**Notes from the Chair**

“Be Passionate About Your Department.” This title of a recent article in a newsletter aimed at Chairs caught my attention, especially the admonition to “beat all the possible drums for your department,” and to “think big, let your enthusiasm show.” I must admit that this is one of the easier parts of my job, as is evident in the outstanding things that faculty and students have been doing this past summer and fall. Undergraduate research is thriving and we are bringing home awards for best student posters, quality teaching and learning is happening as students are getting jobs and into graduate programs, and faculty are presenting their scholarship at conferences. Enjoy reading this newsletter to hear more about our exciting work! Let me also beat another drum – to thank the exceptional staff who keep us organized, on track, up-to-date, ready to teach, and within budget. Thanks to Terri and Ray for their support of Biology faculty and students; thanks to Ashley and Kim for their dedication to the School of Sciences. We are truly blessed to work with such talented and committed people.

Soon the sciences will be our own college and we will be moving to the Wedgewood Academic Building. Before we start packing up boxes for the move, we want to celebrate our times together in Hitch Science Building. We hope to see you at the alumni homecoming event to say good-bye to Hitch and would enjoy hearing your stories of time spent studying and taking courses in Hitch – email or post them on Facebook.

Best wishes for a joyful 2014!

Dr. Darlene Panvini
Chair, Biology Department

**College of Sciences and Mathematics**

What news could be bigger than Biology moving to a new building? How about the School of Sciences is set to become its own college? SOS will be renamed College of Sciences and Mathematics and will include Biology, Chemistry, Physics, Psychological Science, Mathematics and Computer Science. A search for a dean is in progress with plans for the new dean to be in place by June 1. Dr. Kim Daus, Professor of Chemistry will be the associate dean.

**Homecoming Redux**

Put your time travel shoes on and take a trip to the past during Homecoming 2014. Alums can go back in time as they walk the halls of Hitch Science Bldg. and revisit old memories before Biology moves into the new Wedgewood building. Dr. John Niedzwiecki is contacting alums through LinkedIn, so be sure to contact him in the near future for all of the fun that will take place in the past on February 8, 2014!
Summer Scholars

In its last year housing biology, the third floor of Hitch Science Building was an active place this summer as students participated in summer scholars and worked on research in the lab and in the field. Dr. Darlene Panvini’s students, Sarah Gilmore (ENV), Kari Morse (Biology) and Megan Swaine (ENV) investigated the “Impact of Exotic Plants on Abundance, Diversity, and Distribution of Earthworms.” Biology majors Court Reese, Valini Ramcharan and Kyle Sullinger along with ENV major Hannah Martin worked with Dr. John Niedzwiecki on research that included comparison of mitochondrial DNA between two populations of salamanders, studying effects of size and predator cues on snail behavior and using a Geographic Information System to collect data about local environments. Dr. Lori McGrew’s biology research students Allison McCoy, Jen Myer, Katie Farrell and Jordan Gann worked with zebra fish to explore the effect of different compounds on memory and anxiety in the fish.

In August, the Summer Scholar Communities hosted a poster session in Hitch to showcase their work. This event was only the beginning of posters and oral presentations that take place throughout the year. These research students attended conferences in California, Virginia and here in Tennessee. The conferences are part of their research course and the August event gave them the opportunity to refine their posters and presentations for the conferences. As the Biology department moves into its new building in summer 2014, summer scholars can look forward to larger research labs and equipment that will move undergraduate research even further here at Belmont.

SEPEEG 2013
Southeast Population Ecology and Evolutionary Genetics

Dr. John Niedzwiecki and four Biology and Environmental Science majors attended SEPEEG 2013 at the University of Virginia’s Mountain Lake Biological Station near Blacksburg, Virginia, from September 27-29. Dr. Niedzwiecki’s research students, Kyle Sullinger, J. Court Reese, Hannah Martin and Valini Ramcharan presented their Summer Scholar’s research at the Saturday evening Poster Session. In addition to the Poster Session, students attended talks and interacted with graduate and undergraduate students as well as faculty from more than 20 Universities from across the south including University of Virginia, University of Georgia, UNC Chapel Hill, University of Florida, East Carolina University, Duke University and University of Tennessee.

SURS 2013
Science Undergraduate Research Symposium

In its tenth year, SURS was held in the Maddox Grand Atrium on December 2. SURS offers these research students the opportunity to show Belmont students what the sciences are doing. Many of these students have presented their research at TAS or out of state conferences. This is the culmination of hours of work done during the summer and fall with advisors and peers. 20 Biology seniors, two BMB seniors and five ENV seniors presented posters. Additional posters and oral presentations in the areas of Chemistry, Mathematics, Computer Science and Psychological Science were also presented at SURS. The keynote address, “Astronomy in Popular Media” was delivered by Dr. Eric W. Klumpe, Professor, Department of Physics and Astronomy at Middle Tennessee State University. Photos can be seen on our Facebook page—Serotonin Helix.
Tennessee Academy of Science Annual Meeting

Drs. Bob Grammer, Steve Murphree, Darlene Panvini, Nick Ragsdale, Jennifer Thomas and Chris Barton (Biology) and a total of 17 undergraduate research students from Biology, Environmental Science, BMB and Neuroscience attended the 2013 Tennessee Academy of Science Annual Meeting held November 15 at Motlow State Community College. The Belmont students presented posters at the meeting and attended presentations from graduate students and faculty from a wide variety of Tennessee schools.

Several of our students received awards for their poster presentations—In Botany: Megan Swaine, Second Place; Ashley Allen, Third Place. In Health and Medical Sciences: Crystal LeBlanc, Second Place. In Zoology: Haley Ellison, First Place and Kari Morse, Second Place. In addition, Dr. Panvini and Dr. Barton gave presentations. Dr. Thomas and Dr. Ragdale were section chairs. Dr. Murphree is the TAS treasurer. Additional photos can be seen on our Facebook page—Serotonin Helix.

SfN 2013

Society for Neuroscience

Dr. Lori McGrew took two of her research students, Katie Farrell and Jordan Gann, to the annual meeting of the Society for Neuroscience which was held in San Diego, CA, November 9-12, 2013. This is an international conference that draws more than 30,000 neuroscientists who share the latest research in the field. Dr McGrew presented a poster in the “History and Teaching of Neuroscience” theme. Her poster was titled “How to design group projects that successfully foster collaborative learning”. Katie and Jordan presented posters describing their undergraduate research projects during the Faculty for Undergraduate Neuroscience chapter meeting and poster session. In addition to these presentations, Dr McGrew and the students were able to meet other neuroscience researchers and learn about their current research. Furthermore, the group was able to attend a number of lectures concerning key events in neuroscience this year. One such lecture series focused on implementation of President Obama’s BRAIN initiative. In an address in April 2013, the President outlined why now is the ideal time to revolutionize our understanding of the mind and make real strides in curing brain disorders. The SIN lecture series included leaders from the NIH, NSF and DARPA who discussed the plan for implementation of the BRAIN initiative. Other special lectures included “Behavioral Sciences in the Courtroom” and “Adjusting Brain Circuits for Learning and Memory”. Overall, Dr McGrew and the students learned a great deal about current advances in neuroscience, shared some of their own discoveries and returned to Nashville with a plethora of new ideas.

Tennessee Physiological Society

The Fifth Annual Tennessee Physiological Society Meeting was held at Belmont on Friday, November 22 in Beaman A&B. This society, chartered in 2009, as a chapter of The American Physiological Society, seeks to “enhance and advance the field of physiology with all its molecular, cellular, organ and organismal basic and applied disciplines of research and education and unite the Physiologists for this purpose within the State of Tennessee.” Along with several keynote speakers, there were also poster presentations by graduate and undergraduate students from Middle Tennessee. D’angelou Newsome, Maria Martino, Justin Hughes and Taylor Brown presented posters at this meeting. D’angelou Newsome and Justin Hughes were recipients of the Best Undergraduate Presentation award. Dr. Nick Ragsdale (Biology) is the current president of this organization. Additional photos can be seen on our Facebook page—Serotonin Helix.
Educator of the Year Award

At a reception on November 8, Dr. Murphree received the 2013 Tennessee Science Teachers Association Higher Education Science Educator of the Year Award. The award was given to Dr. Murphree in recognition of his work in the science community in Tennessee. Dr. Murphree has taught biology courses at Belmont since 1991. In addition, for the past 22 years, he has taught the highly popular Beetles, Bugs and Butterflies camp every summer on the Belmont campus. Dr. Murphree is also a regular contributor of articles to The Tennessee Conservationist. Many know Dr. Murphree from his Insects of the Night event at Warner Park Nature Center, his BioBlitzes at various parks in Middle Tennessee, and his workshops at the Adventure Science Center. Dr. Murphree also works with the home school community through the Home School Science Discovery Labs here at Belmont. In the summer of 2011, media from around the country consulted Dr. Murphree regarding the cicada invasion in Middle Tennessee. The biology department is extremely proud of Dr. Murphree’s latest achievement.

Niedzwiecki paper published

Dr. John Niedzwiecki, associate professor of biology, has co-authored a paper titled “Species Tree Reconstruction of a Poorly Resolved Clade of Salamanders (Ambystomatidae) Using Multiple Nuclear Loci.” The paper was published in the September issue of Molecular Phylogenetics and Evolution (Volume 68 (2013): 671-682). This paper is the product of a collaboration with the Weisrock Lab at the University of Kentucky.

ENV students adopt creek

For their service learning project in ENV 1110, Introduction to Environmental Science, five students adopted a section of Richland Creek in Nashville and organized a stream clean-up on Saturday, October 19. Students organizing the clean-up were Megan Brady, Walter Burn, Luke Castle, Katie Keast, and Jessie Wyn. Six additional students and Dr. Panvini, professor of the course, assisted in the clean-up event. A sign has been posted to announce the adoption of this section of the creek.


Grant Approved

Dr. Lauren Lunsford, Associate Professor of Education, and Dr. Darlene Panvini, Professor of Biology, are serving as co-Principal Investigators for a project, “Food and Gardening: Growing Partnerships between Science Teachers and English Teachers to Support Instruction,” that was awarded a $75,000 grant from the Tennessee Higher Education Commission (THEC). They will work with other Belmont faculty members, including Dr. Sally Barton-Arwood of Education, Dr. Kim Daus of Chemistry, Dr. Bonnie Smith-Whitehouse of English, and Ms. Kate McGowan of Education to unite English and Science teachers to help their students explore text in interactive and fun ways. The project will provide teachers with the professional development and time to plan lessons that utilize hands-on activities like community gardens and classroom kitchens to support the teaching of informational texts. Teachers from Bedford County, Davidson County, Dickerson County, Montgomery County, and Franklin City Schools will have the opportunity to participate in workshops this summer and receive continued support in the fall.

Belize Trip May 2013

The Belize Maymester course was offered again this spring. Dr. Niedzwiecki took his students out to the island for course and lab work.

Students and Dr. Niedzwiecki at caves outside Santa Elena, Guatemala.

Fall Semester Biology Speakers

This fall, students and faculty had opportunities to hear from several speakers:

Dr. Sarah Katen, from Vanderbilt University, discussed current vaccine research including her work to develop reovirus immunizations in “A Sheep in Wolf's Clothing: Using Viral Vectors as Vaccine Platforms”.

Wesley Roberts, teaches Biology at Hume Fogg High School, and spoke to students about “Teaching Evolutionary Biology in the Bible Belt”.

Dr. Christopher Herlihy from the Department of Biology at MTSU was the School of Sciences Colloquium Series speaker. His talk was entitled “What can tiny plants tell us about big questions in plant evolution?”

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

Laura Muck (12)
Will be returning to Belmont in spring 2014 to begin the Master of Arts in Teaching program.

Sachin Amin (09)
Has finished med school in Grenada, passed the first part of his US Board Exams and will be starting residency at UTK this fall.

Robert Gibson (09)
Graduated at ETSU and heading to Gainesville Florida at the University of Florida to practice internal medicine.

Tomi Homononay (12)
Attending UT Memphis School of Dentistry fall 2013.

Jo Ellen (Bennett) Wilson (04)
Has completed her year of psychiatry chief residency and will be staying at Vanderbilt for a fellowship in Psychosomatic Medicine.

Ryan Alexander (10)
Has started DO school at Lincoln Memorial University - DeBusk College of Osteopathic Medicine.

Alaina Regan (09)
Finishing the second year of her PhD in Neuroscience at Oklahoma University Health Sciences Center in Oklahoma City. Her project deals with retinal degeneration research at the Dean McGee Eye Institute.

Sarah Ayers (11)
Currently in her second year of Pharmacy School at Belmont.

Shea Harrison (13)
Attending College of Medicine at UT-Memphis.

Liberty Foye (13)
Attending School of Medicine at ETSU.

Christina Inman (09)
Engaged to be married in October 2014. Christina’s fiancé, Lucas Routh, is doing residency in orthopedic surgery at UAB and Christina has matched into pediatrics at UAB/Children’s Hospital of Alabama.

Monique Parrish (12)
Works as a Histology/Grossing Assistant for Pathgroup Lab at Grassmere Park. Plans to apply to the Medical Technology Program at Vanderbilt University.

Brad Gill (13)
Was accepted to the College of Dentistry at University of Tennessee Health Science Center.

Anderson Webb (13)
Attending College of Medicine at UT Memphis.

Bellamy Hawkins (13)
Attending University of Alabama to begin Master’s of Public Health program

Roshni Patel (09)
Will be graduating in May 2014 with her Doctorate of Dental Surgery from Meharry Medical College.

Scott Kim (13)
Will be attending UT Medical School next year.

Current Students Update

The newly formed Belmont Equestrian Club is already bringing home ribbons and recognition after two events. Biology seniors Morgan Wilters, Sarah Spence and Maria Martino are part of this equestrian group. At the event in September in Sewanee, Morgan Wilters took fifth place in Advanced Walk Trot Canter and Sarah Spence took fifth place in Novice Over Fences. At the Maryville College Horse Show on Oct. 26-27 in Knoxville, TN, Morgan Wilters placed first in Advanced Walk Trot Canter on Sunday and second on Saturday. Maria Martino place first in Beginner Walk Trot Canter on Sunday and second on Saturday.

The year-old team has already grown to have 15 members and works in collaboration with the Vanderbilt Equestrian Team, having recently hosted a team-building dinner of almost 40 people. Belmont adult degree student and club president Julie Anderson started the club in 2012 with five members. The club now has 40 members. Seven members currently compete while other members plan social events for the team and participate in community service. Most recently, the club volunteered at Saddle Up, a therapeutic riding center for children with disabilities. The next show for the Belmont team will be in February at Middle Tennessee State University.

Congratulations to our December grad—Megan Swaine (ENV)!

Dr. Darlene Panvini and Megan Swaine.
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
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We're on Facebook! Join us at Serotonin Helix