Double Helix

Biology Department Newsletter

Notes from the Chair

I have procrastinated as long as I can. There is not a single box packed in my office. Anyone who has seen my office is no doubt wondering how and when I am going to start sorting through my stuff and packing. Reading senior research papers, grading exams and projects, writing an article, planning a course for spring 2015, working on a teacher workshop this summer ... anything to avoid putting items in boxes. It is not that I don't want to pack and move, but rather the excitement of moving to the new space is tempered by a feeling of loss that is analogous to realizing that your favorite sweater has holes in the elbows, is frayed, and discolored. Some items will find their way to the shred and recycling bins. Some will probably end up at home. Yet many of my favorite items will have to find a niche in the new office: artwork of pressed leaves from Megan who is now in grad school, a baseball from Phillip who selected me as an honored faculty, the new photo from Kari of the “worm group,” an angel from the family of a dear student whose life was unexpectedly cut short, a stuffed pollen grain from Dr. Thomas, a lichen and seed pod from Kris, a photo of a big tree from Dr. Murphree, bumper stickers proclaiming “What Would Aldo Do” and “If you Love the Creator, Take Care of Creation.” Items that speak to relationships fostered, moments shared, lessons learned, and dreams cultivated. Items that speak to what I value in my role as a professor. Then there are the many, many books. Need I point out that faculty are addicted and in love with books? I had better start packing!

As reported in previous editions, Biology is moving this summer into the new Wedgewood Academic Building. We are now part of the newly formed school, College of Sciences and Mathematics with a new dean, Dr. Thomas Spence. And, as if it couldn’t get any better, we also have a new faculty member in Biology, Assistant Professor Dr. Chris Barton. We are excited about these changes and look forward to being in our new offices and labs in August. Be sure to follow our progress on Facebook and Twitter this summer.

A big shout out to Dr. Chris Barton – we are glad to have you officially on the team! And to Mr. Ray Seely, who was the lab manager for the sciences but with the hiring of a new lab manager will now be the lab manager for Biology.

The summer will be busy with the move and orientation for new students. We hope you will visit us in the fall to see the new building and meet our new dean. Congrats to our seniors! Good luck to the current students who have internships and summer research projects awaiting them. Enjoy summer!

Special points of interest:

- Graduation!
- ASB Conference

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Dr. Thom Spence, Dean, College of Sciences and Mathematics

Dr. Chris Barton
CAS Awards
Awards were held in Beaman A&B on April 14, 2014. Dr. Darlene Panvini, Department of Biology, and Dr. Rachel Rigsby, BMB Coordinator, presented awards to seven deserving students, from freshmen to graduating seniors. Also, the Biology Research Award has now been officially renamed the Robert T. Grammer Biology Research Award. The intensity and length of the applause at this announcement was a good indication that this is a well-deserved honor!

Freshman Achievement Award in Biology
Mohamed Darwish

Ronald M. Barrett Pre-Health Award
Angelica Brothers

Biology Department Scholarship Award
Sarah Spence

Biology Department Research Award
Molly Shankles

Outstanding Student in Biology
Taylor Brown

Outstanding Student in Biochemistry and Molecular Biology
Emily Mason

David R. Hill Environmental Service Award
Katelyn Keast

Pictured above: Angelica Brothers, Sarah Spence, Molly Shankles, Emily Mason, Taylor Brown, Katelyn Keast and Mohamed Darwish
Not pictured: Libby Ligon

TAS Awards
Tennessee Academy of Science announced the award recipients from the Spring 2014 meetings.
Congratulations to our winners!

Spring 2014 Meeting

Chemistry
2nd place
Lee McGill

Zoology
1st place
Emily Mason
2nd place
Valini Ramcharan

Cell Biology
2nd place
Morgan Arrants

Congratulations to Spring 2014 Alpha Chi Inductees!
Biology
Tessa Shupe

BMB
Adam James

Neuroscience
Miranda West

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.

Homecoming in Hitch

The past was revisited during Homecoming week as Biology alums, current students, retired and current faculty gathered in Hitch to reminisce about the years spent in the building and to look at the plans for the new Biology space in the Wedgewood Academic Building.

More photos can be seen at our Facebook page, Serotonin Helix.
Biology Faculty Update

In addition to teaching this semester, Biology faculty have also been busy outside of class.

**Dr. John Niedzwiecki** met with graduate students in MTSU’s Molecular Bio-Sciences doctoral program to discuss his and their research programs. He also presented a talk entitled “Comparative Landscape Genetics of Darwin’s Finches.” Dr. Niedzwiecki also received an Education and Outreach Grant from The Society for the Study of Evolution (SSE). These grants are provided for Local and Regional Outreach Promoting the Understanding of Evolutionary Biology. The grant was matched by the Middle Tennessee STEM Innovation Hub.

**Dr. Jennifer Thomas**, along with Vanderbilt women’s and gender studies professor Dr. Rory Dicker, spoke at the Nashville Library’s Nashville Reads event in March. Thomas and Dicker discussed the book “We Are All Completely Beside Ourselves” by Karen Joy Fowler.

**Dr. Steve Murphree** delivered a talk to members of Murfreesboro Camp No. 33, sons of Confederate Veterans in February. The talk was entitled “Insects and Disease in the War Between the States.” In March, he was at the Adventure Science Center to help kick off the Lost Ladybug Project. Dr. Murphree was the “Scientist on the Spot” as he answered questions about the project and gave a short presentation about Middle Tennessee lady beetles. The Lost Ladybug Project, which is funded by the National Science Foundation, studies the decline of some native lady beetle species. In addition to his talks on lady beetles and insects, Dr. Murphree was recently elected to the Board of Trustees of the Sam Davis Memorial Association (SDMA). The Davis home, located in Smyrna, TN, is preserved through the efforts of this organization. Museum exhibits, the homestead, preserved farmland and educational programs help education visitors to the importance of learning about their past and its connection to the present.

Brain Awareness Week

The Biology and Psychology departments hosted Brain Awareness Week in March. Scheduled events included speakers from Vanderbilt and Belmont, a viewing of the film *Memento* and two discussion sessions on brain structure which included the opportunity for students to dissect sheep brains.

**Dillon Oman**, Neuroscience major, oversees the dissection of sheep brains during the sessions on brain structure.

ASB Conference

Biology faculty members Nick Ragsdale, Jennifer Thomas, Darlene Panvini, Chris Barton and 17 biology undergraduate research students attended the 2014 Association of Southeastern Biologists Meeting on April 2—April 5 in Spartanburg, SC. Abstracts were presented by undergraduate and graduate students from Georgia, North Carolina, Alabama, Ohio, Tennessee and other southeastern states. Belmont students presented posters and talks, attended presentations, symposiums and workshops and had the opportunity to see and discuss research with students from many universities in the southeast area. Haley Ellison received honorable mention in the BBB District II presentations and John Gossen 3rd place in the BBB District II posters. More photos can be seen on our Facebook page, Serotonin Helix.

Environmental Lecture Series

The Environmental Science Lecture Series took a different direction this spring as Jim Pfitzer, a storyteller, playwright and actor, brought his one-man play, “Aldo Leopold—A Standard of Change” to Belmont. The play, written and performed by Mr. Pfitzer, takes place in one evening as Aldo Leopold revisits his shack 64 years after his death. As a follow up to last year’s speaker Buddy Huffaker from the Aldo Leopold Foundation, this performance gave the audience added insight into Aldo Leopold’s writings and life as a conservationist.

Haley Ellison and John Gossen

Haley Ellison and John Gossen
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!

**Taylor Brown** - Will be attending the University of Missouri's Science and Mathematics Academy for the Recruitment and Retention of Teachers. Abbreviated as SMAR2T. Taylor be obtaining her masters as well as her teacher's certification in the course of a year and a half (2 semesters and 2 summer sessions). Taylor will be student teaching in a high school biology course during this time. After she graduates, Taylor plans on teaching high school biology and perhaps chemistry and anatomy in St. Louis.

**Lee McGill** - accepted into two graduate PhD programs. UAB – Biochemistry and Structural Biology in College of Medicine and Montana State University – Molecular Biosciences Program. Lee will be going to Montana State University.

**Matthew Heard** - Accepted to Colorado State University Masters in Microbiology and Immunology; Tulane’s Masters in Microbiology and Immunology and Johns Hopkins Masters in Microbiology and Immunology.

**Morgan Wilter** - Accepted to Oklahoma State University Veterinary School

**Morgan Arrants** - Accepted into Lipscomb’s certificate program in Nutrition and Exercise science

**Crystal LeBlanc**—has received a scholarship to the University of Tennessee Health Science Center where she will be working on a Master’s degree in speech and language pathology.

**Emily Mason (BMB)** - accepted into Indiana University graduate school biomedical science program.

**Sarah Gilmore (ENV)** - going to New Zealand to participate in Willing Workers on Organic Farms program.

**Kari Morse** - going to Lipscomb University to pursue a dual Masters in Exercise & Nutrition School.

**Kyle Sullinger**—attending Master of Arts in Teaching (M.A.T.) at Belmont.

Graduation Day 2014
Alumni Corner

Amy Nesius (13)
Has been accepted to UT Veterinary School

Rachel Chandler (13)
Rachel was accepted to the University of Chicago’s Master of Science in Biomedical Visualization. In English. This is a prestigious and modern biological illustration program, using both traditional and computer-aided visualization techniques. This was her preferred program (and there are only a few in North America).

Matthew Turner (11)
“I will be working at OPKO Labs (previously known as OURLab). It is a Urologic Reference Lab. They are about to launch a next generation prostate cancer test called 4kScore, so that will be my main focus when I first get started. Then from there we will continue on with a couple other projects. I will be working in a lab with 3 others, and they have hopes to expand into another lab depending on how well this new product launch does!”

Anna Witherspoon (13)
Accepted a position at Witherspoon and Associates, a specialty insurance agency catering exclusively to the SCUBA industry. Anna works with compliance and accounting and looks forward to other responsibilities. You may have noticed that the name of the company is Witherspoon and Associates. Anna will be working with her father and uncle.

Current Students Update

Siddhant Thukral (BIO) was awarded a SURE fellowship from Emory University to participate in their 10 week Pediatric Engineering Research Summer Experience. In this Program, ten undergraduate students from across the country will have the unprecedented opportunity to participate in the Nation’s only pediatric bioengineering program. The program is made possible due to the collaborative efforts of Emory University and Georgia Tech’s Biomedical Engineering Department, the Department of Pediatrics within Emory University’s School of Medicine, Emory College’s Summer Undergraduate Research Program (SURE), and Children’s Healthcare of Atlanta. Students will have the opportunity to not only work in a lab doing Pediatric Engineering research, but also will shadow clinicians to better understand pediatric medicine.

Angelica Brothers (BIO) will be working with the Giant Anteaters at the Nashville Zoo this summer through the zoo’s formal internship program. Angelica will be guided with a keeper-mentor on the animal care staff in the anteater exhibit while learning about general husbandry, reproduction, nutrition, commissary, and various other aspects of the anteater life. Nashville Zoo has the largest anteater exhibit in the country.

Alicia Hsu (BIO) will be competing in figure skating again August 14-16 at the 2014 U.S. Collegiate Championships in Rochester, Michigan at the Onyx Ice Arena. Alicia was recently featured in a story on Fox news about figure skating. Hsu says she finds “relaxation in the competitive sport.”

Morgan Wilters (BIO) As a member of the Belmont Equestrian Club, Morgan has had a successful year in competition at universities throughout the state. She has received third place ribbons for Advanced Walk, Trot, Canter in the hunter/jumper discipline of horseback riding at the Intercollegiate Horse Show in Murfreesboro and at Murray State University, she received ribbons for second and fifth places.

Kathryn Hook (BIO) will be participating in the SERPENT REU at Vanderbilt this summer at the McLaughlin Lab where she will study research dealing with neurodegenerative and neuroprotective pathways in the brain. She’s very excited with this opportunity to work with Dr. BethAnn McLaughlin and her team.

Chelsea Lee (BIO) will be doing a bird care internship at Southwick’s Zoo in Mendon, MA.

BIO 3200 (Parasitology) Dr. Murphree’s class spent a lab session at the Nashville Zoo to expand their knowledge of parasites.

BIO 4500 (Neurobiology) Dr. McGrew’s neurobiology class visited a nonhuman primate lab at Vanderbilt University. Dr. Jeff Schall, a neuroscientist who uses macaque monkeys to study brain regions involved in controlling eye movements, provided the class with a tour of the facilities and the opportunity to watch some of the monkeys performing their visual discrimination tasks. They discussed important ethical considerations of working with primates as well as the sort of information that can only be obtained by using primates or humans. Michelle Howell-Young, a Belmont alum, is currently Dr. Schall’s lab manager and works extensively with the macaques.
Biology Alumni Update

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.

Ms. Terri Templeman, Administrative Assistant, terri.templeman@belmont.edu
Dr. Darlene Panvini, Chair, darlene.panvini@belmont.edu
Department of Biology
Belmont University
1900 Belmont Blvd.
Nashville, TN  37212

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

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

Biology Department

Dr. Chris Barton, Assistant Professor
Dr. Robert T. Grammer, Professor and BMB Coordinator
Dr. C. Steven Murphree, Professor
Dr. Lori L. McGrew, Associate Professor, ICORD Fellow and Neuroscience Coordinator
Dr. John Niedzwiecki, Associate Professor and Gulf Coast Research Lab Coordinator
Dr. Darlene Panvini, Professor, Environmental Science Coordinator and Chair
Dr. D. Nicholas Ragsdale, Associate Professor and Pre-Health Advisor
Dr. Jennifer T. Thomas, Professor
Dr. Roger Jackson, Lecturer
Ms. Terri Templeman, Administrative Assistant
Mr. Ray Seely, Laboratory Manager and Chemical Hygiene Officer