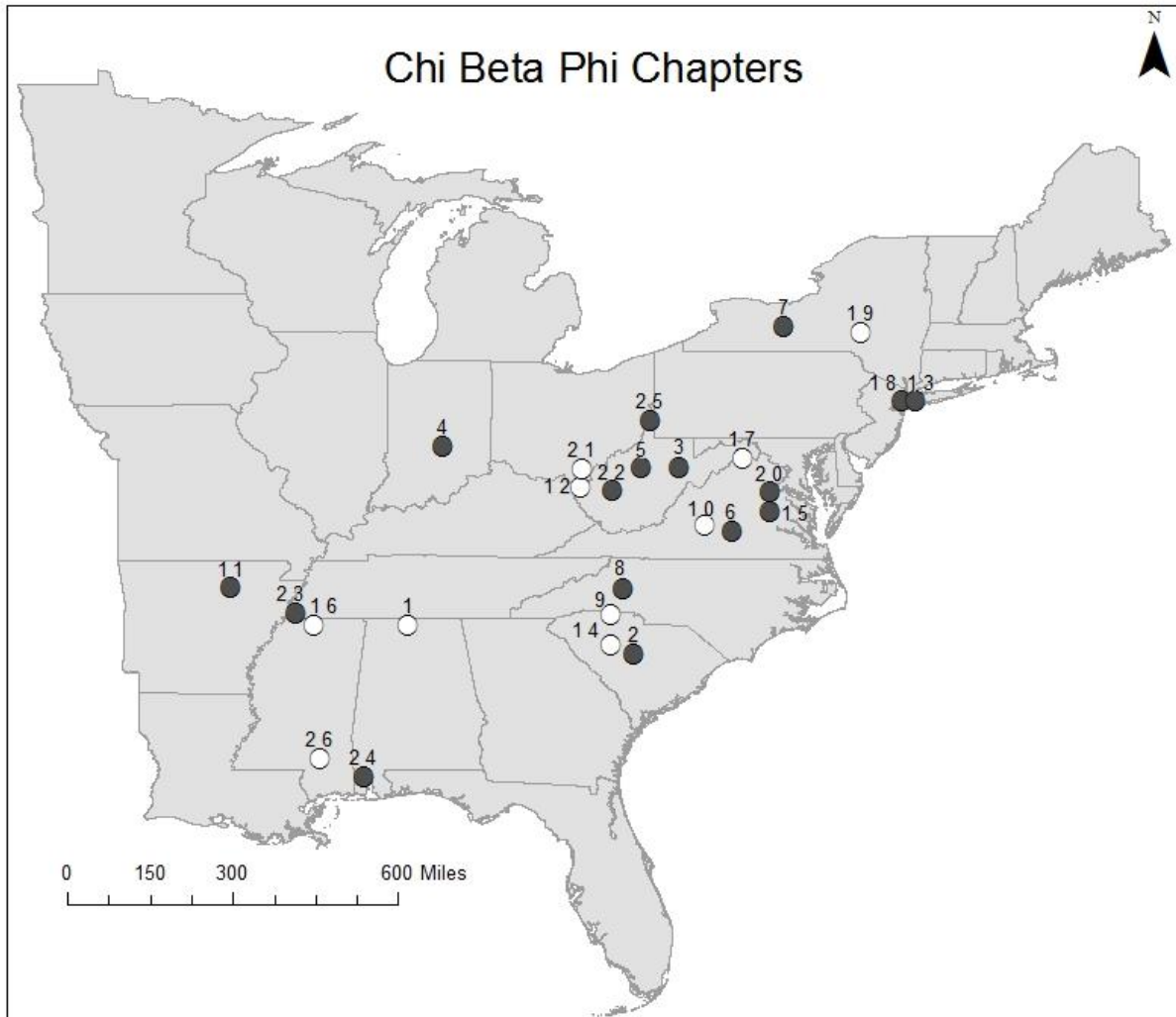
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## **CHI BETA PHI**

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**



### Chapter Locations

● Active ○ Inactive

1 Athens State College	10 Lynchburg College	19 State Univ. of Oneonta
2 Columbia College	11 Lyon College	20 The University of Mary Washington
3 Davis & Elkins College	12 Marshall University	21 University of Rio Grande
4 Franklin College	13 Molloy College	22 University of Charleston
5 Glenville State College	14 Newberry College	23 University of Memphis
6 Hampden-Sydney College	15 Randolph-Macon College	24 University of Mobile
7 Keuka College	16 Rust College	25 West Liberty University
8 Lenoir-Rhyne University	17 Shenandoah University	26 William Carey College
9 Limestone College	18 St. Francis College	

Data source <http://nationalatlas.gov>; Map created by Dr. Crystal Krause, Davis & Elkins College

## Chi Beta Phi Chapters

Alpha	1916	Randolph-Macon College, Ashland, Virginia
Gamma	1921	Hampden-Sydney College, Hampden-Sydney, Virginia
Epsilon	1923	University of Charleston, Charleston, West Virginia
Zeta	1925	Davis & Elkins College, Elkins, West Virginia
Kappa	1925	Marshall University, Huntington, West Virginia
Rho	1935	West Liberty University, West Liberty, West Virginia
Theta Sigma	1941	Limestone College, Gaffney, South Carolina
Kappa Sigma	1945	The University of Mary Washington, Fredericksburg, Virginia
Phi	1947	University of Memphis, Memphis, Tennessee
Chi	1948	Columbia College, Columbia, South Carolina
Omega	1948	Lynchburg College, Lynchburg, Virginia
Alpha Beta	1952	Lenoir-Rhyne University, Hickory, North Carolina
Alpha Delta	1953	Franklin College, Franklin, Indiana
Alpha Epsilon	1954	Keuka College, Keuka Park, New York
Alpha Zeta	1955	William Carey College, Hattiesburg, Mississippi
Alpha Eta	1956	Newberry College, Newberry, South Carolina
Alpha Iota	1964	Glenville State College, Glenville, West Virginia
Alpha Kappa	1964	Athens State College, Athens, Alabama
Epsilon Sigma	1965	SUNY- Oneonta, Oneonta, New York
Alpha Xi	1969	St. Francis College, Brooklyn, New York
Alpha Pi	1970	University of Rio Grande, Rio Grande, Ohio
Alpha Rho	1973	Arkansas College, Batesville, Arkansas
Alpha Sigma	1974	Molloy College, Rockville Centre, New York
Alpha Tau	1984	Rust College, Holly Springs, Mississippi
Alpha Upsilon	1984	Shenandoah University, Winchester, Virginia
Alpha Phi	2012	University of Mobile, Mobile, Alabama
Alpha Chi	2014	University of Colorado, Boulder, Colorado

**Grand Chapter Officers  
2014-2016**

**PRESIDENT**

Dr. William J. Pohley  
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101 Branigin Blvd.  
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wpohley@franklincollege.edu

**VICE-PRESIDENT**

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**TREASURER**

Prof. Carl T. Meadors†  
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St. Albans, WV 25177  
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**HISTORIAN/MARSHALL**

Thomas Morgan, Talbot Weston  
Alpha Chapter  
Randolph-Macon College  
Ashland, VA 23005

**WEBPAGE**

[www.chibetaphi.org](http://www.chibetaphi.org)

**The 68<sup>th</sup> Chi Beta Phi National Conference Host  
Randolph-Macon College, Host  
October 24, 2015**



Founded in 1830 by the Methodist Church, Virginia statesman John Randolph and North Carolina statesman Nathaniel Macon gave their names to the college. Though neither gentleman was a Methodist, their names were adopted to send a message that students of all denominations were welcome. This tradition of openness flourishes today in the religious and ethnic diversity of our student body. Randolph-Macon remains the oldest Methodist-related college in continuous operation in the United States.

Originally located in Boydton, Virginia, the college moved to Ashland in 1868 to escape the ravages of the Civil War. The move challenged the college's spirit and stimulated new growth. A new era of vitality ensued with students raising most of the money for Washington and Franklin Hall, the first major building on the “new” campus. Referred to affectionately as “Wash-Frank,” the building is a national historic landmark and is still in use today.

A lot has changed since those early days. The handful of male students who once attended classes has now blossomed into a student body of more than 1400 men and women from all across the United States and all over the world. Our beautiful 117-acre campus has developed around Washington and Franklin Hall and now boasts 60 major buildings, including Andrews Hall, a freshmen residence facility and Brock Commons, a new two-story student center. Birdsong Hall opened in 2014 and is home to 120 graduating senior students who enjoy suite-style living with rooms overlooking the football field. Birdsong also houses Lindgren Pavilion, a multipurpose room that serves



as classroom, meeting and event space. This is where the conference program takes place. The college also developed new athletic facilities and has finalized plans to build a new science center.

The Latin- and Greek-based curriculum offered in the 1830s that focused on English, history and geography has expanded to include 38 majors, 34 minors and an array of pre-professional programs. What remains the same is our commitment to preparing students to build their own extraordinary futures through a rigorous academic program that exposes students to all areas of artistic and scientific inquiry as well as mentoring from caring professors.

Chi Beta Phi 68th National Conference  
 October 24, 2015  
 Alpha Chapter Host  
 Birdsong Hall  
 Randolph-Macon College  
 Ashland, VA

8:30—9:00 am	Sign in and Refreshments	Breezeway, 1 <sup>st</sup> Floor
9:00 am	Session I Call to Order Opening Prayer Greeting from Host Chapter Roll Call of Chapters, Proxy Assignments, Chapter Reports Report from the National Officers Committee Assignments Awards Officer Elections Presentations	Dalton Dining Room, 2 <sup>nd</sup> Floor         Room 220 Room 218 Dalton Dining Room
10:00—10:45 am	Committee Meetings Campus Tours	
10:45—11:00 am	Break	Mezzanine, 3rd Floor
11:00 – 11:45 am	Session II Presentation of Papers Part I	Dalton Dining Room
12:00—12:45 pm	Lunch	Trustees Room, 2 <sup>nd</sup> Floor
1:00—2:00 pm	Guest Speaker Sabra Klein Maloney, PhD '92	Dalton Dining Room
2:00 pm	Conclusion of Old Business New Business Awards Committee Report to the President	Dalton Dining Room
2:30 pm	Presentation of Papers Part II  Number of sessions and breaks to be determined based on number of papers submitted for presentation.	Dalton Dining Room
TBD	Presentation Committee Meeting Awards and Announcements	Dalton Dining Room

## Roll Call of Chapters/Proxies

### Chi Beta Phi 67th National Conference October 24, 2015

<b>Chapter</b>	<b>Chapter Report</b>	<b>Delegate or Proxy</b>
Alpha	Yes	Kristin Sheetz
Gamma	Yes	Larry Baker
Epsilon	Yes	Deborah Zies
Zeta	Yes	Jessica Nelson
Kappa	No	
Rho	Yes	Austin Cusik
Kappa Sigma	Yes	Kris Krumpos
Phi	Yes	Talbott Weston
Chi	Yes	Sarah Marshall
Alpha Beta	Yes	Melanie Gubbles-Bupp
Alpha Delta	Yes	Bill Pohley
Alpha Epsilon	No	
Alpha Zeta	No	
Alpha Eta	No	
Alpha Iota	Yes	Emily Ramezan
Alpha Xi	Yes	Paul Peck
Alpha Rho	Yes	Samantha Fulks
Alpha Sigma	No	
Alpha Phi	No	Michelle Mabry

## Minutes of the 68th National Conference

Following refreshments provided by the host chapter, President William Pohley called the 68th National Conference to order at 9:10. Talbott Weston, Alpha Chapter President, welcomed participants. The roll call of chapters followed. If a chapter was called and there was no representative present but a proxy had been submitted with the Chapter Report, the chapter was assigned a proxy and considered present. The list of chapters and their delegate/proxies is on the preceding page. A quorum was present.

The chapter reports were then presented. The reports were presented by the chapter delegate or their assigned proxy. Alpha Iota Chapter presented the board with a \$50.00 contribution to the Meadors Research Grant in honor of C.T. Meadors during their chapter report. The reports of the National Board Officers then followed. President Pohley welcomed the newest chapter, Alpha Chi at the University of Colorado Boulder and the reactivation of Epsilon at the University of Charleston WV. He then recognized the recent loss of the long-serving Treasurer, C.T. Meadors. Pohley stated that he appointed himself as acting Treasurer until elections will be held at next year's conference. This action is in accordance with the bylaws and was supported by the other national officers. Pohley described the work he has done since Meador's passing, including contacting the I.R.S. to make sure we retain tax- exempt status and securing the financial records from Meador's house. Pohley once again encouraged chapters to have co-advisors to help keep a chapter active, and welcomed any queries from individuals wanting to start a new chapter. Vice President Zies stated that two Meadors Research Grants had been awarded the previous year, and encouraged people to apply for the funds.

Secretary Mabry stated that the 2014 Record was distributed to chapters. She also described her work with Pohley and Huntington Bank to close out the old checking account and transfer the funds to the new checking account due to security concerns. Both she and Pohley are co-signers on the new checking account and have online access to the statements. Complete Officer reports follow the chapter reports.

After the Officer reports, committees were then assigned. The committees were the Awards Committee and Presentations Committee. President Pohley pointed out the duties of the committees. The committees were comprised as follows:

Awards: Chair- Dr. Melanie Gubbles-Bupp; Kristina Krumpas, Kristin Sheetz, Rebecca Barnes, Guillerme Hubsch

Presentations: Chair- Dr. Jeremy Keene; Jessica Nelson, Katie Bennis, Brittany Ritchie, Samantha Fulks

President Pohley adjourned the morning session. Some committees met prior to lunch and our guest speaker, Dr. Sabra Klein Maloney. A speaker profile follows these minutes.

After lunch and our lecture presentation President Pohley reconvened the Conference. There was no old business to discuss. The presentation of papers followed, and afterwards President Pohley thanked the participants for their excellent work. After a dinner reception, the awards ceremony followed.

President Pohley announced the awards recipients:

Outstanding Chapter: Zeta, Davis & Elkins College

Most Improved Chapter: Rho, West Liberty University

Blackwell Distance Award: Alpha Iota, Glenville State College

Host Chapter Award: Alpha, Randolph-Macon College

For the student presentations, there was a two-way tie for first, and one third place was awarded:

First Rebecca Barnes Rho, West Liberty University First McKensie Mason Rho, West Liberty University Third Kaeleigh Olsen, Alpha, Randolph-Macon College

President Pohley thanked everyone for their attendance and participation and complimented the host chapter on their excellent work as host. He announced that we are still seeking a host for the 2016 National Conference, and encouraged chapters to contact him if interested. He then announced that the 68th National Conference was now adjourned and wished everyone a safe trip home.

Respectfully submitted,

Michelle Mabry, Ph.D. National Secretary

**Guest Speaker, Sabra L. Klein**, Ph.D. received her B.A. in Psychology from Randolph-Macon College (where she was inducted into Chi Beta Phi), her M.S. from the University of Georgia in Biological Psychology, and her Ph.D. in Behavioral Neuroscience from Johns Hopkins University. She did postdoctoral training at the Johns Hopkins Bloomberg School of Public Health in Molecular Microbiology and Immunology where she is now an Associate Professor. Dr. Klein is a leading expert on sex differences in susceptibility to infection and currently has over 80 peer-reviewed publications, authored several book chapters, and edited two books on the broad topics of sex differences in response to infection and treatments for infectious diseases. During the 2009 influenza pandemic, she was commissioned by the WHO to evaluate and publish a report on the impact of sex, gender, and pregnancy on the outcome of influenza virus infection. Dr. Klein also has been invited to write reviews to introduce journal policies about sex reporting, wrote an Op Ed in the New York Times about sex-specific dosing of vaccines, and was lead author on an Opinion piece in PNAS defining the importance of sex as a biological variable in biomedical science. Her research has been highlighted in commentaries appearing in PNAS, Nature, and U.S. News and World Reports. Her research has been supported by grants from the National Institute of Allergy and Infectious Diseases, the National Science Foundation, and the National Foundation for Infectious Diseases. In 2010, she won the Society for Women's Health Research Medtronic Award for Science Contributions, which recognized her scientific contributions as well as her commitment to mentoring other female scientists.

## CHAPTER REPORT- ALPHA

Chapter report for October 2014 through October 2015.

Mailing Address: Melanie Gubbels-Bupp  
Department of Biology  
Randolph-Macon College  
Ashland, Virginia 23005

Advisor: Dr. Melanie Gubbels-Bupp      Email Address: melaniegubbelsbupp@rm.edu

Current Officers:	Name	Email address
President	Talbot Weston	TalbotWeston@go.rmc.edu
Vice-President	Kristin Sheetz	KristinSheetz@go.rmc.edu
Secretary	Brittaney Richie	BrittaneyRichie@go.rmc.edu
Treasurer	Nana Bamko	AdwoaBamfo@go.rmc.edu
Other (Historian)	Thom Morgan	ThomasMorgan@go.rmc.edu

Officers for next year if determined:

President	TBD
Vice-President	TBD
Secretary	TBD
Treasurer	TBD
Other	TBD

Current number of members

Student 48    Faculty 1    Pledges 0    Active Alumni 0

Frequency of meetings: Monthly

Function or purpose of Meetings:

chapter business <input checked="" type="checkbox"/>	fund raising <input checked="" type="checkbox"/>	social <input checked="" type="checkbox"/>
presentations <input checked="" type="checkbox"/>	conference planning <input checked="" type="checkbox"/>	other <input checked="" type="checkbox"/>

Presentations, lectures, seminars, etc. attended or as part of chapter meeting: Hosted seminar by Henry Castillo, President of Chi Beta Phi, Alpha Chapter 2014-2015, in regards to post graduate opportunities

Activities relative to the Annual Theme: N/A

Social Activities of Chapter: N/A

## Honors Awarded to Chapter Members:

### Name, honor

- Talbot Weston
  - Member of Omicron Delta Kappa
  - Member of Beta Beta Beta
  - Member of Rho Lambda
  - Douglas W. Foard Phi Kappa Beta Freshmen Award
  - Douglas W. Foard Phi Kappa Beta Sophomore Award
  - Omicron Delta Kappa Leadership Award
  - Ira L. Andrews Spirit of Fraternalism Award
  - Schapiro Undergraduate Research Fellowship
- Kristin Sheetz
  - Member of Omicron Delta Kappa
  - Member of Rho Lambda
  - Member of Gamma Sigma Alpha
  - Randolph-Macon College Student of the Year Award
  - Freshmen Chemistry Award
  - Randolph-Macon Presidential Scholarship Recipient
  - Schapiro Undergraduate Research Fellowship
  - Douglas W. Foard Phi Kappa Beta Freshmen Award
  - Douglas W. Foard Phi Kappa Beta Sophomore Award
  - William and Sue Schick Junior Leadership Award Scholarship
  - William and Sue Schick Senior Leadership Award Scholarship
- Brittaney Richie
  - Member of Beta Beta Beta
  - Randolph-Macon Presidential Scholarship Recipient
- Adwoa Bamfo
  - Member of Beta Beta Beta
  - Member of Omicron Delta Kappa
  - Member of Theta Alpha Kappa
- Thomas Morgan
  - Randolph-Macon Presidential Scholarship Recipient
  - Diversity Grant
- Haley Russ
  - Member of Omicron Delta Kappa
  - Member of Beta Beta Beta
  - Member of Gamma Sigma Alpha
  - Jackson Fellowship in Chemistry
  - Douglas W. Foard Phi Kappa Beta Freshmen Award
  - Douglas W. Foard Phi Kappa Beta Sophomore Award
  - Freshmen Chemistry Student of the Year
  - Shepard Medal in Organic Chemistry
  - Schapiro Undergraduate Research Fellowship



- Noelle Mckearney
  - Member of Psi Chi
  - Randolph-Macon Presidential Scholarship Recipient
  - Douglas W. Foard Phi Beta Kappa Sophomore Award
  - Who's Who Among Students Honoree
  - Schapiro Undergraduate Research Fellowship
- Alicia Cash
  - Member of Beta Beta Beta
  - Douglas W. Foard Phi Kappa Beta Freshmen Award
  - Douglas W. Foard Phi Kappa Beta Sophomore Award
- Linda Blackburn
  - Member of Order of Omega
  - Member of Rho Lambda
  - Member of Beta Beta Beta
  - Member of Omicron Delta Kappa
  - Randolph-Macon Presidential Scholarship Recipient
- Emily Kirk
  - Member of Omicron Delta Kappa
  - Member of Psi Chi
  - Member of Beta Beta Beta
  - Who's Who Among Students Honoree
  - IHSA First Team Academic Award
  - Klein-Maloney Fellowship for Women in the Sciences
  - Randolph-Macon Presidential Scholarship Recipient
  - Douglas W. Foard Phi Beta Kappa Sophomore Award
- Rebecca Waldman
  - Member of Psi Chi
  - Member of Omicron Delta Kappa
  - Member of Gamma Sigma Alpha
  - Member of Rho Lambda
  - Order of Omega- Greek Leadership Honor Society
  - Randolph-Macon Presidential Scholarship Recipient
  - Northern Virginia Alumnae Panhellenic Association President's Scholarship Recipient
  - Omicron Delta Kappa Sophomore Leadership Award
  - Order of Omega Emerging Leader Award
  - Douglas W. Foard Phi Beta Kappa Sophomore Award
  - Greek Woman of the Year
  - Excellence in Academic Performance Award
  - Jewish Student of the Year Award
  - Student Education Association Service Award
- Brooke Thompson
  - Member of Beta Beta Beta

- Dr. Paul H. Wornom Pre-medicine Scholarship Recipient
- Dr. Stephen and Georganne Long Scholarship Recipient
- Jackson Fellows Scholarship
- Courtney Lowers
  - Member of Beta Beta Beta
  - Member of Omicron Delta Kappa
  - Member of Rho Lambda
  - Randolph-Macon Presidential Scholarship Recipient
- Timothy Thoner
  - Member of Beta Beta Beta
  - Carillion Clinic Fellowship
  - Schapiro Undergraduate Research Fellowship
  - Douglas W. Foard Phi Beta Kappa Sophomore Award
- Alexi Bowden
  - Member of Eta Sigma Phi
  - Member of Beta Beta Beta
  - Member of Phi Beta Kappa
  - Simpson's Scholarship Recipient
  - Roberts Epps Jones Scholarship Recipient
  - Watts Biology Scholarship Recipient
- Marysa Clark
  - Member of Pi Delta Phi
  - Member of Psi Chi
- Trevor Fisher
  - Member of Sigma Delta Pi
  - Randolph-Macon Presidential Scholarship Recipient
  - Hershey Chocolate Scholarship Recipient
  - Comfort Systems USA Scholarship Recipient
- David Gibson
  - Member of Beta Beta Beta
  - Member of Eta Sigma Phi
  - Presidential Scholar
  - Douglas W. Foard Phi Kappa Beta Freshmen Award
  - Douglas W. Foard Phi Kappa Beta Sophomore Award
- Brennan Terhune-Cotter
  - Member of Psi Chi
  - Member of Phi Beta Kappa
  - Randolph-Macon Presidential Scholarship Recipient
- Braeshaun Bozier
  - Member of Psi Chi
- Kelly Abate
  - Member of Beta Beta Beta
- Jessica Caso
  - Member of Psi Chi

- Kaeleigh Olsen
  - Member of Pi Mu Epsilon
- Mark Heideman
  - Dean's Award Scholarship Recipient
- Eric Riha
  - Member of Beta Beta Beta
- Jessica Caso
  - Member of Psi Chi
- Ashley Andersen
  - Member of Beta Beta Beta
- Kristin Patrick
  - Member of Beta Beta Beta
- Micaiah Landrum
  - Member of Beta Beta Beta
  - Douglas W. Foard Phi Kappa Beta Freshmen Award
  - Douglas W. Foard Phi Kappa Beta Sophomore Award
- Cody Huber
  - Member of Psi Chi
  - Member of Omicron Delta Kappa
  - Randolph-Macon Presidential Scholarship Recipient
- Olivia Latham
  - Member of Beta Beta Beta
  - William Neal Cunningham Scholarship Recipient
- Thomas Morrisette III
  - Member of Sigma Delta Pi
  - Member of Beta Beta Beta
- Rachel Monkouski
  - Member of Psi Chi
  - Member of Omicron Delta Kappa
  - Member of Phi Alpha Theta
  - Member of Order of Omega
  - Randolph-Macon Presidential Scholarship Recipient
- Elizabeth Steiner
  - Member of Beta Beta Beta
  - Shepard Medal in Organic Chemistry
- Austin Goyne
  - Randolph-Macon Presidential Scholarship Recipient

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): N/A

Service to community: N/A

Trips or other activities: Attended 2014 Chi Beta Phi National Conference, and will attend and host the 2015 Chi Beta Phi National Conference

Please add any additional information or comments below.

Our chapter is open to students with a minimum GPA of 3.25 in the sciences and an overall GPA of 3.0. We are currently working to increase interest/awareness/activity on campus.

## CHAPTER REPORT- GAMMA

Chapter report for Fall 2014 through Spring 2015

Mailing Address: 80 Graham Circle Drive, Hampden-Sydney, VA 23943

Advisor: Dr. Herb Sipe

Email Address: hsipe@hsc.edu

Current Officers:	Name	Email address
President	Branch Vincent	VincentB16@hsc.edu
Vice-President	Robert Kerby	KerbyR17@hsc.edu
Secretary	Westley Eure	EureW16@hsc.edu
Treasurer	See above	See above
Other	NA	NA

Officers for next year if determined:

President	NA	NA
Vice-President	NA	NA
Secretary	NA	NA
Treasurer	NA	NA
Other	NA	NA

Current number of members

Student: 46      Faculty: 1      Pledges: 0      Active alumni: 2

Frequency of meetings: Once a semester

Function or purpose of Meetings:

chapter business x	fund raising	social
presentations	conference planning	other

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

NA

Activities relative to the Annual Theme:

NA

Social Activities of Chapter:

NA

Honors Awarded to Chapter Members:

Name, honor

NA

Other Chapter Activities:

Efforts to reactivate a chapter or establish a new one:

NA

Fund raising

NA

Service to school (include any awards by chapter)

NA

Service to community

NA

Trips or other activities

Chi Beta Phi National Conference 2014 (University of Mary Washington)

Please add any additional information or comments below.

## CHAPTER REPORT Epsilon

Chapter report for October 2014 through October 2015.

Mailing Address 2300 MacCorkle Avenue SE, Charleston, WV, 25304

Advisor – Ilona Sviderskaya

Email Address [ilonasviderskaya@ucwv.edu](mailto:ilonasviderskaya@ucwv.edu)

Current Officers:	Name	Email address
President	Emily Rider	<a href="mailto:emilyrider@ucwv.edu">emilyrider@ucwv.edu</a>
Vice-President	Taylor Pickens	<a href="mailto:taylorpickens@ucwv.edu">taylorpickens@ucwv.edu</a>
Secretary	Pete Walters	<a href="mailto:petewalters@ucwv.edu">petewalters@ucwv.edu</a>
Treasurer	Courtney Pierron	<a href="mailto:courtneypierron@ucwv.edu">courtneypierron@ucwv.edu</a>
Other	Jonathan Hanson	<a href="mailto:jonathanhanson@ucwv.edu">jonathanhanson@ucwv.edu</a>

Officers for next year if determined:

President	Jonathan Hanson	<a href="mailto:jonathanhanson@ucwv.edu">jonathanhanson@ucwv.edu</a>
Vice-President	Taylor Pickens	<a href="mailto:taylorpickens@ucwv.edu">taylorpickens@ucwv.edu</a>
Secretary	Tyler Newman	<a href="mailto:tylernernewman@ucwv.edu">tylernernewman@ucwv.edu</a>
Treasurer	Pete Walters	<a href="mailto:petewalters@ucwv.edu">petewalters@ucwv.edu</a>
Other	Seth Deskins	<a href="mailto:sethdeskins@ucwv.edu">sethdeskins@ucwv.edu</a>

Current number of members

student 10 faculty 2 pledges 0 active alumni 2

Frequency of meetings: one every other month

Function or purpose of Meetings:

Chapter business: Mostly discussing graduation attire and doing school demonstrations  
fund raising No fundraising was discussed this year

Social: School demonstrations and activities are the school were discussed

Presentations: No presentations were discussed this year

Conference planning: No conference planning was discussed this year

Other: Discussing community service events and school demonstrations

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

Activities relative to the Annual Theme: n/a

Social Activities of Chapter: School Demonstrations, forest clean-up, and an info night were held

Honors Awarded to Chapter Members:

Name, honor

Other Chapter Activities:

Efforts to reactivate a chapter or establish a new one:

No effort was taken during this time to reactivate membership

Fund raising

n/a

Service to school (include any awards by chapter)

n/a

Service to community

Demonstrations and forest clean-up events were held

Trips or other activities

n/a

Please add any additional information or comments below.

From October 2014 to October 2015, no events were planned for national and the chapter began to reestablish national membership. For the October 2015 to October 2016 year, the chapter will have had two new pledge groups and will have regained national membership, as long as planned to attend the national conference in October 2016.



## CHAPTER REPORT- ZETA

Chapter report for Fall 2014 through Fall 2015.

Mailing Address: Davis & Elkins College  
100 Campus Drive  
Elkins, WV 26241

Advisor – Dr. Michelle Mabry

Email Address: mabrym@dewv.edu

Current Officers:	name	Email address
President	Sarah Marshall	marshalls2@dewv.edu
Vice-President	Jessica Nelson	nelsonj2@dewv.edu
Secretary	Trisha Higgins	higginst2@dewv.edu
Treasurer	Guilherme Hubsch	condolohubschg@dewv.edu

Officers for next year if determined:

President	Jessica Nelson	nelsonj2@dewv.edu
Vice-President	Sarah Marshall	marshalls2@dewv.edu
Secretary	Trisha Higgins	higginst2@dewv.edu
Treasurer	Guilherme Hubsch	hubschg@dewv.edu

Current number of members:

student 7 faculty 2 pledges 2 active alumni 0

Frequency of meetings: Monthly

Function or purpose of Meetings:

chapter business X fund raising X social X  
presentations \_\_\_\_\_ conference planning X other X

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

- Spring 2015: Zeta Chapter sponsored a seminar by Tyler Hern. Tyler, a biologist with the US Fish & Wildlife Service, is a former member of Zeta Chapter.

Activities relative to the Annual Theme:

NA

Social Activities of Chapter:

- Fall Meet & Greet Pizza Party

#### Honors Awarded to Chapter Members:

- Colton Allen Biology & Environmental Science Departmental Achievement Award
- Guilherme Hubsch Business Administration & Entrepreneurship Departmental Achievement Award; Tatiana Jardetzky Scholarship in Foreign Languages & Cultures; Mathematics, Computer Science & Physics Departmental Achievement Award; Freeman J. Daniels Award for highest ranking junior; Academic Student-Athlete of the Year; Elected Student Assembly President
- Sarah Marshall Robert E. Urban Memorial Award

#### Other Chapter Activities:

Efforts to reactivate a chapter or establish a new one:

NA

Fund raising:

During fall finals, a basket of finals week necessities was raffled.

Service to school:

- Science Center Recycling
- Campus e-cycling
- Solar Panel Installation (with *Greenworks!*)
- Campus Clean-up

Service to community:

- Spruce Restoration project
- Adopt-a-Highway program
- Garlic Mustard pull on campus to remove invasive species
- Fundraiser for the Elkins Public Library

Trips or other activities:

- Colton Allen and Sarah Marshall participated in a research project with Dr. Shawn Stover. Their research was published in the August 2015 issue of the *Journal of Exercise Physiology Online*.
- Colton Allen did research in bioinformatics as a summer intern at Johns Hopkins University.
- Sarah Marshall did research in physiology as a WV-INBRE summer intern at Marshall University.
- Trisha Higgins interned at the USDA Forest Service.

- Guilherme Hubsch presented two papers at the Blue Ridge Undergraduate Research Conference.
- Jessica Nelson volunteered at Barbour County Animal Friends.

## CHAPTER REPORT- RHO

Chapter report for 08/26/15 through 12/12/15.

Mailing Address: West Liberty University  
Chi Beta Phi  
208 University drive  
West Liberty, WV  
26074, United States

Advisor – Dr. Theunis Van Aardt  
Email Address theunis.vanaardt@westliberty.edu

Current Officers:	Name	Email address
President	Austin Cusick	ASCUSICK@westliberty.edu
Vice-President	Jessica Payne	JNPAYNE@westliberty.edu
Secretary	Rebecca Barnes	RLBARNES@westliberty.edu
Treasurer	Courtney Pyeritz	CLPYERITZ@westliberty.edu
Other		

Officers for next year if determined:

President  
Vice-President  
Secretary  
Treasurer  
Other

Current number of members

student 58 faculty 21 pledges N/A active alumni 1

Frequency of meetings: held every second and fourth Wednesday of every month

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:

- West Liberty University is commonly represented well at various scientific research meetings; in turn, our chapter is looking to allow students to present and be informed about these opportunities.

- There are also various faculty research presentations that multiple members of the club attended.
- Guest speakers from the scientific and professional community present their occupation and explain what it entails to students interested in those fields

#### Activities relative to the Annual Theme:

- Various activities include the expanding of knowledge through student, faculty, or occupational presentations.
- Our chapter of Chi Beta Phi will also benefit the community by reaching out and donating through our campus wide activities.
- Lastly, more students will be inducted from more varying fields and majors signified by the Chi Beta Phi symbolisms and oath

#### Social Activities of Chapter:

- Our chapter strives to provide an environment for diverse students to co-mingle with one another amongst the different majors. Allowing more networking and the development of interpersonal co-operation between academic fields and personalities.

#### Honors Awarded to Chapter Members:

- Multiple members of the club have received research grants such as WV-NASA grants, as well as WV INBRE grants to perform research.
- Some of the members of Chi Beta Phi are also members of Alpha Chi, which is an honorary that only selects members of the academic top ten percent of the student population as nominated by faculty.
- Many Chi Beta Phi members have also won and received awards and placed, presenting at various research seminars including an Alpha Chi national conference, West Virginia Academy of Sciences, and the Mid-Atlantic Microbial Pathogenesis Meeting.

#### Other Chapter Activities:

##### Efforts to reactivate a chapter or establish a new one:

N/A

##### Fund raising

- Our chapter provides an annual chili cook-off as well as T-shirt sales and a carnation sale. The club may also provide a taste testing party using a taste altering fruit, as well as a possible video game tournament.

Service to school (include any awards by chapter)

- The chapter provides its fundraisers accessible to the campus community providing them with awards for participation

#### Service to community

- The benefits of the fundraisers will be directed towards those in need like local soup kitchens.

#### Trips or other activities

- Other activities include inviting professionals to meetings explaining their occupation to the members of the chapters to hopefully convince or intrigue the students

Please add any additional information or comments below.

## CHAPTER REPORT- KAPPA SIGMA

Chapter report for Oct 2014 through Oct 2015.

Mailing Address

Deborah Zies  
Jepson Science Center  
Univ. of Mary Washington  
1301 College Avenue  
Fredericksburg, VA 22401

Advisor – Deborah Zies

Email Address [dzies@umw.edu](mailto:dzies@umw.edu)

Current Officers:	Name	Email address
President	Kristina Krumpos	<a href="mailto:kkrumpos@umw.edu">kkrumpos@umw.edu</a>
Vice-President	Nicole Guinn	<a href="mailto:nguinn@umw.edu">nguinn@umw.edu</a>
Secretary	Leah Roth	<a href="mailto:lroth@umw.edu">lroth@umw.edu</a>
Treasurer	Abby Cox	<a href="mailto:acox@umw.edu">acox@umw.edu</a>
Other		

Current number of members  
student 21 faculty 2 pledges 0 active alumni 0

Frequency of meetings: Monthly

Function or purpose of Meetings: chapter business

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

- Members frequently attend departmental hosted speakers including:
  - Women in Science
  - Careers in Science
- Faculty candidate lectures
- Members presented original research at UMW's Research and Creativity Day

Social Activities of Chapter:

- Award Ceremony for graduating seniors April 13, 2015
- Post Induction celebration October 14, 2015

Honors Awarded to Chapter Members:

<u>Name,</u>	<u>Honor</u>
○ Kristina Krumpos	Chi Beta Phi Scholarship, 1 <sup>st</sup> place
○ Leah Roth	Chi Beta Phi Scholarship, 2 <sup>nd</sup> place

Other Chapter Activities:

- Last year, we hosted the National Chi Beta Phi Meeting

Service to school (include any awards by chapter)

- Chi Beta Phi Student Selected Faculty Award
- Professor Jennifer Magee

Service to community

- Pumpkin Palooza (community event where kids are invited to Halloween themed activities, Chi Beta Phi had a "mad-scientist" theme table and performed experiments using momentum and conservation of energy) Fall 2014
- UMW's Annual Calculus Tournament (Event where high schools bring teams of calculus students to compete against each other in a double elimination tournament, Chi Beta Phi helped staff the event) Spring 2015
- Spring Forward (spring equivalence to Pumpkin Palooza where we had a conservation of energy magic trick and simple chromatography flowers) Spring 2015
- Members served as screeners and judges for the Richmond Metro Science Fair



## CHAPTER REPORT- PHI

Chapter report for Univ. Memphis through 2016.

Mailing Address                      Univ. Memphis  
   Dept. Biological Sciences  
   3774 Walker Ave. Memphis, TN 38152

Advisor – David Freeman Email Address dfreemn1@memphis.edu

Current Officers:	Name	Email address
President	Olivia Freeman	
Vice-President	Lucas Skinner	
Secretary	Mariam Osman	
Treasurer	Bridget Shaner	
Other		

Officers for next year if determined:

President                      \_\_\_\_\_  
Vice-President              \_\_\_\_\_  
Secretary                     \_\_\_\_\_  
Treasurer                    \_\_\_\_\_  
Other                            \_\_\_\_\_

Current number of members

student      13 faculty 1 pledges \_\_\_\_\_ active alumni \_\_\_\_\_

Frequency of meetings: Bi-Monthly

Function or purpose of Meetings:

chapter business x fund raising \_ social \_\_\_\_\_  
presentations \_\_\_\_\_ conference planning \_\_\_\_\_ other \_

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

\_\_\_\_\_

Activities relative to the Annual Theme:

\_\_\_\_\_

Social Activities of Chapter

\_\_\_\_\_

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 CHI

Chapter report for August 2014 through May 2015.

Mailing Address 1301 Columbia College Drive Columbia, SC 29203

Advisor – Dr. Adrienne Oxley                      Email Address ayoxley@my.columbiasc.edu

Current Officers:	Name	Email address
President	Myranda Jackson	myranda.jackson@my.columbiasc.edu
Vice-President	Adrian Coates	adrian.coates@my.columbiasc.edu
Secretary	Jacqueline Mayorga	jacqueline.mayorga@my.columbiasc.edu
Treasurer	Jasmin Jones	jasmin.jones@my.columbiasc.edu

Officers for next year if determined:

President	Jasmin Jones	jasmin.jones@my.columbiasc.edu
Vice-President	Sarah Smith	sarah.smith@my.columbiasc.edu
Secretary	Jacqueline Mayorga	jacqueline.mayorga@my.columbiasc.edu
Treasurer	Tabitha Faulks	tabitha.faulks@my.columbiasc.edu

Current number of members

student 9    faculty 1    pledges 3    active alumni \_\_\_\_\_

Frequency of meetings: Bi-Weekly

Function or purpose of Meetings: chapter business N/A Fund raising √ social √  
presentations N/A conference planning N/A

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

1 Be the Match Presentation at Spring Meeting

Activities relative to the Annual Theme: 5 Social Activities of Chapter: 0

Honors Awarded to Chapter Members: N/A

Other Chapter Activities:

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

Fund raising

- Be the Match- Spring Fundraising Event to increase awareness about bone marrow donors and to acquire potential donor sign-ups (50 signed-up to be on the national registry)

Service to school (include any awards by chapter) 2 Service to community N/A

Trips or other activities N/A

- Participation in Activities fair
- Participation in Annual Boo-riffic Event

Please add any additional information or comments below N/A

## CHAPTER REPORT-ALPHA BETA

Chapter report for October 2014 through October 2015

Chapter – Alpha Beta                      Mailing Address –                      Dr. Timothy Goldberg  
Lenoir-Rhyne University  
Campus Box 7141  
Hickory, NC 28603

Advisor – Dr. Timothy Goldberg      Email Address –                      timothy.goldberg@lr.edu

Current Officers:	Name	Email address
President	Amber Walser	amber.walser@my.lr.edu
Vice-President	Pashence Johnson	pashence.johnson@my.lr.edu
Secretary	John Falls	john.falls@my.lr.edu
Treasurer	Breanna Lucas	breanna.lucas@my.lr.edu
Historians	Meredith Gladden	meredith.gladden@my.lr.edu

Officers for next year if determined: N/A

Current number of members:

student 15

faculty 14

pledges 7 eligible and interested students, October 2015

active alumni 0

Frequency of meetings: monthly

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: N/A Activities relative to the Annual Theme:

Social Activities of Chapter:

- Cookout/Membership Drive on October 2, 2015 on LRU campus
- Cookout/Initiation ceremony on April 26, 2015 at faculty member's house, as part of the Campus Celebration of Excellence at LRU

#### Honors Awarded to Chapter Members:

- Honor cords were earned by 17 seniors in 2014-2015.

#### At our University's Academic Awards Ceremony in April:

- Member Richard Jordan received the Steelman Scholarship.
- At the Collegiate Academy of the NCAS, Alan-Michael Bresch received a first place and Brittany Coursen a second place in the Immunology, Microbiology, Cell Development Biology and Chemistry category, while Sam Anderson and Marie Mauhar received second and third place awards in Health and Behavioral Sciences. Stephen Amoah also received a second place for his poster in Biotechnology, Chemistry, Physics and Engineering, Genetics and Genomics. Other student participants included Justin Schwartz, Brittany Coursen, Elliott Millinor, and Caitlin Rubow.
- Member Brianna Belsky and prospective member Ashlyn Karre were awarded GlaxoSmithKline Women in Science Scholarships.
- Member Stephen Amoah won the Outstanding Senior Research Award.
- Member Caitlin Rubow won the Cecilia Willard Natural Science Medal.
- Member Matthew Renegar won the Carolyn B. Huff Teacher/Scholar Award, and a Mathematics Outreach Award.
- Member Nikki Hollar won a Student Teacher Award for Elementary Education.
- Member Leigha Myers won a Student Teacher Award for Secondary Mathematics, and a Mathematics Outreach Award.
- Member Ben Carrion won a Jane Royster Leadership Award.
- Member Cydney Caldwell won a Computer Programming Award and was one of four students to win the Team Competition Award for CS.
- Member Marie Mauhar won the National Science Foundation Mathematics Scholar award.
- Member Jeffrey Fisher was one of two awardees of the Fritz Mathematics Medal.
- Prospective member Micah Rufsvold won the Putnam Competition Achievement Award.
- In the Spring Semester, prospective member Micah Rufsvold was elected President of the Student Government Association.
- At the Southeastern Section Meeting of the Mathematical Association of America, member Jeffrey Fisher's gave a presentation on his student research that won first place in his group in the Student Presentation Competition.
- Member Brianna Belsky was co-captain of the University's Women's Soccer Team for the Fall 2014 and Fall 2015 seasons.

#### Other Chapter Activities:

Efforts to reactivate a chapter or establish a new one:

\_\_\_\_\_

Fund raising  
None this year.

#### Service to school (include any awards by chapter)

- At our Spring Cookout/Initiation Ceremony, members presented Dr. Karen McDougal with a card, cake, and gift in honor of her retirement and her many years of service to the university, the Biology Program, and Chi Beta Phi.
- In March, members brought in, created, and distributed small teacher appreciation gifts and cards to University mathematics and science faculty members.

#### Service to community

- In March, a large number of members helped with the Science Olympiad for local high school students hosted at our University.
- Also in March, several members helped with the High School Math Contest hosted at our University.
- In April, several members helped with the Elevate Mathematics Tournament for Elementary Students, hosted at our University.

#### Trips or other activities

- In April, members Alan-Michael Bresch, Brittany Coursen, Sam Anderson, Marie Mauhar, Stephen Amoah, Brittany Coursen, Elliott Millinor, and Caitlin Rubow presented their research in the Derieux Paper Competition at the North Carolina Academy of Sciences meeting in Raleigh, NC.

Please add any additional information or comments below.

Planned activities for the 2014-15 academic year include:

- Science Olympiad March 2016
- High School Math Contest 2016
- Elevate Mathematics Tournament 2016
- Create and distribute periodic "Surprising Math/Science Facts" around campus.

## CHAPTER REPORT-ALPHA DELTA

Chapter report for Oct. 2014 through Oct. 2015.

Chapter: Alpha Delta

Mailing Address: Dr. Edward Chikwana  
Franklin College  
101 Branigin Blvd.  
Franklin, IN 46131

Advisor: Dr. Edward Chikwana    Email Address: echikwana@franklincollege.edu

Current Officers:	Name	Email address
President:	Kayla Hammelman	kayla.hammelman@franklincollege.edu
Vice-President:	Sophia Abner	Sophia.Abner@franklincollege.edu
Secretary	Austin Carlton	Austin.Carlton@franklincollege.edu
Treasurer	Kathryn Stoia	Kathryn.Stoia @franklincollege.edu
Other		

Officers for next year if determined:

President  
Vice-President  
Secretary  
Treasurer  
Other

Current number of members

Student 37    faculty 5    pledges \_\_\_\_\_    active alumni 2

Frequency of meetings: Monthly

Function or purpose of Meetings:

chapter business X    fund raising X    social X  
presentations \_\_\_\_\_    conference planning \_\_\_\_\_    other X

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

- We are hosting a presentation from one of our Pre-law advisors to address science students who are interested in applying to law school. One of our alumni (chemistry) is in law school and we two CBP seniors who are both in the process of applying to law school. This is in line with our commitment to provide our members with alternative careers. In the spring we are planning to invite someone from IUPUI School of Public Health to address interests in public health in support of a new 3 + 2 accelerated Masters of Public Health partnership our school has started with IUPUI Fairbanks School of Public Health.



### Social Activities of Chapter:

- In May of every year, we organize a field trip to send off graduating seniors. We took graduation seniors to Go-Ape Zipline Adventures in Indianapolis. This was our social and end-of-the-year event.
- At the beginning of this academic year, we hosted a Welcome mixer, where we invited all the science students from mathematics, computer science, biology, chemistry, biology and psychology. We provided pizza and other refreshments. Students were given the opportunity to interact with each other as well as with professors. This year we co-hosted the mixer with chem-club who provided some entertainment through fun experiments that were hands-on.

### Honors Awarded to Chapter Members:

- Most of our members have the highest GPA at school and in their respective majors. They receive a wide range of scholarships and academic awards, which reflect their hard work, dedication and commitment to excellence.

### Other Chapter Activities:

#### Efforts to reactivate a chapter or establish a new one:

##### Fund raising

- During the last academic year, we did not hold any fundraising activities since we were allocated a large fund from Student Congress. We managed to use some of our funds to help other science clubs in their fundraising events.

##### Service to school (include any awards by chapter)

- The mixer we hosted is a way on introducing science freshmen to upperclassmen and to their science professors.

##### Service to community

- We are planning a shoe drive in the spring to help collect new shoes for a non-profit organization called Shoe Closet (<http://www.shoeclosets.org>) that provides shoes for low income high schoolers.

##### Trips or other activities

Please add any additional information or comments below.

- Our club is dedicated to providing science students with an array of various events where they can broaden their knowledge while networking with their peers

and professionals. Our goal is to foster greater appreciation of science not only on our campus, but also in the community and to also appreciate the array of different career opportunities that a science degree can open. Members will be engaged in various activities where they will learn about the many opportunities available in their scientific area of study as well as other possibilities outside their majors. We plan to organize guest lectures, social events, fundraising events, shadow days, field trips and graduate student panels.

## CHAPTER REPORT- ALPHA IOTA

Chapter report for October 19, 2014 through October 20 , 2015.

**Chapter – Alpha Iota**                      **Mailing Address**    Alpha Iota Chapter  
C/o Paul Peck Advisor  
Glennville State College  
200 High St.  
Glennville, WV 26351

**Advisor - Paul S. Peck**                      **Email Address** Paul.Peck@glennville.edu

**Associate Advisor - Larry Baker** **Email Address** Larry.Baker@glennville.edu

<b>Current Officers:</b>	<b>Name</b>	<b>Email address</b>
President	Emily Ramezan	ramezan.emily@gsc.glennville.edu
Vice-President	Sarah Gillespie	Gillespie.saraha@gsc.glennville.edu
Secretary	Tia LeMaster	lemaster.tiam@gsc.glennville.edu
Treasurer	Larisa Gordon	Gordon.larisad@gsc.glennville.edu
Historian	Sam Canfield	canfield.samuela@gsc.glennville.edu

### Officers for academic year 2014-2015:

President	Samantha Fulks	fulks.samanthab@gsc.glennville.edu
Vice-President	Judith Urbanic	urbanic.judithj@gsc.glennville.edu
Secretary	Tia LeMaster	lemaster.tiam@gsc.glennville.edu
Treasurer	Randy Smith	7th.Draigon@gmail.com
Historian	Katy Younts	katyyounts427@gmail.com

### Current number of members:

student      17    faculty 16    pledges 0    active alumni 1

**Frequency of meetings:** At least monthly and as needed.

### Function or purpose of Meetings:

chapter business     fund raising                       social   
presentations       conference planning

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

**Presentations by faculty members sponsored by Chi Beta Phi:**

Presenter	Status	Title	Date
David O'Dell	Faculty	"Fibonacci and the Golden Ratio: Facts and Fallacies"	November 18, 2014
Wenwen Du	Faculty	"A Ball, a Cube, and 'Ears': An Introduction to Polycrystals."	April 23, 2015

**Other Presentation activity by Chapter members**

**Fall 2015 Chi Beta Phi National Conference**

Judith Urbanic

"Effects of the Antidepressant Imipramine on Long Term Potentiation (LTP) and Brain Derived Neurotrophic Factor (BDNF) in the Rat Hippocampus"

Adam Wilson

"Modeling the Transport of Glutaraldehyde in Soil"

**Presentations to the Glenville State College Board of Governors**

Sam Canfield

"Pocket Gopher Activity Across Elevation Gradients."

**Annual Undergraduate Research Day at the West Virginia State Capitol Rotunda**

Sam Canfield presented his research on the behavioral variation of pocket gophers in different habitats.

Emily Ramezan presented her research on the effect of temperature-induced coral bleaching on genes in sea anemones.

Randy Smith presented research exploring the regulation of cancer cell multiplication by a specific hydrocarbon receptor.

**West Virginia Academy of Science**

Tia LeMaster and Kevin Evans

"Effect of UV Radiation on anti-Markovnikov Hydrobromination of Alkenes" Poster

**2014 Pioneer Showcase**

Emily Ramezan and Sara Sawyer

“The effect of temperature-induced coral bleaching on the MMP genes in the sea anemone *Aiptasia pallida*”

Steven Pifer and Kevin Evans

“Anti-Markovnikov hydrobromination of alkenes”

Dr. Ross Conover

“How to breed at high elevations: lessons learned from the mountain white-crowned sparrow”

Tia LeMaster and Kevin Evans

“Effect of UV light on anti-Markovnikov hydrobromination” Poster

Samuel Canfield (Chi Beta Phi), Jennifer Rudger, Josh Lynn, Ross Conover (Chi Beta Phi) “Pocket gopher activity across elevational gradients” Poster

### **Activities relative to the Annual Theme:**

None

### **Social Activities of Chapter:**

The Chapter had refreshments and social time before sponsored presentations which were open to all who attended. The Chapter had a party as part of an induction ceremony in December. The Chapter sponsored an End of the Spring Semester Picnic in May.

### **Honors Awarded to Chapter Members:**

<b>Name</b>	<b>Honor</b>
Samuel Canfield	Shared second place, Science Poster, 2015 Pioneer Showcase Chisler Scholarship (Fall 2015)
Joe Evans (FACULTY)	Inducted into the West Virginia University College of Education and Human Services (CEHS) Hall of Fame GSC Alumni Achievement Award
Samantha Fulks	Chisler Scholarship (2014-2015)
Larisa Gordon	2015 Homecoming Queen
Kayleigh Huck	2015 Student Leadership Award (at Commencement) Chi Beta Phi Pin & Graduation Honor Cord Graduated Cum Laude

## GSC Honors Convocation (Science Department recognition)

Judith J. (Urbanic) Kennen	Shared award for best presentation at 2014 Chi Beta Phi National Conference First Place Science Category, 2015 Pioneer Showcase Chisler Scholarship (2014-2015)
Tia LeMaster	Received \$250 Meadors Research Grant from Chi Beta Phi First Place, Science Poster, 2015 Pioneer Showcase Hunt-Stalnaker Scholarship (Fall 2015) Pribble Award (2014-2015)
Steven Edward Pifer II	Received \$250 Meadors Research Grant from Chi Beta Phi GSC Honors Convocation (Science Department recognition) Hunt-Stalnaker Scholarship (2014-2015 and Fall 2015)
Randy Smith	Chi Beta Phi Pin & Graduation Honor Cord Graduated Cum Laude GSC Honors Convocation (Science Department recognition) Wagner Science and Math Award Hunt-Stalnaker Scholarship (2014-2015) Wagner Award (2014-2015)
Adam D. Wilson	Chi Beta Phi Pin & Graduation Honor Cord

### **Other Chapter Activities:**

#### **Efforts to reactivate a chapter or establish a new one:**

None

#### **Fund raising:**

The Chapter had three major fund raising projects.

In the fall semester, the Chapter sponsored a 50-50 raffle during homecoming week. We netted \$80.50 from this project. Later in the fall semester, the Chapter held a basket bonanza raffle in which we raffled several baskets filled with special themed prizes and/or GSC novelty items. As the baskets and items were donated, this project was also very successful and many members of the Chapter were involved in it. The Chapter made \$239.00 on this project. In the spring semester, we again held a Valentine's Day Rose Sale. A generous alumni member of the Chapter bought the roses. Many members of the Chapter were involved in processing and selling roses and the sale was the most successful in recent memory. The Chapter made \$705.00 from this project.

### **Service to school (include any awards by chapter)**

The Chapter's presentations were advertised and open to the campus community.

The Chapter continued to assist the campus wide recycling program. Chapter members were responsible for taking recyclables from Science Hall to the campus collection center.

The Chapter aided in some campus beautification work.

The Chapter placed two bird feeders near the campus nature trail and, with a grant from the Student Government Association, bought bird food for use in the feeders.

The Chapter participated in the banner contest during the Fall 2015 homecoming week, winning the 3<sup>rd</sup> place in the contest with a banner emphasizing major science and math advances from the 1990s. Chapter members marched in Homecoming parade with the banner.

### **Service to community:**

Our presentations were advertised in local media and open to the public.

### **Trips or other activities**

Chapter members Larry Baker, Kevin Evans, Joe Evans, Samantha Fulks, Judith (Urbanic) Kennen, Tia LeMaster, David O'Dell, Paul Peck, and Adam Wilson attended the 67<sup>th</sup> National Conference of Chi Beta Phi at the University of Mary Washington. The Chapter won the Blackwell Distance Award.

### **Science Grants**

The Chapter supported Tia LeMaster's presentation at the West Virginia Academy of Sciences meeting with a \$139.00 grant for lodging.

### **Please add any additional information or comments below.**

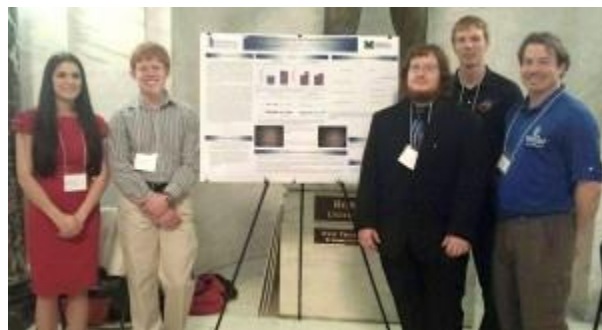
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List of new members inducted during the period since the last Chapter Report:

Charles F. Schmidt Jr.	(STAFF/FACULTY)	October 21, 2014
Elisabeth A. Coombs		October 21, 2014
Samuel A. Canfield		December 3, 2014
Sarah Gillespie		March 2, 2015

Larisa Gordon  
Amara Autumn Yoak

March 2, 2015  
March 2, 2015

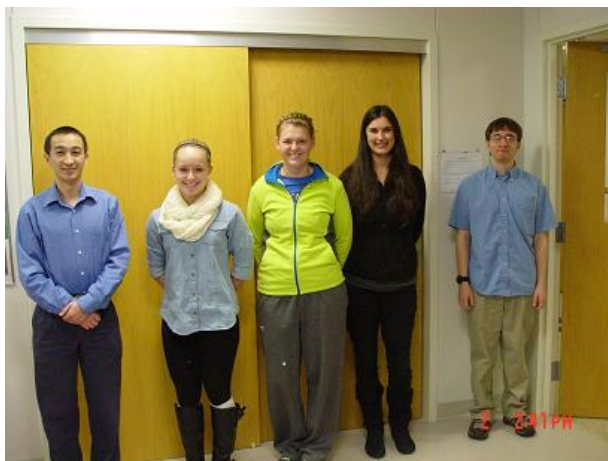
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Undergraduate Research Day at the State Capitol: Wednesday, March 4, 2015  
Emily Ramezan (Chi Beta Phi), Samuel Canfield (Chi Beta Phi), Randy Smith (Chi Beta Phi), Jonathan Rhodes, and Dr. Ross Conover (Chi Beta Phi) at Undergraduate Research Day in Charleston

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**2014-2015 Alpha Iota Chapter Pledge Class at December Installation Meeting**



Left to right: Professor Wenwen Du, Tia LeMaster, Kayleigh Huck, Kathryn Younts, and William Alderman

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## **CHAPTER REPORT- ALPHA XI**

Dr. James E. Corrigan, moderator of the Alpha Xi chapter at St. Francis College (Brooklyn) reported that on Oct. 17, 2015 with the assistance of two alumni (Prof. Rami Alsaber and Elizabeth Giron) they inducted 32 new members. Elections for officers will be held the first week of November.

## CHAPTER REPORT-ALPHA RHO

Chapter report for October 2014 through October 2015.

Chapter – Alpha Rho      Mailing Address 2300 Highland Road, Batesville, AR 72501

Advisor – Dr. Jeremy Chapman      Email Address jeremy.chapman@lyon.edu

Current Officers:	name	Email address
President	Lauren Gunderman	Lauren.gunderman@lyon.edu
Vice-President	Marvin McCalman	Marvin.mccalman@lyon.edu
Secretary	Jean Mugiraneza	Jean.mugiraneza@lyon.edu
Treasurer	Jean Mugiraneza	Jean.mugiraneza@lyon.edu

Other

Officers for next year if determined:

President

Vice-President

Secretary

Treasurer

Other

Current number of members

students **12**      faculty **1**      pledges **22**      active alumni **0**

Frequency of meetings: Monthly

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:

- Jason DeMoulied presented his computer science research as part of a chapter meeting.
- Zebulon Schichtl presented his chemistry research as part of a chapter meeting.

Activities relative to the Annual Theme:

Social Activities of Chapter:

- Participation in science and mathematics presentations, induction ceremony, and regular meetings.

Honors Awarded to Chapter Members:

Other Chapter Activities:

Efforts to reactivate a chapter or establish a new one:

- Actively recruiting new members, planning induction ceremony for new members, and started a monthly research lecture series as part of our regular meetings.

Fund raising:

Service to school (include any awards by chapter)

- Service to community: All members participate in Lyon College's Service Day, a day devoted to community service.
- Members volunteered at the ACTM Mathematics Contest held annually at Lyon College. They performed numerous tasks including proctoring and grading.

Trips or other activities:

Please add any additional information or comments below.

## CHAPTER REPORT- ALPHA PHI

Chapter report for April 10, 2013 through October 22, 2013.

Chapter – Alpha Phi

Mailing Address 5735 College Parkway

Mobile, AL 36617

Advisor – Dr. L Walker

Email Address: lparsley@umobile.edu

Current Officers: name

Email address

President Molley Ward

molleyword@live.com

Vice-President Katie Belue

kbelue70@rams.umobile.edu

Secretary Sophia Houston

sdhouston11@gmail.com

Treasurer Sophia Houston

Other

Officers for next year if determined: N/A

Current number of members:

student 8 faculty 3 pledges 4 active alumni 6

Frequency of meetings: 4 per semester

Function or purpose of Meetings:

chapter business X fund raising X social X

presentations X conference planning X other

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

- Flu Vaccine - Dr. Custodio, University of South Alabama - Feb 27, 2013
- Chiropractic - Mackel Harris, Life University
- Pharmacy - Dr. Woosley, Auburn University - September 11, 2013

Activities relative to the Annual Theme:

Social Activities of Chapter:

- End of year celebration/ Potluck April 26, 2013

Other Chapter Activities:

Efforts to reactivate a chapter or establish a new one:

Established Alpha Phi Chapter - April 10, 2013

Fund raising:

Student Government Association Funding

Service to school (include any awards by chapter):

- Clean-up of campus trails – March 2013

Service to community:

- Tornado Relief – Supply drive for Red Cross of Hattiesburg, MS – April-May 2013
- USA's Women and Children Hospital – March 22, 2013

Trips or other activities

Please add any additional information or comments below.

## Report of the President 2015

This has been a very eventful year in both a positive and negative way. We welcomed a new chapter, Alpha Chi at the University of Colorado Boulder, but we lost a tireless worker, who supported and enhanced the Honorary in many ways, Mr. Carl T. Meadors. Mr. Meadors did so many things for the Honorary that a couple of years ago I began to encourage him to detail "The Operation of the Treasurer" that could be passed to his successor. Most contact that chapters had with the Honorary was with him, so the position is critical to the ongoing success of the Honorary. I stepped up my efforts last year after he was not able to make conference due to health reasons. I wish I had gotten further before he became too ill to help. In the spring I lost contact with him and was only able to reconnect shortly before his death on August 18, 2015. He helped pull the Honorary through some difficult times and is largely responsible for the great position the Honorary is in today. Secretary Mabry and I have been able to straighten things out with the IRS and the banks that the Honorary deals with. The official address had been the University of Charleston because of Mr. Meadors long association with that University, but with his passing we have changed the official address to Davis and Elkins College in Elkins, WV. We felt it was important to keep things in West Virginia for the present time. I have recreated the various documents important to the Honorary like the membership certificates, awards, etc. He provided printed examples but no digital files. I have successfully ordered graduation cords and jewelry and have that on hand. The process was made more difficult by the fact that his home was burglarized while he was in the hospital and we lost a number of items. I am currently working with the family to recover as much as I can concerning the Honorary from his home. I will discuss this in greater depth in the Report of the Treasurer. Because we are not currently in an election year, I will propose in New Business that I serve in the role of Treasurer until elections at next year's conference. By that time I should have detailed instructions concerning the functioning of the treasurer position in digital format. We have already begun to divide some of the other duties that Mr. Meadors had performed for years among the other officers.

On a happier note, I continue to work on creating a new website that is easier to maintain. In addition to discussions resulting in the formation of the new chapter in Colorado, after numerous discussions with students at the University of Charleston, Epsilon chapter is reactivating, something I know Mr. Meadors would be very happy about. He had led that chapter for many years prior to his retirement. We had a travel mug made to commemorate our centennial.

I have been in contact with Dr. Adrienne Oxley chapter advisor for Chi in Columbia, SC and she reported some loss to the college or the faculty as a result of recent floods there but overall they have been very fortunate.

In my last report I mentioned the importance of having active co-advisors since most communications from the National go through the chapter advisors. I want to continue to encourage co-advisors. The National also suffered when two chapter advisors who were also board members abruptly left their positions. A suggestion I will try to

implement on the national level and encourage on the chapter level is to use a file sharing program such as OneDrive, Dropbox, or Google Drive to store important documents and make them available to the appropriate persons. I suggested this when I visited Colorado to install Alpha Chi chapter and found out that they use Google Drive. This means their chapter reports, membership lists, expense reports, etc. will all be stored and can easily be passed on to new officers. On the national level it will mean that all board members can access all relevant documents.

Respectfully submitted by the President, William J. Pohley

### **Report of the Vice-President 2015**

Deborah Zies reported that Meadors grants awarded to Glennville State College students Sevene Pifer and Tia LeMaster. She encouraged others to apply

### **Report of the Secretary 2015**

Most of the past year's work has come from preparing for the National Conference. This includes gathering information from the host chapter, sending announcements to advisors and preparing the Record. I am still in possession of four large boxes of Chi Beta Phi memorabilia and records donated from Alpha chapter. Much of it consists of membership cards, but there are a few older copies of the Record as well as some scrap books. I have considered scanning the items so they can be made available electronically, but have not made progress on that. Any recommendations would be greatly appreciated. I also worked closely with Bill Pohley and Huntington National Bank to have accounts transferred over to my name after the passing of C.T. Meadors. The accounts are now stabilized, with new checks ordered.

Respectfully submitted, Michelle Mabry, Ph.D.



## Treasurers Report 2015

This report covers the period from October 2014 thru September 2015.

The treasury remains stable. As a result of Mr. Meadors passing there were was a bill that was unpaid and a request for membership certificates that was fulfilled. I am happy to report that these items were successfully resolved. After discussions with the IRS we are once again in good standing and continue to maintain our status as a tax exempt organization on the federal level.

As a result of Mr. Meadors death and the burglary at his home, we have been unable to obtain the check register so I am not able to provide a detailed financial statement. Because we lost our checkbook as well as the register, Secretary Mabry closed the old account and opened a new one. Because of a bank error I was not listed on the Huntington Bank checking account. That has been resolved now. Unfortunately Mr. Meadors was the only person on our savings account at Citizens Bank of Morgantown, WV, but we are working to change that and will have both Dr. Mabry's name and mine on that account as well.

Our savings account showed a modest increase because of the currently low interest rates and was \$7,150.59 on Sept. 30, 2015.

The checking account balance on Sept. 30, 2014 was \$36,645.68 and currently (Oct. 21, 2015 ) stands at \$44,283.56

Factors responsible for this difference include the cost of the commemorative mugs, the installation of the new chapter and the cost reordering cords and jewelry, some of which was lost as a result of the burglary of Mr. Meadors home. As chapters order jewelry and cords, some of this money will be put back into the account. I want to remind people that we do not charge for postage so whenever it is possible to group orders it is helpful. Speaking of postage, I have begun to mail certificates using USPS Priority Mail envelopes. A couple of chapters reported some damage to certificates in the past when they were sent in a large envelope through regular mail. It adds about \$2.00 per mailing but I think it is money well spent.

In New Business, I will ask for approval to continue to serve as Treasurer at least until our next election of national officers at the 2016 National Conference. I am working very hard to make the position as easy to fulfill as possible because it is critical to the continued success of the Honorary.

Respectfully Submitted by the President, William J. Pohley  
24 October 2015

## Obituary

Carl Thomas "C.T." Meadors, 82, of St. Albans WV, passed away Tues. Aug. 18, 2015, at Southeast Georgia Health System Camden, Ga.

Born July 16, 1933, at Nitro, to the late Ivan and Gladys Erskine Meadors. He was preceded in death by his wife, Merewyn C. Davis Meadors; and brother, Jim Meadors. Carl graduated from Morris Harvey College with a Bachelor of Science degree in Biology, he received a Master of Science degree from WVU and studied there and at Arizona State University towards his doctorate. He retired as Emeritus Professor from the University of Charleston with 40 years of service. He was a recipient of the Outstanding Faculty Award by the UC Alumni Association and a National Certificate of Merit by the National Academic Advising Association for outstanding student advising. He was a United States Navy veteran having served in the Korean War, a board member of the West Side Volunteer Fire Department, a member of the American Legion and a board member of Chi Beta Phi National Science Honorary having served as president and treasurer and also was Advisor of Epsilon Chapter at UC. He presented a number of scientific papers at national conferences and was elected at a national conference of the Honorary as the Outstanding Chapter Advisor.

Surviving are his sons and daughter-in-law, Sean T.S. and Ladonna Meadors of St. Marys, Ga. and Ian Andrew Meadors of St. Albans; grandchildren, Sarah, Tehya, Andrew and Merewyn.

Funeral service will be held at 2 p.m. Sun. August 23, at St. Andrew United Methodist Church, 815 Kanawha Terrace, St. Albans with the Rev. Krysta Rexrode Wolfe officiating. Burial will be in Teays Hill Cemetery, St. Albans with military honors conducted by the American Legion Post No. 93, Kenova. Friends may call from 6 to 8 p.m. Saturday at the funeral home.

You may share memories or condolences with the family at [www.chapmanfuneralhomes.com](http://www.chapmanfuneralhomes.com). Bartlett-Chapman Funeral Home, family owned and located at 409 Sixth Ave., St. Albans is honored to serve the Meadors family.

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See more at:

<http://www.wvgazette.com/article/20150821/OBIT/308219991/1120#sthash.fkGj7IVe.dpuf>



## **Committee Reports**

### **AWARDS COMMITTEE**

#### Host Chapter Award

Alpha  
Randolph-Macon College  
Ashland, VA

#### Blackwell Distance Award

Alpha Iota  
Glennville State College  
Glennville, WV

#### Outstanding Chapter Award

Zeta  
Davis & Elkins College  
Elkins, WV

#### National Key Award

None awarded

#### Most Improved Chapter Award

Rho  
West Liberty University  
West Liberty, WV

#### Outstanding Advisor

None awarded

### **PRESENTATIONS COMMITTEE**

First Rebecca Barnes, Rho, West Liberty University  
First McKensie Mason, Rho, West Liberty University  
Third Kaeleigh Olsen, Alpha, Randolph-Macon College

## Presentation Abstracts

### **Identification of Insertion Sequence Movements in *Escherichia coli* Using Next Generation Sequencing Technologies**

*Colton Allen, Mentor Katie Cox, Dr. Joel Schildbach, Dr. Frederick Tan  
Johns Hopkins University*

When a plasmid is initially inserted into a host, the fitness (growth) of the organism decreases, but over time this fitness returns to a higher growth rate than initially. What is the genetic basis behind this change? The best way to determine this is by looking at the types of mutations present, and the mutations that contribute most. Insertion sequence movements are difficult to find using next generation sequencing technologies, but contribute highly to the mutations found in the *Escherichia coli* (*E. coli*) genome, making them of high importance. These mutations were explored and a possible pipeline for identification was produced.

## **The role of the erythrocyte cytoskeleton protein spectrin during invasion by *Francisellatularensis*.**

*Rebecca Barnes, Deanna M. Schmitt, Tricia L. Gilson, and Joseph Horzempa*  
*Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV*

*Francisella tularensis* classified as a Category A bioterrorism agent by the Centers for Disease Control and Prevention. Inhaling as few as ten of these bacteria can cause acute, lethal pneumonia. Studies using mouse models of infection have shown that erythrocyte invasion is a novel feature of *F. tularensis* during infection; however, the mechanism by which this bacterium enters red blood cells is unknown. Cytoskeletal rearrangement of other host cells such as macrophages and hepatocytes is required for entry of *F. tularensis*. In this study, we evaluated the role of the major erythrocyte cytoskeletal component, spectrin, in red blood cell invasion. To test this, human erythrocytes were treated with venom from the Blue-bellied black snake (*Pseudechis guttatus*), which disrupts the spectrin in the cytoskeleton. We also investigated the role of band 3 protein in red blood cell invasion using antigen-binding fragments of anti-band 3 antibodies. Treatment with this venom significantly reduced the number of intra-erythrocytic bacteria suggesting that spectrin is involved in erythrocyte invasion. Importantly, the concentrations of venom used in this study did not reduce the number of intact erythrocytes. The data collected from the investigation of band 3 protein in erythrocytes during invasion is inconclusive thus far, however preliminary results suggest that band 3 may not play a significant role during invasion by *F. tularensis*. This is the first study showing the involvement of an erythrocyte protein during invasion by *F. tularensis*. The disruption of spectrin in erythrocytes significantly reduced the ability of *F. tularensis* to invade during red blood cell invasion. Further studies testing the role of band 3 protein in red blood cell invasion are needed to establish any conclusions.

**This work was supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence and funding from the WV Research Challenge Fund [HEPC.dsr.14.13]**

## **Tracking Changes: Mental health related care for children before, during, and after the 3/11 disaster in Japan**

*Jessica Caso and Susan Parker, Randolph-Macon College.*

Many relief organizations offer assistance in many areas to aid areas affected by natural disasters. It is obvious that a part of this assistance should be related to mental health care. What needs to be evaluated is the effectiveness of these programs and what the basis for them are. In the case of the 3/11 disaster in Japan this has proven to be a difficult task due to the different levels of trauma experienced by each individual and the unforeseen secondary effects of the trauma. In the short-term and long-term recovery of the disaster, resources provided to the victims of the disaster should be made readily available and adapted to current needs. It was found that Japan is beginning to adapt to the changing needs of the child victims of the tsunami, but like all victims their needs are extremely varied, making it difficult to cater to everyone. A definite long-term vision needs to be developed for the affected children. This can be made possible by the slow but positive changes being made toward seeing mental health care as a necessity.

## Colonization of Mosquitoes by *Francisella tularensis* via a Nectar Reservoir

Austin Cusick, Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV 26074

*Francisella tularensis* is a highly infectious bacterium that causes tularemia. In parts of Europe, mosquitoes are capable vectors for transmission of *F. tularensis*. Presumably, mosquitoes become colonized with *Francisella* following extraction of a blood meal from an infected mammal. Mosquitoes feed intermittently on nectar between blood meals. Our long term goal is to determine whether mosquitoes deposit *F. tularensis* into plant nectar during these intermittent feedings. And if so, can the bacteria present in the nectar colonize a feeding mosquito, producing a disease vector. Therefore, we first sought to determine the viability of *F. tularensis* in nectar by inoculating sucrose solutions, a nectar alternative, in comparison to water and a bacterial growth medium (TSBc). Bacteria were capable of surviving in sucrose and TSBc over a long period of time relative to water. Mosquitoes (*Aedes aegypti*) feeding from this sucrose became colonized with *F. tularensis* as was determined by plating insect homogenates at various time points. The presence of *F. tularensis* was confirmed by PCR using *Francisella*-specific primers on the viable bacteria recovered from the mosquitoes that fed from the colonized sucrose.

***Francisella tularensis* utilizes iron scavenged from erythrocytes to increase survival in low pH environments.**

*Ashley Haught, Taylor Rogerson, Edward Beaumont, Tricia Gilson, Deanna Schmitt, and Joseph Horzempa.*

*Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV*

*Francisella tularensis* is a highly infectious bacterium that causes the disease, tularemia. Humans acquire tularemia through inhalation, oropharyngeal exposure, or tick bites. A unique feature of *F. tularensis* during infection is its ability to invade erythrocytes. Recent evidence indicated that residing within an erythrocyte enhances the ability of *F. tularensis* to colonize ticks. Further results indicated that residing within erythrocytes protects *F. tularensis* from the low pH environment associated with the gut cells of a feeding tick. Iron has previously been shown to be utilized by *F. tularensis* to protect against killing by reactive oxygen species. We hypothesized that *F. tularensis* was obtaining iron from erythrocytes. This iron was being utilized by *F. tularensis* for protection against the oxidative stress associated with a low pH environment, such as that found in the gut cells of a tick. We first sought to determine whether *F. tularensis* was capable of acquiring iron from erythrocytes. Our results indicated that *F. tularensis* bacteria incubated with red blood cells contained significantly more iron than those incubated in media alone. This suggested that *F. tularensis* bacteria were capable of acquiring iron from these host cells. Investigations are ongoing that will assess whether additional iron is responsible for protecting the *F. tularensis* bacteria from the low pH environment of the tick gut cells.

***(Supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence)***



## Genetically Engineering a Plasmid Expression Vector for Nuclear Localization Studies

*Kristina Krumpos*

*Faculty Advisor: Stephen Gallik*

Due to its natural fluorescence, Green Fluorescent Protein (GFP) is a preferred reporter protein for cellular localization studies. For use in nuclear localization studies, a fusion protein consisting of multiple copies of GFP must be used to eliminate simple diffusion as a mechanism through which the protein can enter the nucleus. The long-term goal of this research project is to create a plasmid expression vector containing three copies of the GFP gene linked to a single monopartite nuclear localization signal (3GFP-1NLS) and containing the commonly used pCMV eukaryotic promoter. The specific objective of the research study reported here is to create an intermediate plasmid, containing two copies of the GFP gene, from which the 3GFP-1NLS plasmid could be eventually produced. Using site-directed mutagenesis techniques, the parent plasmid used in this study, the pCMV/myc/nuc/GFP *pShooter* plasmid (Life Technologies, Inc.), was modified to create 2 intermediate plasmids, one serving as a vector and the other serving as a source for a single copy GFP insert. The restriction enzyme *Pst*I was then used to successfully open the vector and isolate the insert. After multiple attempts, GFP insert has been successfully ligated into the vector creating the intermediate plasmid, 2GFP-3NLS. To date, an insertion mutation of a 48 base pair linker has been added for the preparation of the triple GFP gene linked to three monopartite nuclear localization signals. This will lead to the eventual production of the final 3GFP-1NLS plasmid. Once produced, the final plasmid could be used to study various aspects of NLS-dependent nuclear import.

## **Effect of UV Radiation on anti-Markovnikov hydrobromination of alkenes**

*Tia LeMaster and Kevin L. Evans*

*Department of Science & Mathematics, Glenville State College*

Alkyl bromides are key intermediates in numerous multi-step organic syntheses and are commonly synthesized from the hydrobromination of alkenes. The regiochemistry of the hydrobromination of alkenes is controlled by the absence or presence of radicals. The addition of a peroxide results in a radical mechanism which yields predominately the anti-Markovnikov alkyl bromide. The objective is to develop an efficient synthesis of the anti-Markovnikov alkyl bromide by generating hydrobromic acid in situ from the hydrolysis of phosphorous tribromide. The reaction of 1-octene with phosphorous tribromide, silica gel, and benzoyl peroxide in hexanes was studied with varying reaction conditions.

The peroxide promotes the desired radical mechanism, whereas, the silica gel promotes the electrophilic addition mechanism. By having conditions that result in the mechanisms competing, the effects of varying reaction conditions become more prominent. Results of the ratio of anti-Markovnikov product to Markovnikov product with varying quantities of peroxide and varying exposure times to shortwave UV radiation are discussed.

## **Chladni Plates: A Demonstration of Sound Waves**

*Steven Lohrey and Rachele Dominguez, Randolph-Macon College.*

Two dimensional standing sound waves on flat metal plates at various frequencies were investigated and analyzed during this study. These metal plates are known as Chladni plates, and are a tool used to produce intricate sand patterns resulting from driving the plates at their resonant frequencies. For each resonance frequency, I recorded the sand pattern on the Chladni plates for both a circular plate and a square plate. I then investigated the mathematical theory for the standing wave equation in one dimension and two dimensions in this project. Also I explored a computational model that involved Huygens principle and the Bohr model as a means to predict the sand patterns on the circular Chladni plates. Next I developed a Chladni plate laboratory exercise for undergraduate level courses as a way to demonstrate and ascertain the theory of standing sound waves through Chladni plates. As a result I concluded that qualitative computational models are better suited for an undergraduate level audience than the two-dimensional wave equation approach and that Chladni plates have numerous applications in the field of acoustics.

## **Dietary modulation of body weight and leptin in Antioxidant excess mice.**

*Sarah Marshall, Jonique George, Logan Efaw, Carla Cook, Deborah Amos, Kristeena Ray, Meera Penumetcha and Nalini Santanam. Department of Pharmacology, Physiology, & Toxicology, Joan C. Edwards School of Medicine, Marshall University, Huntington, WV*

As obesity rates increase in the U.S., more individuals are at risk for cardiometabolic diseases. Oxidative stress and abnormal leptin signaling both play important roles in leading to obesity. It is therefore hypothesized that increased antioxidant activity will regulate both factors and decrease the risk of these diseases. To test this hypothesis, male *C57Bl/6J* mice, human catalase transgenic mice (*Cat-tg*), and catalase transgenic in *ob/ob* mice (*Bobcat*), were fed normal chow (NC), fish oil (OM3), or high fat (HF) diet for 8 weeks. Weekly body weights and food consumption was determined. ECHO-MRI was used to measure body fat and lean mass composition. Expression levels of obesity associated genes were measured using quantitative real-time PCR. The weight gain and ECHO-MRI results showed that the body weights and fat mass were increased with HF diet but lowered by OM3 diet consumption in both *Cat-tg* and *Bobcat* mice compared to *C57* mice. Leptin mRNA expression in adipose tissue negatively correlated with increases in body weight and fat mass. The *Bobcat* mice had the highest decrease in body weight and fat mass especially in the OM3 diet group. OM3 diet increased adiponectin levels in *Bobcat* mice. GPR120, a lipid sensor, was highly expressed in the *Bobcat* mice, which were further increased by OM3 diet. Our studies indicate that excess levels of antioxidant as in *Cat-tg*, might be counterproductive in preventing diet-induced obesity. Omega-3 rich diet in association with excess antioxidant might be beneficial in preventing obesity.

*(Supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence)*

## Synthesis of *trans*-Pterocarpans via an Aldol Condensation

McKensie Mason, James Horner, Jon Serra, Theunis van Aardt  
Department of Natural Sciences and Mathematics, West Liberty University, West  
Liberty, WV 26074

The natural occurring isoflavonoids pterocarpans present a *cis*-stereochemistry in nature irrespective of the different variations found in substitution patterns. Pterocarpans have been shown to have medicinal uses, particularly as antidotes, and estrogenic, enzyme inhibiting, and antitumor activities. It is believed that the non-naturally occurring *trans*-isomer may display these medicinal properties as well, since their three-dimensional structure more closely resembles that of steroids. In order to investigate this, a synthetic method must be developed to produce the desired stereo outcome of the pterocarpans product. First, protected 2-hydroxy-benzaldehyde and phenylacetic acid starting materials were prepared via Williamson ether synthesis to be combined via aldol condensation. The aldol products can then be converted to *trans*-pterocarpans by sequential cyclization of first the 5-membered ring and then the 6-membered ring using protection and deprotection procedures. At this point, 2-hydroxy-benzaldehyde starting materials have been protected, and an aldol condensation procedure is being optimized to combine the protected 2-hydroxy-benzaldehydes with methylated phenyl acetic acid.

## Synthesis, Characterization, and Reactivity of Iridium(I) Complexes Containing Diphosphine Ligands

*Kaeleigh Olsen and Serge Schreiner, Randolph-Macon College.*

Iridium(I) square planar complexes contend as potential catalysts for the hydrogenation of carbon monoxide. Treatment of  $[\text{Ir}(1,5\text{-cod})\text{Cl}]_2$  with the diphosphine (P-P) ligands 1,2-Bis(diphenylphosphino)benzene (dppb), *cis*-1,2-Bis(diphenylphosphino)ethylene (dppey), Bis(diphenylphosphino)methane (dppm), and Bis(dicyclohexylphosphino)methane (dcpm) in a polar solvent precipitated out with sodium tetraphenylborate, yield the square planar complexes  $[\text{Ir}(\text{cod})(\text{P-P})]\text{BPh}_4$ . These complexes activate carbon monoxide to form  $[\text{Ir}(\text{cod})(\text{P-P})(\text{CO})]\text{BPh}_4$  and when reacted in a polar solvent yield  $[\text{Ir}(\text{C}_8\text{H}_{13})(\text{P-P})(\text{CO})]$ . Reduction of  $[\text{Ir}(\text{cod})(\text{P-P})(\text{CO})]\text{BPh}_4$  with sodium borohydride in a polar solvent yields the trihydride complex  $[\text{Ir}(\text{coe})(\text{P-P})(\text{H})_3]$ . Reaction of  $[\text{Ir}(\text{cod})(\text{P-P})(\text{CO})]\text{BPh}_4$  with HCl in a polar solvent generates the oxidative-addition product  $[\text{Ir}(\text{cod})(\text{P-P})(\text{CO})(\text{H})(\text{Cl})]\text{BPh}_4$ . The reaction of  $[\text{Ir}(\text{coe})_2\text{Cl}]_2$  with diphosphine ligands in a polar solvent yield the square planar complexes  $[\text{Ir}(\text{coe})_2(\text{P-P})]\text{BPh}_4$ , but the same reaction in a nonpolar solvent yields complexes  $[\text{Ir}(\text{P-P})_2]\text{BPh}_4$ . Products were identified by IR, multinuclear NMR spectroscopy, and in some cases by x-ray crystallography.

## Anti-Markovnikov hydrobromination of alkenes

Steven E. Pifer and Kevin L. Evans

Department of Science & Mathematics, Glenville State College

Alkyl bromides are key intermediates in numerous multi-step organic syntheses and are commonly synthesized from the hydrobromination of alkenes. In the late 1920s, Kharasch published a mechanistic explanation for the regiochemistry of the hydrobromination of alkenes that was first observed by Markovnikov in 1870. In the absence of radicals, an electrophilic addition mechanism yields predominately the Markovnikov product. The addition of peroxide into the reaction mixture generates radicals and results predominately in the anti-Markovnikov alkyl bromide. The objective of this research is to develop an efficient synthesis of the anti-Markovnikov alkyl bromide by generating hydrobromic acid *in situ* by the hydrolysis of phosphorous tribromide. The reaction of 1-octene with phosphorous tribromide, silica gel, and benzoyl peroxide in hexanes has been studied with varying reaction conditions in an effort to optimize the yield of 1-bromooctane (anti-Markovnikov product). The roles of the silica gel have been investigated and the percent conversion of 1-octene to either alkyl bromide with varying quantities of silica gel and peroxide and the addition of water will be presented. Current optimized conditions result in 90% conversion of 1-octene to 1-bromooctane. Various other alkenes have been used with lower percent conversions. As the molecules complexity increases lower percent conversions were noted.

**Does residing within an erythrocyte protect *Francisella tularensis* from the low pH environment associated with the gut of a tick?**

*Taylor Rogerson, Ashley Haught, Tricia Gilson, Deanna Schmitt, Joseph Horzempa*  
*Department of Natural Sciences and Mathematics, West Liberty University, West*  
*Liberty, WV*

*Francisella tularensis* is a highly infectious bacterium that causes the disease, tularemia. Humans acquire tularemia through inhalation, oropharyngeal exposure, or tick bites. A unique feature of *F. tularensis* during infection is its ability to invade erythrocytes. Recent evidence indicated that residing within an erythrocyte enhances the ability of *F. tularensis* to colonize ticks. We hypothesized that the intracellular environment of the erythrocyte protects *F. tularensis* from the low pH associated with the digestive tract of the feeding tick. To test this, we incubated intra-erythrocytic *F. tularensis* bacteria that had been liberated from erythrocytes in media that ranged in pH. Preliminary data indicate that erythrocyte invasion may protect *F. tularensis* bacteria from an acidic pH, and further investigations are ongoing.

**Supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence and funding from the WV Research Challenge Fund [HEPC.dsr.14.13]**



### XBΦ Chapters and Advisors 2015

Active	Chapter	Year	Address	Advisor	Email
Yes	Alpha	1916	Randolph-Macon Coll. Ashland, VA 23005	Dr. Melanie Gubbels-Bupp	melaniegubbelsbupp@rmc.edu
Yes	Gamma	1921	Hampden-Sydney Coll. Hampden-Sydney, VA 23943	Mr. Herb Sipe	hsipe@hsc.edu
Yes	Epsilon	1923	Univ. of Charleston 2300 MacCorkle Ave. SE Charleston, WV 25304	Dr. Ilona Sviderskaya	ilonasviderskaya@ucwv.edu
Yes	Zeta	1925	Davis & Elkins Coll. 100 Campus Dr. Elkins, WV 26241	Dr. Shawn Stover, Dr. Michelle Mabry	stovers@dewv.edu mabrym@dewv.edu
No	Kappa	1925	Marshall Univ. 1 John Marshall Drive Huntington, WV 25755		
Yes	Rho	1935	West Liberty Univ. West Liberty, WV 26074	Dr. Theunis van Aardt Dr. Matthew Zdilla	theunis.vanaardt@westliberty.edu mzdilla@westliberty.edu
No	Theta Sigma	1941	Limestone College Gaffney, SC 29304		
Yes	Kappa Sigma	1945	The Univ. of Mary Washington 1301 College Ave. Fredericksburg, VA 22401	Dr. Deborah Zies Dr. Stephen Fuller Dr. Marie Sheckles Dr. Stephen Davies	dzies@umw.edu sfuller@umw.edu msheckel@umw.edu sdavies@umw.edu
Yes	Phi	1947	Univ. of Memphis Dept. of Physics Memphis, TN 38152	Dr. David Freeman	Dfreemn1@memphis.edu
Yes	Chi	1948	Columbia College Columbia, SC 29203	Dr. Oxley	ayoxley@columbiasc.edu
No	Omega	1948	Lynchburg College 1501 Lakeside Dr, Lynchburg, VA 24501		
Yes	Alpha Beta	1952	Lenoir-Rhyne Univ. Campus Box 7141 Hickory, NC 28603	Dr. Timothy Goldberg	Timothy.goldberg@lr.edu
Yes	Alpha Delta	1953	Franklin College 101 Branigin Blvd. Franklin, IN 46131	Dr. Edward Chikwana	echikwana@franklincollege.edu
Yes	Alpha Epsilon	1954	Keuka College Keuka Park, NY 14478	Dr. Thomas X. Carroll	tcarroll@keuka.edu

Yes	Alpha Zeta	1955	William Carey Univ. 498 Tuscan Ave. Hattiesburg, MS 39401	Dr. Randall Harris	rharris@wmcarey.edu
No	Alpha Eta	1956	Newberry College Newberry, SC 29108		
Yes	Alpha Iota	1964	Glennville State Coll. 200 High St. Glennville, WV 26351	Paul Peck Larry Baker	Paul.Peck@glennville.edu Larry.Baker@glennville.edu
No	Alpha Kappa	1964	Athens State Univ. Athens, AL 35611		
No	Epsilon Sigma	1965	SUNY-Oneonta Oneonta, NY 13820		
Yes	Alpha Xi	1969	St. Francis College Dept. of Biology 180 Remsen St. Brooklyn, NY 11201	Dr. James Corrigan	jcorrigan@sfc.edu
Yes	Alpha Pi	1970	Univ. of Rio Grande Rio Grande, OH 45674		
Yes	Alpha Rho	1973	Lyon College 2300 Highland Rd. Batesville, AR 72501	Dr. Jeremy Chapman	jeremy.chapman@lyon.edu
Yes	Alpha Sigma	1974	Molloy College 1000 Hempstead Ave. Rockville Centre, NY 11570	Dr. Chris Massone	cmassone@molloy.edu
No	Alpha Tau	1984	Rust College Holly Springs, MS 38635	Mr. Sana Sise	ssise@rustcollege.edu
No	Alpha Upsilon	1984	Shenandoah Univ. Winchester, VA 22601		
Yes	Alpha Phi	2012	Univ. of Mobile 5735 College Parkway Mobile, AL	Dr. Gail Shelly Dr. Lesley Baggett Dr. Rebekah Morrow	gshelly@umobile.edu lbaggett@umobile.edu rmorrow@umobile.edu
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