



# Double Helix

## Biology Department Newsletter

### Notes from the Chair

Lots of exciting things have been happening around the Biology Department this summer and fall as this issue of *The Double Helix* attests. Some of my personal highlights include: being licked on the forehead by a jaguar\*, hours sitting on a rock in a stream counting waterpenny beetle larvae on hot summer days, lifting coverboards in a wetland in hopeful anticipation of animals underneath (no snakes, much to a student's dismay), and observing nature on a cold, drizzly day at Radnor Lake State Natural Area. In reflection, the aspect that makes these events special is that they were shared with students beyond the realm of "traditional teaching." They are the moments that afforded me the opportunity to build relationships with students and know

them beyond the descriptor of "student." My best learning occurs when I am with students outside the classroom or laboratory and fully engaged in the experience of discovery. I am convinced these are also my strongest teaching moments. Sure, I can put together an eloquent lecture, a picture-filled PowerPoint, an engaging group activity, and even an inquiry-based lab exercise, but the most meaningful teaching and learning moments are those that get me and my students outside of the confines of routine teaching. My colleagues in Biology excel in various forms of engaged learning with our Biology, Environmental Science, Neuroscience, and BMB students as evidenced in this newsletter. Enjoy reading about the

many varied things happening this year and check out our website and Facebook page for details. Best wishes for an engaging 2012!

*\*Surely this brings good luck to anyone daring to get this close to such an amazingly beautiful animal!*



*Darlene Parvini*  
Dr. Darlene Parvini  
Chair, Biology Department



Volume 7, Issue 1

Fall 2011

#### Special points of interest:

- Belmont goes to Belize



Research students at conferences -

TAS

SEPEEG

SfN

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### From Belmont to Burundi



Dr. McLaughlin talks to Dr. Jennifer Thomas and Dr. Lori McGrew

The Biology department seminar series welcomed alum Eric McLaughlin back to Belmont on October 3 where he spoke to students about his experiences as a doctor and educator in Africa. Eric graduated in 2002, attended medical school and then journeyed to Africa to teach and practice medicine. Students had the opportunity to listen to an alum's experiences in medical school and practice.

## SEPEEG 2011

### Southeast Population Ecology and Evolutionary Genetics

Dr. John Niedzwiecki and three of his undergraduate research students presented posters at the 2011 Southeast Population Ecology and Evolutionary Genetics Meeting Held October, 21-23, Hosted by UNC-Chapel Hill in Reidsville, NC. The posters were among 70 presentations, from over 100 participants in this year's meeting. In addition to the poster session the students attended oral presentations from graduate students and faculty from a wide variety of southeastern schools including UNC Chapel Hill, UNC Greenville, NC state, UGA, Emory, UVA, ECU, UFL, and UT. Abader Almosawi's poster was titled "Habitat perception and the anti-predator response of Physid snail." Kelsey Grant gave a poster titled "Distance perception of a predator through a chemical cue in a Physid snail." And Nicholas Kirk's poster was "The effect of development on bird diversity along a stream corridor." The students enjoyed and learned from the starting keynote about cooperative breeding birds as "superorganisms" to a final talk summarizing parthenogenesis across snakes.



**Abader Almosawi and Nick Kirk present their posters at SEPEEG**

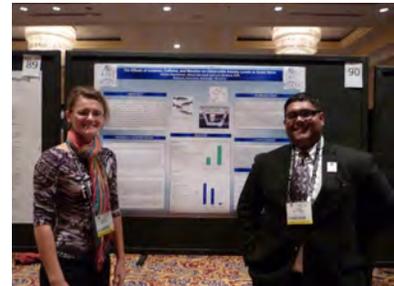
## SfN 2011

### Society for Neuroscience

Dr. Lori McGrew, Vishan Ramcharan (Biology) and Alesya Borisyuk (Neuroscience) attended the SfN conference this year which was held in Washington, D.C. on November 12—15. All three presented posters. SfN expected more than 31,000 attendees at the conference this year. Attending conferences such as this one give students the opportunity to present their research and talk to other students about their experiences in research and studies.



**Dr. Lori McGrew**



**Alesya Borisyuk and Vishan Ramcharan**

## Belmont Students Present at TAS Meeting

Drs. Bob Grammer, Steve Murphree, Darlene Panvini, Nick Ragsdale, Jennifer Thomas (Biology) and 17 biology undergraduate research students attended the 2011 Tennessee Academy of Science Annual Meeting held October 28, 2011 in Jackson, TN. The meeting was hosted by Union University. The Belmont students presented posters at the meeting and attended presentations from graduate students and faculty from a wide variety of Tennessee schools. More photos are at the Facebook site—Serotonin Helix.

**Pictured are Dr. Jennifer Thomas, Tristan Daniel, Dr. Robert Grammer, Phillip Parsley, Samera Berhane, Ryan Baker, Jordan Murray, Laura Muck, Monique Parrish and Ashley Newsome.**



## Belmont goes to Belize

The May trip to Belize was a success with many students from Belmont attending. Dr. John Niedzwiecki led the students in classroom lectures, field trips and an education in the environment of both the rainforest and coastal areas of Belize. Students learned about environmental issues, snorkeled, explored caves and were even “kissed” by a jaguar! More photos are on our Facebook page—



Serotonin Helix.



## SURS 2011

### Science Undergraduate Research Symposium

In its eighth year, SURS was presented by the School of Sciences. SURS is the high-water mark for many of these students as it gives them 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. Several Biology students presenting are also part of the Summer Scholars program that takes place in the summer months here at Belmont. 21 Biology seniors and one Neuroscience senior presented posters. An additional 30 posters were presented by a total of 52 students. In addition, oral presentations were made by 19 students.

The keynote address, “Simplicity and Incomprehensibility” was delivered by Dr. Nathaniel Dean from Texas State University. More photos can be seen on our Facebook page—Serotonin Helix.



## School of Sciences Annual Fall Picnic

The School of Sciences’ annual Evening of Picnic and Games was held Nov. 11 in the Hitch Science Building. The evening of food and fun was open to all SoS majors, faculty and staff. Pizza and drinks were provided by the school and the students brought desserts. The picnic was hosted by the various clubs within the School of Sciences: Theta Epsilon Tau, Tri Beta, Beta Chi, O.N.E., S.M.A.C.S., Society of Physics Students, MAA/ACM and the Psychology Club. Approximately 75 students and faculty were in attendance.

## Fall Semester Biology Speakers

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

**Dr. Habibeh Khoshbouei**, from the Department of Physiology, Meharry Medical College talked about her research and the effects of methamphetamine on cell lines in the School of Science Colloquium Series.



**Dr. Eric McLaughlin**, Belmont alum, doctor and medical educator in Kenya, returned this fall as a speaker in the Department of Biology Seminar Series.



Additionally, several speakers and guests were on campus from health-related graduate and professional schools to talk about their programs.

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

## Biology Faculty in the News

### Dr. Niedzwiecki presents at Tennessee Herpetological Society Annual Meeting

Dr. John Niedzwiecki presented research he did in collaboration with recent students, Lauren Oeser (class 2009) and Sara Bentley (class 2010), at the 2011 Meeting of the Tennessee Herpetological Society. The meeting was held on September 29-30 at Cumberland University in Lebanon, TN. The talk was titled "The specificity of the anti-predator response in the streamside salamander, *Ambystoma barbouri*." Dr. Niedzwiecki had previously presented this research as a poster at Behavior 2011, the Joint Meeting of the Animal Behavior Society and the International Ethological Conference, held July 25-30<sup>th</sup> in Bloomington, IN.

### Cicada Invasion

Dr. Steven Murphree was all over the news in May as the 13 year cicadas made their entrance in Middle Tennessee. Media coverage started at The Tennessean and ultimately ended with an article in Time magazine. Biology faculty enjoyed the attention and spotlight that Dr. Murphree brought to the department. Links for the articles can be found on our Facebook site—  
Serotonin Helix.

### Owl's Hill Nature Sanctuary

Biology Professor Steve Murphree recently taught a class at the [Owl's Hill Nature Sanctuary](#). The class was titled *The World of Invertebrates: Pollinators, Predators, Pests and Parasitoids*. The topics discussed in the class included: Characteristics and life cycles of insects, Identification of insects, Overview of other arthropods, including spiders, isopods and mites, Methods of collecting and observing insects and other arthropods, and Ecological roles of arthropods.

### Biology Faculty Participate in TAS Meeting

Bob Grammer, Steve Murphree, Darlene Panvini, Nick Ragsdale, and Jennifer Thomas (Biology) presented or served in leadership roles at the 2011 Tennessee Academy of Science Annual Meeting held October 28, 2011 in Jackson, TN. The meeting was hosted by Union University. Grammer, Panvini, and Thomas presented in the Science and Math Teaching Technical session on various aspects of the biology science curriculum and outreach. Ragsdale chaired the Health and Medical Science Technical session. Murphree is treasurer of TAS and assisted with registration and other meeting details.

## Current Students Update

### Congratulations to Fall 2011 Alpha Chi Inductees!

#### Biology

Homa Ghulam Jan  
Shea Harrison  
Lauren Land  
Breanna Poore  
Anderson Webb

#### Neuroscience

Rachel Garland

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.

**Laura Muck**, accepted and attended Marquette's summer research program this past summer.

**Ashley Newsome** accepted and attended the UMC program in Jackson, MS for the summer. This is the second summer she has been accepted into programs related to health disparities.

Students in biology Associate Professor Darlene Panvini's **Introduction to Environmental Science** recently observed a bird banding demonstration at Warner Parks. The students learned more about how scientists track and study bird populations. Some students in the course are Environmental Science majors, while other students are taking the class to fulfill a general education science requirement.



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## Alumni Corner

### Sarah Updegraff (11) ENV

Sarah has been working at Big Cypress National Preserve for almost 2 months now. She has been involved with both the hydrology and wildlife biology departments. On a weekly basis Sarah goes out to the swamp and collects data on the endangered Big Cypress fox squirrels by using telemetry to locate squirrels that have GPS collars on them.

### Derrick Gregory (05)

Derrick is starting his last year of dental school at the University of Kentucky.

### Stephen Carlson (05)

Stephen received his Ph.D. in marine biology and is now a postdoctoral fellow at the Bowles Center for Alcohol Studies at the University of North Carolina, conducting neuroscience research with rats studying alcohol dependence and withdrawal.

### Ola Osinusi (11)

Ola has started and completed his first semester of a Masters of Biomedical Sciences Program at Barry University in Miami Shores, Florida.

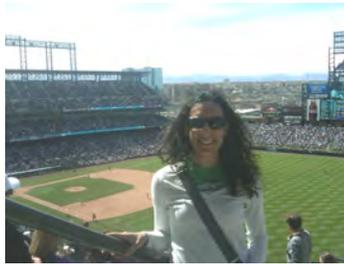
### Jimmy Bertaud (06)

Jimmy is in his 4th year of medical school at Meharry Medical College and will be applying for a residency program in Neurology this year. "Many thanks to Dr. McGrew and Dr. Ragsdale who first sparked my interest in Neuroscience when I was a senior-I would have NEVER guessed I would be choosing Neurology as a specialty."

### Bridget Shariat (06)

Bridget continues her update from Colorado:

*Spring time in Denver*



"It's been way too long, I know.

I can hardly remember the last week let alone several months-it's all a blur. After working the holidays in the winter, I had my own fabulous vacation in Spain and Portugal that was awesome.

I came back to hard work and long hours at the Children's Hospital. I experienced my first pediatric death-a 6yr old boy that went to hospice 2 days before he died.

I was very attached to him and his family and it was very difficult for me in many ways, but ultimately I felt relief for him and his tiny body.

I have grown in so many areas of my life since starting residency and here I am almost finished with my intern year. Unbelievable.

### Bridget Shariat (06) (continued)

I am continually challenged mentally, physically, and emotionally in this field.

I have my days of exhaustion with my hair on the side of my head wondering how I've gotten through my day facing stressful and near death situations, but I could not be happier with my occupation and residency program. I'm "living the dream" as we say sometimes sarcastically in the hospital, but really I am.

My last rotation of this year is OB and I have several of my own OB's that I follow in clinic due in June-can't wait!"

### Cori Pedigo (08)

Cori is attending Austin Peay's Nursing program.

### Taylor Walter (09)

Taylor is in Knoxville working for AstraZeneca as a pharmaceutical rep.

### April Tummins (09)

April is working as a lab technician at Vanderbilt University Medical Center and taking courses in school counseling at UT-Martin.

### Becky Repasky Adams (08)

Becky successfully passed her qualifying exams and is a Ph.D. candidate in the Department of Cell and Developmental Biology.

# Biology Department

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

## 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](mailto:terri.templeman@belmont.edu)

Dr. Darlene Panvini, Chair, [darlene.panvini@belmont.edu](mailto:darlene.panvini@belmont.edu)

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**We're on Facebook! Join us at Serotonin Helix**

## 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? \_\_\_\_\_

