Double Helix

Biology Department Newsletter

Notes from the Chair

As I muse on the fall semester, I take note that Steve is busy planning details to host the Middle Tennessee Science and Engineering Fair in March. Bob has experimented with using “notecard quizzes” in his Introductory Biology course. Nick has assumed the duties of Associate Dean of the College of Sciences and Mathematics while Jennifer has taken on the role of Assistant Director of the Teaching Center. Lori has navigated details so that faculty can use the Gross Anatomy Lab in their courses. Chris mentored our part-time adjuncts this semester. I returned from sabbatical and John will be leaving for one next semester. We both are busy planning for our second Maymester in Costa Rica. Roger attended a summer teaching workshop and is teaching three new courses this year. Laura is teaching several courses for the first time and acclimating to the department. Terri and Ray supply us in everything from paperclips to Petri dishes, while keeping the office, events and labs running smoothly and safely. All of this is happening while teaching courses, mentoring students in research, attending conferences, and participating in numerous service opportunities throughout the university. Clearly this is a group not content with status-quo – but continually striving for professional development and new ways of creating effective and meaningful learning opportunities for students.

I am blessed beyond measure to call them colleagues and even more so to know them as friends.

Here’s hoping that spring 2016 finds us enjoying more intellectual challenges, taking pedagogical risks, and contributing to meaningful relationships.


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

Alums speak to Biology students

Belmont alums Beth Bowman and Chris Bowman were on campus in September to speak to science majors about career opportunities available to them. The talk, entitled “Biomedical Graduate and Medical Programs: which is right for me?”, was well attended and students had the opportunity to ask questions about medical and graduate school opportunities. This is the third time that alums have returned to speak to Belmont science majors and share their experiences and knowledge about the world beyond undergraduate studies. The Biology department looks forward to continued visits from our alums and we encourage them to come and speak with our students during the academic year.

Beth Bowman and Chris Bowman
SfN 2016
Society for Neuroscience

Dr. Lori McGrew and her research team presented at the annual meeting of the Society for Neuroscience which was held in Chicago, Illinois October 17-21. Dr. McGrew presented a poster in the History and Teaching theme entitled “Applying the “flipped classroom” approach to teaching hybrid neuroscience courses.” The students presented a poster at the Faculty for Undergraduate Neuroscience chapter meeting describing their research using Danio rerio (zebrafish) under Dr. McGrew’s mentorship. The students, Lindsey Cheek, Lindsey Dennis, Araceli Garland, Samantha Gould, Donald Hoyle, Tessa Shupe and Brandy Sweet, also had the opportunity to attend a number of conference events including the Presidential Lecture on neurexins and their role in autism, nanosymposia on anxiety, depression, learning and ethics. In addition to these conference events, Dr. McGrew also attended a workshop on teaching neuroscience to nonscientists.

Tennessee Environmental Education Association

Dr. Panvini (Biology) and five students attended the Tennessee Environmental Education Association conference at Montgomery Bell State Park, TN on Saturday, Sept 26. Students attending were Environmental Science students Alex Jeffers and Walter Burn and Biology students Lindsay Millward, Lindsey Dennis, and Katlin Stodard. They were joined by Environmental Science alumni Erin Pitts and Sylvia Alsup. Dr. Ryan Fox (Mathematics/Education) and Dr. Bonnie Smith Whitehouse (English) also attended the conference.

SURS 2015
Science Undergraduate Research Symposium

In its twelfth year, SURS was hosted by the College of Sciences and Mathematics. 30 Biology seniors, one BMB senior, two ENV seniors, and five 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 “What Undergraduate Research Means to Me” was delivered by Dr. Christopher Raridan, Associate Professor of Mathematics at Clayton State University. 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.
Tennessee Academy of Science Annual Meeting

Drs. Steve Murphree, Darlene Panvini, Nick Ragsdale, Chris Barton and Roger Jackson (Biology) and a total of 31 undergraduate research students from Biology, Environmental Science, BMB and Neuroscience attended the 2015 Tennessee Academy of Science Annual Meeting held November 20 at MTSU in Murfreesboro, TN. The Belmont students presented posters at the meeting and attended presentations from graduate students and faculty from a wide variety of Tennessee schools.

Four of our Senior research students received recognition for their poster presentations at the Tennessee Academy of Sciences Annual Meeting.

Lindsay Millward received 3rd place in the Ecology and Environmental Science section. Her research is entitled “Differences in leaf pack decomposition rate between invasive exotic and native species in a temperate deciduous forest”. Her research advisor is Dr. Darlene Panvini.

Ambrose Rice received 3rd place in the Cell and Molecular Biology section. His research is entitled “The effects of increasing dosages of lipoic acid on the chemotaxis of Caenorhabditis elegans at adulthood”. His research advisor is Dr. Robert Grammer.

Eeleyah Singh Tanwar received 2nd place in the Health and Medical Sciences section. Her research is entitled “Transcription factor p53 and its regulation of pro-apoptotic gene Bnip3L during heat shock”. Her research advisor is Dr. Chris Barton.

Parker Tumlin received 2nd place in the Cell and Molecular Biology section. His research is entitled “Determining C. elegans chemotaxis to cervical cancer and decanal to expand on the nematode scent detection test – a cancer screening system”. His research advisor is Dr. Robert Grammer.
Green Meeting

Dr. Darlene Panvini and senior biology and environmental science major Lindsay Millward spoke at the Tennessee Women in Green (TWIG) meeting on September 11. Their presentation, “Doing Biology: A Philosophy for Mentoring Students,” covered ways in which students are involved in research, professional development and civic engagement.

“We Do Biology” describes the philosophy of the Department of Biology at Belmont. Getting undergraduate science students involved in research, community service and professional organizations includes catching earthworms, cleaning streams and presenting posters at conferences. Panvini and Millward shared examples of how actively mentoring science students prepares them for graduate schools, careers and civic engagement. The talk also described Belmont’s sustainability initiatives.

Releaf Project

On Saturday, November 21, Tri-Beta, ECO and SMACS participated in ReLeafing Day in Nashville by planting four trees in various neighborhoods. ReLeafing Day is the Nashville Tree Foundation’s fall planting, held every year on the Saturday before Thanksgiving. Volunteers across the county come to plant trees in public spaces and private yards.

This year the event was held in northwest Nashville neighborhoods of Bordeaux, Haynes Manor, Haynes Park, in public parks and along Titans Way with the Cumberland River Compact.

Project Green Challenge Winner

Environmental Science major Missy Martin was named the champion in the Project Green Finals held in San Francisco in November.

The Project Green Challenge, an international 30-day eco challenge, hosted by non-profit Turning Green, invited close to 4,000 students representing 422 campuses globally to complete challenges each day. According to an article on EcoWatch, “Its goal is to inform, inspire and mobilize, to create a global call to action for college and high school students inspiring the transition from conventional to conscious living.”

Belmont finished 5th in the world, and individually, Martin placed first and travelled to San Francisco November 18-23 for the PGC 2015 Finals. At the Finals, Martin, along with 14 other finalists from around the world, participated in an eco summit where they worked with and shared their PGC experiences and competed to become the PGC 2015 Champion. At the end of the summit, finalists performed a mock TED talk in California for a panel of judges and the chance to win the prize package valued at more than $12,000.

As the champion, Martin received the grand prize package, valued at more than $12,000, which includes a $5,000 Green Award from Acure Organics, a trip to the Natural Products Expo in Anaheim from Aubrey Organics, a $1,000 Whole Foods Market gift card, a trip to the Gaia Herbs farm in North Carolina, a head-to-toe eco makeover complete with clothing, bath and body products and other great prizes.

Maymester Costa Rica

Drs. Darlene Panvini and John Niedzwiecki led a group of 14 Belmont students on a course focusing on diversity of tropical ecosystems in Costa Rica this past May. Students studied flora and fauna as well as efforts to protect tropical rainforest and endangered species in Costa Rica. The course will be offered again in Maymester 2016.

Fall Semester Biology Speakers

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

Dr. R. Jason Pitts, from the department of Biological Sciences Institute for Global Health at Vanderbilt University was the BMB speaker this fall.

Dr. Scott Grubbs, Department of Biological Sciences and Director, Center for Biodiversity Studies at Western Kentucky University talked to students about “Untangling the tangled, a stable isotopic approach to assessing the importance of filamentous algae to a riverine foodweb”

Dr. Philip Crowley, Professor of Biological Sciences at the University of Kentucky and Associate Director for Research of the Tracy Farmer Center for the Environment presented a talk on “Games and other conundrums: How organisms, institutions, agents, and algorithms make decisions.”

Dr. Sandy Rosenthal from Vanderbilt University was the Vaughn Science Lecture speaker this fall. Her talk was entitled “Elucidating Molecular Mechanisms of Mental Illness with Ligand Conjugated Nanocrystals”

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

Rezzan Hekmat (15)
Attending John Hopkins Bloomberg School of Public Health

Chris Bowens (14)
Attending Union University’s School of Pharmacy.

Jimmy Bertaud (06)
Will be a Vascular Neurology fellow at the University of Virginia starting July 2016. It is a 2 year program with one year of clinical training and another year in clinical research.

Becky Adams (08)
Accepted a position at Yale and is writing grants this fall as a postdoctoral fellow in the lab of Dr. Anna Pyle.

Steven Avers (11)
Graduated medical school in May 2015 in the top 10% of his class, matched into his residency of choice at UT Southwestern in Dallas TX for PM&R and currently doing his intern year at Harbor UCLA doing Surgery.

Justin Smith (15)
Working as an anesthesia technician at Centennial Medical Center. Has also been accepted to UT Medical School.

Chelsea Lee (15)
Was promoted to a full time hoofstock zookeeper (large herbivores, ratites, and big cats) at Southwick’s Zoo where she is also a manager of the petting zoo and walk-in aviary.

D’Angeleau Newsome (14)
Has recently accepted a position at the Sarah Cannon Research Institute in Nashville as a Data Coordinator in their Drug Development Unit.

Taylor Andrew (11)
Currently a chemistry and biology teacher at Antioch High School.

Taylor Brown (14)
Has accepted a position as a biology and zoology teacher at Liberty High School in the Wentzville School District.

Scott Kim (14)
Has completed first year of medical school.

Jordan Helms (15)
Will be working with the Georgia Department of Public health, Office of HIV/AIDS, as a Qualitative Study Intern.

Katie Rush (13)
Graduated from Rush University with her Masters in Nursing and is now working as a Registered Nurse in the Neonatal ICU in Rush University Medical Center.

Rebekah Shepperd (15)
Attending UT Pharmacy School

Kyle Tran (15)
Attending UT Pharmacy School

Sylvia Chac (12)
Has passed her boards and is now Doctor of Physical Therapy at Joel Scherr Physical Therapy in West Hollywood, CA.

Nick Kirk (12)
Won the AAV (Association of Avian Veterinarians) student manuscript competition this year with his paper entitled “Comparison of Euthanasia Methods in Avian Species”. Nick presented his paper at the ExoticsCon conference in San Antonio, TX in August. Conference expenses were covered by AAV.

Senior Preview

Our seniors are already going places -

- Jacob Dahm has been accepted to Iowa Dental School,
- Parker Tumlin has been accepted to UT Medical School,
- Jeff King has been accepted to St. Louis Medical School.

In the spring newsletter, we will keep you updated on our seniors and their plans after graduation.
Biology Department

Dr. Chris Barton, Assistant Professor
Dr. Robert T. Grammer, Professor and BMB Coordinator
Dr. C. Steven Murphree, Professor
Dr. Lori L. McGrew, Professor 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, Professor, Associate Dean and Pre-Health Advisor
Dr. Jennifer T. Thomas, Professor
Dr. Roger Jackson, Lecturer
Dr. Laura Stephan, Lecturer
Ms. Terri Templeman, Administrative Assistant
Mr. Ray Seely, Laboratory Manager and Biological Safety 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.

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Dr. Darlene Panvini, Chair, darlene.panvini@belmont.edu

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