Richard Preston, The Hot Zone: The Terrifying True Story of the Origins of the Ebola Virus Could Preston be correct in his statement? What a convoluted viewpoint. Is Biology so complicated that it can never be wholly understood by an individual or group? As a Department, we ask our freshmen to take Principles of Biology I and II. The mere fact that a survey of biological concepts takes thirty-two weeks to complete points to the complexity of the topic. Add to this fact that these same students will take courses over the next three years that expound upon the principles taught in the freshman year. Then add to this fact that masters, doctorate and a plethora of clinical science programs are available for additional study of these same principles (expanded to the nth degree). Considering these facts, one can come to the conclusion that Biology is a mass of extremely complex concepts/teachings in which nothing is simple, nothing is clearly understood, everything is too complicated, everything is too messy, and just when you think you understand something, you peel off a layer and find deeper complications beneath. Nature is anything but simple.

"In biology, nothing is clear, everything is too complicated, everything is a mess, and just when you think you understand something, you peel off a layer and find deeper complications beneath. Nature is anything but simple." - Richard Preston, The Hot Zone: The Terrifying True Story of the Origins of the Ebola Virus

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As a group, we were able to observe the heightened expectations that undergraduate researchers could attain. Looking to the near future, the largest number of student researchers to date will be led by faculty in the summer and fall of 2015. These students will have the opportunity to present their work at: The Meeting of Faculty for Undergraduate Neuroscience Oct 17-21, 2015 in Chicago Illinois The Meeting of the Association of Southeastern Biologist April 6-9, 2016 in Asheville North Carolina The National Conference for Undergraduate Research April 7-9, 2016 in Concord, North Carolina The Butler Undergraduate Research Conference April 8, 2016 in Indianapolis, Indiana The Tennessee Academy of Sciences April, 2016 Nashville Tennessee

We are blessed to have dedicated classmates that push and support us while we learn. A common student complaint noted before the completion of the Wedgwood Academic Center (the WAC) was that Belmont’s campus contained very few open areas that students could congregate in, study in, eat in and build a sense of community in. The WAC is helping to fill some of that need for open space. One of the highlights of my days in the WAC is to walk through the third floor atrium and see all of the students gathered on couches, around tables or in small clusters on the floor. Some of these students are goofing-off by bing watching their favorite show on Netflix. Others are doing some last minute cramming before their next Anatomy and Physiology lab practical. Others are learning the necessity of team actions as they finish their Cell Biology lab report. No matter what they are doing, current students have the luxury of this open space. I can only feel that as the students meet and work with one another, they are strengthening their friendships that will help them get through not only the complexities of Biology but also the complexities of growing up and taking on more and more responsibilities.

Finally, we are blessed to have such dedicated faculty and staff who truly want students to understand Biology and succeed in their life goals. In my fifteen years at Belmont, graduating seniors consistently rank faculty and the student faculty relationship as one of the strongest assets of the university. I could not ask to be part of a more dedicated team of faculty and staff who work tirelessly to give students a quality education in the complex subject matter of Biology. Each person works diligently to make this department go. Mr. Seely works countless hours to get the laboratory exercises into a state that actual data can be gathered. All faculty have come to Belmont to be teachers and get genuinely excited to be in the classrooms with their students. Ms. Templeman does all of those behind the scenes jobs that keeps the department on track and actually functioning. I see many good things in the future for the Department of Biology despite the innate difficulty of the subject. I am excited about the possibilities for my next fifteen years at Belmont. I cannot wait to work with students, staff and fellow faculty as we unravel the complexity of Biology.
CSM Awards

CSM Awards were held in the Wedgewood Academic Center on April 13, 2015. Dr. Nick Ragsdale, Department of Biology, and Dr. Robert Grammer, Department of Biology and BMB Coordinator, presented awards to nine deserving students, from freshmen to graduating seniors.

Prisha Patel, Lindsay Millward, Katelyn Keast, Sonia Kadakia, Zara Latif, Brooke Pugsley and Alicia Hsu

Freshman Achievement Award in Biology
Brooke Pugsley

Ronald M. Barrett Pre-Health Award
Prisha Patel

Donald R. Ramage Award for Service to the Learning Community in Biology
Katelyn Keast

Biology Department Scholarship Award
Zara Latif

Robert T. Grammer Research Award
Sonia Kadakia

Outstanding Student in Biology
Alicia Hsu

David R. Hill Environmental Service Award
Lindsay Millward

Freshman Achievement Award in Biochemistry and Molecular Biology
Nancy Le

Outstanding Student in Biochemistry and Molecular Biology
Himesh Zaver

Prisha Patel and Dr. Ronald M. Barrett, Professor Emeritus of Biology

Dr. Donald R. Ramage, Professor Emeritus of Biology and Katelyn Keast

Sonia Kadakia and Dr. Robert Grammer, Professor and BMB Coordinator

Dr. David R. Hill, Professor Emeritus of Biology and Lindsay Millward

Nancy Le and Himesh Zaver
This spring, students and faculty had opportunities to hear from numerous speakers, including:

**CSM Colloquium Series Speaker:**
Michelle Oakes, Ph.D., Post-Doctoral Researcher Environmental Protection Agency
"The Role of Science in Environmental Policy"

**Environmental Science Lecture Series Speaker**
Jennifer Rehage, Ph.D.
"Fish dynamics in the coastal Everglades: dry down, cold snaps and linking upstream water management to recreational angling"

**BMB Series Speaker**
Brandt Eichman, Ph.D.
Associate Professor of Biological Sciences and Biochemistry Vanderbilt University
"Enzymatic recognition, remodeling, and repair of damaged DNA"

**Biology Spring Speaker Series**
Becky Adams, Graduate Student, Vanderbilt University
"Discovering specialized roles for the nuclear pore complex during mRNA export"

**Biology Alumni Speakers**
Steve Avers (11), currently a fourth year medical student at Texas College of Osteopathic Medicine spoke to biology students about medical school.
Morgan Wilters (14), currently a first year veterinarian student at Oklahoma State University Veterinary School spoke to biology students about veterinary school.

**Alumni:** if you would be interested in talking with current students about your career path and experiences, please contact us.

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**TAS Awards**
Tennessee Academy of Science

**Fall 2014 meeting winners**
Jordan D. Helms won second place for his presentation in the Microbiology section.
Rebekah A. Shepherd won second place for her presentation in the Health and Medical Science section.
Himesh B. Zaver won first place for his presentation in the Microbiology section.
Talitha H. Jones won third place for her presentation in the Zoology section.

**Spring 2015 meeting winners**
Tennessee Academy of Sciences Regional Meeting, Belmont University, April 18, 2015. Student Presentations

**Ecology/Zoology/Botany:**
First place - Sonia Kadakia
Second place - Jackson Smith
Third place - Brielle Davis
Honorable Mention - John Gossen

**Cellular/Microbiology/Health and Medical Science:**
First place - Lauryn Bouldin
Second place - Justin Smith
Third place - Stephanie Ray

**Snowman Awards**

**Congratulations to Spring 2015 Alpha Chi Inductees!**

**Biology**
Jeffrey King
Katlin Stodard
Parker Tumlin

Alpha Chi membership is the highest academic honor awarded by Belmont University. It is an international, interdisciplinary honors society open to junior and senior university students who rank in the top 10 percent of their class.
Congratulations to our seniors!!

Here is just a partial list of places our seniors are headed after graduation. Watch our Facebook page as we update graduating seniors information this summer!

**Jordan Helms** - “I am pleased to announce that I have been accepted to and will be attending the Rollins School of Public Health at Emory University this fall. I will be a student in their Behavioral Sciences and Health Education program.”

**Lauryn Bouldin (Neuro)** - “I have decided to defer graduate school for a year in order to pursue a once in a lifetime opportunity. Beginning this July, I will be a Chapter Consultant for Phi Mu Fraternity! I am looking forward to all the adventures to come!”

**Hensley Barnes** - “I have accepted a position as a traveling Leadership Consultant for Alpha Gamma Delta International Headquarters! It is a very competitive position, and I am honored and excited to travel and work during my gap year!” Hensley also received the Bruin Award for Student Leadership.

**Alicia Hsu** - Attending Quillen Medical School at ETSU beginning July 2015.

**Chelsea Lee** - “I accepted a job as a supervisor of two departments at Southwick's Zoo in Medon, MA where I interned at this summer!”

**Paul Hanna (BMB)** - “I will be starting medical school this fall at University of Tennessee Health Science Center in Memphis.”

**John Holt** - “I’ll be going to New York University next fall for a Masters in Bioinformatics and Systems Biology.”

**Rebekah Shepherd** - “I will be going to UT Memphis for Pharmacy School next year.”

**Brielle Nicole Davis** - “I’m taking classes at MTSU while preparing to go to graduate school at MTSU afterwards. During this year, I'll be working with Centennial Youth Ballet as a teaching assistant.”

**Katie Keast** - “I will be moving to Maui to work for the Pacific Whale Foundation as a naturalist.”

**Stephanie Ray** - Will be working at Vanderbilt University Medical Center Tissue Bank after graduation.

**John Gossen** - Will continue EMT work on ambulance and emergency room. Through Lumos Award, going to Tanzania in January to work in government hospital.

**Nicole Knowles** - Will be attending the Accelerated Nursing Program in Nursing at Union University.

**Justin Smith** - Will be working for community outreach organization, work as a tech at Vanderbilt for one year. Attend medical school in 2016. Justin also Received the Bruin Award for Student Leadership.

**Himesh Zaver (BMB)** - Will be attending ETSU Medical School.

**Lauren Sheppard** - “I'm going to a gap year and look for a teacher assistant job or one in pharmaceutical sales while I decide which graduate program I want.”

**Sarah Bonaparte** - Has just received a one year “serology laboratory fellowship” in the chronic viral disease branch under the division of high consequence pathogens and pathology at the CDC in Atlanta! She said her senior research got her the job!

**Taylor Mills (BMB)** - Will be attending Southern College of Optometry in Memphis

**Karah Parker** - Will be attending medical school at Philadelphia College of Medicine (PCOM) in Atlanta, GA in August.
Alumni Corner

Allison McCoy (14) “It is with GREAT pleasure that I can officially announce I will be attending the Medical University of South Carolina to become a PA! Excited to see what grad school and Charleston have to offer.”

Amy Fehrman (11) Matched to University of Maryland Medical Center - program Psychiatry/Sheppard Pratt.

Ashley Dozier (08) Moved to Seattle to work for the biotech company, Oncothyreon, that creates targeted therapeutics for multiple cancers. She will be the molecular biologist for the protocol team--testing targeted cytotoxic nanoparticles.

Lee McGill (14) Became a member of the Carlson Lab at Montana State University and a member of the Center for Biofilm Engineering.

Robbie Gibson (09) Currently practicing internal medicine at the University of Florida in Gainsville, FL, has co-authored and published a research paper in National Center for Biotechnology Information entitled “Takotsubo's cardiomyopathy with an uncommon complication: implications for management and treatment”.

Erin Pitts (13) “I’m happy to finally say I've been promoted to Park Ranger I in Tennessee State Parks central office”

Matthew Heard (14) Will be spending the next year as a Surgical Assistant at Anne Arundel Dermatology in Annapolis, Maryland.

Fatin Jweinat (13) Has been accepted to the Georgia Regents University College of Dental Medicine and will begin classes in August 2015.

Katie Farrell (14) Has been accepted to the Physician Assistant’s Program at Lincoln Memorial University in Harrogate, TN.

Current Students Update

Zara Latif and Dora Geving (BIO) - Dora Geving and Zara Latif, attended the annual National Convention of the Alpha Chi National Honor Society from March 19-12 in Chicago, Illinois and were awarded The Bonnie Revelle Prize in Molecular/Cellular Biology for their efforts titled “Nematodes Roaming the Field of Parkinson’s Disease.” Their presentation was based on research results generated with the Department of Biology’s Dr. Nicholas Ragsdale. Geving and Latif earned top honors in the Molecular/Cellular section of student presentations.

BBB (Tri Beta) Honor Society - The Tri-Beta Biological Honor Society recently inducted a new group of members. Since it’s establishment in 1988, Belmont’s Mu Theta Chapter of Tri-Beta has promoted the study of biology through various activities including presentations, field trips, scientific meetings and social events. Tri-Beta provides leadership opportunities for students, informs them about current developments in biology, and helps them prepare for employment. 

(Sarah Maxwell (BMB) - Will be attending an eight week REU program at UT Health Science Center in Memphis, where she will be doing research in medicinal chemistry. The program gives students an opportunity to look at the graduate school programs offered at UT.

Butler University Conference - Biology faculty members Jennifer Thomas and Roger Jackson and 17 biology undergraduate research students attended the 2015 Undergraduate Research Conference at Butler University on April 9 and 10 in Indianapolis, IN.

ECO (Environment and Conservation Organization) Club - On Friday, March 6th, ECO and Belmont University planted a Colorado Blue Spruce and five additional trees on campus. This tree planting event celebrated Belmont’s recent designation as a 2014 Tree Campus by the Arbor Day Foundation. ECO interacts with students campus wide who are interested in environmental issues. The group also sponsors student activities such as river clean-up, exotic plant removal, Earth Day events and co-sponsors the Biology department’s Environmental Science guest speaker series. Lindsay Millward, current Vice President of the club says, “I think it is important that Belmont is recognizing these trees so students walking by can appreciate them, and an award like this definitely furthers the sustainability efforts on campus.”

Biology at the Nashville Zoo - Biology students, Laura Horton and Ayda Porkar, in Dr. John Niedzwiecki Animal Behavior Class will work with a zookeeper and their animals during a spring semester project focused on understanding specific animal behavior. Projects may have to do with dominance, stress, mating displays or the effectiveness of enrichment activities. Laura and Ayda will present their findings to zoo staff and the general public in April. Both students will be working with tigers, elephants, clouded leopards, kangaroos, bongo bongos, lemurs, fish, night active herptiles and birds.

Kathryn Hook (Neuro) - will be doing summer neuroscience research at The Ohio State University Medical Center under Dr. Foust at Nationwide Children’s as part of the SUCCESS Program.
We want to hear from you! Please take a moment to fill out the information below and send to us.

Name________________________________________________Graduation Year____________________

Address______________________________________________________________________________

City________________________State_________Zip Code________Phone____________

Email address___________________________________________________________________________

Employment______________________________________Title________________________________

Recent promotion, honor, award, family activity?_____________________________________________

Contact Us!

- Have any comments about the newsletter or the Department?
- An alum with an update on activities?
- Like further information about the Department, its offerings or activities?

Please contact us by one of the following e-mail addresses or by postal service.

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Check out our website: www.belmont.edu/biology

We're on Facebook at Serotonin Helix
Follow us on Twitter @SerotoninHelix

Biology Alumni Update

We want to hear from you! Please take a moment to fill out the information below and send to us.