Change has been the operative word around here this summer and fall. A new building with new lab, research, and office spaces. New college. New dean. New parking. New rules. New responsibilities for staff. New group of freshmen. New strategies and ideas for teaching our courses and facilitating undergraduate research.

Yet some things remain the same: commitment to student learning, passion for biology, dedicated faculty and staff, curiosity about living organisms, the predictable rhythm of the semester, stacks of papers and exams to grade, student presentations to hear, committee meetings, advising sessions with students, student clubs to mentor, conferences to attend. A key to making it through this past semester as the new interfaced with the old was to keep a sense of humor, remain flexible, establish guidelines and priorities, and be willing to pitch in and help out. The Biology student workers, staff, and faculty did this in amazing ways – even our new dean spent a part of his summer unpacking boxes!

I love the new biology teaching spaces; we designed them to have lecture and lab in the same room so that we can move seamlessly between lectures, discussions, and laboratory-type experiences. My favorite so far has been working with botany students to design and implement four 10-year projects on our new green roof – an incredible opportunity to have long-term botanical and ecological projects that will involve students for many semesters.

If you haven’t had a chance to visit, please do! We are excited about the opportunity to show you our new spaces and to share with you the great work that is happening in Biology at Belmont.

Best wishes for a blessed 2015!

Darlene Panvini, Ph.D.
Professor and Chair, Biology
Program Coordinator, Environmental Science

As reported in the spring newsletter, we have made the move from Hitch to Wedgewood Academic Center. Now located on the 3rd floor, we have double the labs and space for our students. Equipment from Hitch was moved into WAC in late June. New equipment and scientific supplies were delivered throughout the summer. Boxes from offices and additional furniture were moved in early August. Labs and offices were ready to go by the beginning of classes in mid-August. Throughout the summer students spent countless hours packing supplies and equipment for the move. As the move progressed, students, staff and faculty spent many hours unpacking boxes, checking in supplies and stocking labs. This move could not have been completed without their hard work.

To see how the move progressed during the summer, visit our Facebook page, Serotonin Helix.
Tennessee Environmental Education Association

Biology professor Darlene Panvini, education professors Lauren Lunsford and Sally Arwood, and several Belmont students attended the annual Tennessee Environmental Education Association meeting at the Great Smoky Mountains Institute at Tremont, Tenn. on Sept. 26-28. The Belmont faculty members gave a presentation titled “Reading in the Garden: Integrating Science and ELA CCSS through Informational Texts,” which included information about the professional development institute. This institute was held for middle and high school teachers in summer 2014 at Belmont as part of a grant received from the Tennessee Higher Education Commission. Biology students Katelyn Keast, Chelsea Lee and Lindsay Millward, environmental science student Alex Jeffers, as well as environmental science alumni Erin Pitts and Sylvia Alsup attended the event.

SURS 2015

Science Undergraduate Research Symposium

In its eleventh year, SURS was hosted by the College of Sciences and Mathematics. For the first time, this event was held in the same building where biology labs and research take place. 25 Biology seniors, two BMB seniors, one ENV senior, and four Neuroscience seniors set up their posters in the 3rd floor atrium area of the Wedgewood Academic Center. Additional posters and oral presentations in the areas of Chemistry, Mathematics, Computer Science and Psychological Science were also presented. The keynote address “Why Talking to Your Car Can Drive You to Distraction” was delivered by Dr. David Strayer, Professor of Cognition & Neural Science at the University of Utah. SURS is the culmination of hours of work done during the summer and fall with advisors and peers and offers these research students the opportunity to show the Belmont community what the sciences are doing.

Additional photos can be seen on our Facebook page—Serotonin Helix.
SfN 2015
Society for Neuroscience

Dr. Lori McGrew took 6 students to the annual meeting of the Society for Neuroscience in Washington, DC November 15-18. This conference is an international gathering of over 30,000 neuroscientists who share their latest findings. Some highlights from the meeting include: 1) Data showing that Infection with group B streptococcus bacteria in pregnant rats triggers brain abnormalities and autism-like behaviors in their pups — an important finding since 30 percent of pregnant women test positive for this bacteria. 2) Oxytocin may influence social behavior by priming brain circuits in a region of the hippocampus important for social memory. Oxytocin has already been shown to play a role in mate selection but this new data suggests that it may play a larger role in social interactions. 3) A summary of inhibitory circuits involved in skilled movement given by award-winning neuroscientist Thom Jessell. 4) Discussion of cellular and molecular mechanisms for memory by Roger Nicoll. Perhaps most inspiring was Dr. Nicoll’s sharing of his journey to become a renowned electrophysiologist despite struggling with severe dyslexia. The students, Hensley Barnes, Lauren Sheppard, Karah Parker, Iqra Wahid, Jaime Wesley and Cassie Wyatt, conducted research with Dr McGrew utilizing zebrafish. They presented a poster showcasing their findings at the conference during the Faculty for Undergraduate (FUN) chapter meeting. To the right is a photo of the students visiting one of the exhibitors, NeuroService, to learn about the latest techniques and equipment for neuroscience research.

Tennessee Academy of Science Annual Meeting

Drs. Steve Murphree, Darlene Panvini, Nick Ragsdale, John Niedzwiecki and Roger Jackson (Biology) and a total of 25 undergraduate research students from Biology, Environmental Science, BMB and Neuroscience attended the 2014 Tennessee Academy of Science Annual Meeting held November 21 at Walters State Community College in Morristown, TN. The Belmont students presented posters at the meeting and attended presentations from graduate students and faculty from a wide variety of Tennessee schools. More pictures can be found on our Facebook page—Serotonin Helix.

DOING BIOLOGY AT BELMONT
Richland Creek Cleanup

In October, environmental science students, along with Belmont Biology Professor Dr. Darlene Panvini, hosted a Richland Creek cleanup for their service learning project. The cleanup day was part of a project started by environmental science students last year. Five students adopted a section of Richland Creek through Nashville Metro Water Service’s Adopt-A-Stream program. There is a two-year commitment and at least one stream cleanup per year and the stenciling of storm drains leading to the adopted stream segment. Metro Water Services provides a sign acknowledging the adopting group and stream. Belmont’s official sign is posted at England Park between the walking trail and Richland Creek.

CSM Fall Cookout

The first annual CSM (College of Sciences & Mathematics) Cookout was held in October at Fannie Mae Dees Park. The event was hosted by the student clubs and organizations of CSM. As a new college, the cookout gave science and math students an opportunity to get together on a beautiful fall afternoon to socialize and share some food together.

THEC Grant Update

Drs. Lauren Lunsford and Darlene Panvini have been busy since their grant was approved. As reported in the spring newsletter, a $75,000 grant was approved by Tennessee Higher Education Commission (THEC) for Drs. Lauren Lunsford and Darlene Panvini’s project, “Food and Gardening: Growing Partnerships between Science Teachers and English Teachers to Support Instruction.” This summer Dr. Lauren Lunsford and Dr. Darlene Panvini, along with Belmont professors Sally Barton-Arwood, Bonnie Smith Whitehouse, Kim Daus and Kate McGowan, hosted a workshop in June for area science and English teachers. The weeklong workshop, attended by 20 middle and high school teachers focused on the use of cooking and gardening to develop partnerships to support instruction and keep students engaged using informational text. In November, an article written by these professors, was published as the lead article in the TN Council of Teachers of English’s peer-reviewed publication, Visions and Revisions. Currently, plans are being made for the next workshop, funded by another THEC grant, which will take place in June 2015 and incorporate math lessons.

Fall Semester Biology Speakers

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

Dr. Yan Su, from the department of Biochemistry at Vanderbilt University was the Neuroscience speaker for the fall.

Dr. Carol Robbins of the University of Alabama at Birmingham spoke to students about careers in Biotechnology.

Faith Rainey from Roche Diagnostics talked to students about “Biomedical Careers with a Bachelor’s Degree”

Dr. Nicholas Reiter, Assistant Professor of Biochemistry at Vanderbilt University was the BMB speaker this fall. “Exploring the structure and function of large non-coding RNAs” was the title of his talk.

Dr. Stephen Randal Voss from the University of Kentucky was the Vaughn Science Lecture speaker this fall. His talk was entitled “Axolotl Story: Enabling an Endangered Species for Human Health and Disease Research”.

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

Sachin Amin (09)
Has completed first year of internal medicine residency at UTK.

Dennis Gibson (69)
Inducted into Battle Ground Academy Teacher Hall of Fame. Retired after 30 years as teacher and department head.

Deanna (Gardenhire) Brown (06)
Completed residency at Metro Health Medical Center/Case Western Reserve University in Cleveland, OH in June 2014. Now in practice at Dr. Rodney Susong’s dermatology practice in Chattanooga, TN.

Kari Morse (14)
Pursuing Masters in Exercise and Nutrition Science at Lipscomb University. She is also a graduate supervisor in the Department of Fitness and Recreation at Belmont.

Annie O’Steen (08)
Passed the PTA boards on July 7, 2014 and is now a licensed PTA.

Rachel Garland (13)
Is a scribe at the Neurology clinic at UT Physicians Medical Center.

Bellamy Hawkins (13)
Graduates December 2014 from University of Alabama with a Masters in Public Health in Epidemiology. She has been accepted to the University of Alabama Physician Assistant Program.

Maria Martino (14)
Has been accepted to Belmont University’s School of Physical Therapy.

Taylor Andrew (11)
Teaches 8th grade science at McMurray Middle School for Teach for America.

Faculty Update

Home School Science
Dr. Niedzwiecki and Dr. Murphree, led 16 home schooled students, grades seven through 10, in their Vertebrate Anatomy Home School Science Discoveries session in May. The students performed dissections to learn about muscles, organs and organ systems and how they function.

Insects and History
Dr. Murphree combined his knowledge of insects with local history at several events this summer and fall. In October, Dr. Murphree gave table presentations about “Insects and Disease in the Civil War” at the Civil War Surgeon display of Tom and Nancy Wood in Pioneer Village as part of the Granville, Tennessee Fall Festival event. In late September, he offered an “Insects and Disease in the Civil War” table presentation for elementary school children at The Historic Sam Davis Home and Plantation’s Heritage Days event.

Biology Faculty Attend iPlant Genomics in Education Workshop
In August, Drs. John Niedzwiecki, Roger Jackson and Chris Barton, attended the iPlant Bio Genomics in Education Workshop hosted at Hudson Alpha Institute for Biotechnology in Huntsville, Alabama. At the workshop they learned strategies for incorporating the latest genomic and bioinformatics technologies and methods for the undergraduate classroom. Genomics in Education focuses on DNA Subway, a website that introduces students to sophisticated bioinformatics though an easy-to-use interface.

Pictured: Dr. Roger Jackson, Dr. John Niedzwiecki and Dr. Chris Barton
Biology Alumni Update

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

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

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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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.

Name________________________________________ Graduation Year_____________________

Address_________________________________________________________________________

City_________________________State__________Zip Code_________Phone____________

Email address_______________________________________________________________________

Employment__________________________________Title________________________________

Recent promotion, honor, award, family activity?_________________________________________________________________________

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