



# BioSynthesis

Volume 10, Issue 1 (January, 2011)

BioSynthesis On-Line: <http://departments.bloomu.edu/biology/>

## Fall & Spring Semester Dates

**JAN 31:** Pre-Medical Sciences Club Meeting, ABLE, Columbia Residence Hall, 5 p.m.

**FEB 2:** Deadline for seniors to submit Graduation Applications to BAHS office.

**FEB 4:** Deadline for BAHS Scholarship Applications.

**FEB 7:** BAHS Club Meeting, 6 p.m., G38 HSC.

**FEB 21:** BAHS Club Movie Night, 6 p.m., G38 HSC.

**FEB 28:** Medical Imaging Internship Applications due to Dr. Hranitz, 268 HSC.

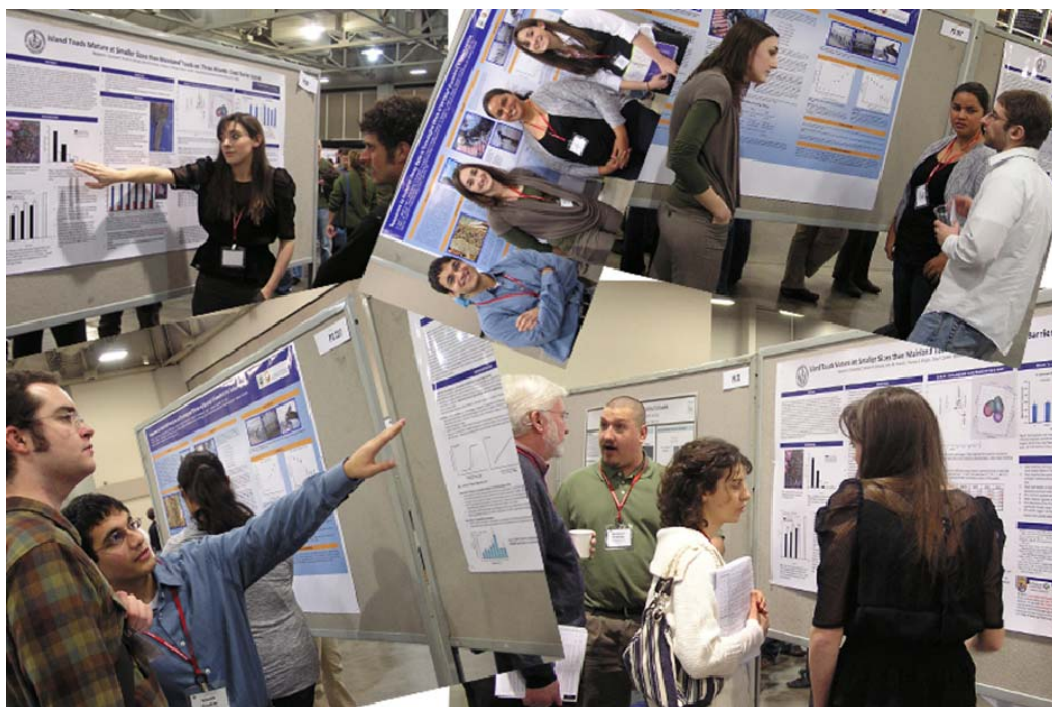
**MAR 7-11:** Spring Break..



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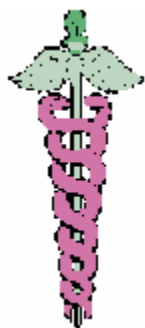
## BAHS Students Present Research on a National Stage



BAHS was well-represented at this year's meeting of the Society for Integrative and Comparative Biology in Salt Lake City, UT in early January. Five BAHS students presented their research results in poster presentations. Pictured above in an "action montage" are **Jonathan Bobek** (M.S. Biology candidate), **Meghan Duell** (B.S. Biology), **Ben Evancho** (M.S. Biology candidate), **Nicole Gerard** (B.A. Biology, natural history), and **Ghaith Ibrahim** (B.S. Biology, pre-medical sciences). Attending the meeting with the students were: **Drs. Corbin, Hranitz, Surmacz, and Wassmer**. Students attended talks in oral sessions from 8 am to 3 pm and presented their posters between 3 and 5 pm. During this time, students met with faculty, graduate students, and fellow undergraduates from around the world to discuss their science! A listing of presentations by BAHS students and faculty appears on page 11.

## Notice to May Grads

All seniors planning to graduate in May 2011 must submit a graduation application to the BAHS Department office, 115 Hartline, by February 2. Applications may be found on the Registrar's website. All students who are graduating with degrees in biology or health science must take the Major Field Test prior to graduation. The test will be given on Friday, April 29 from 3 to 5 pm and Tuesday, May 3 from 5 to 7 pm. Please schedule a time to take the exam in the BAHS Department office, 115 HSC. See **Dr. Wood** for additional information. Graduates in the College of Science and Technology will receive their diplomas at the ceremony at 3 p.m. on Saturday, May 7, 2011 in the Academic Quad.



## Pre-professional Committee News

### OPPORTUNITIES: Primary Care Scholars Program

Interested in medical school in general and primary care in particular? Consider attending the 2011 Primary Care Scholars' Program sponsored by the Penn State College of Medicine at Hershey. From May 16 to May 27, 2011. The first week is devoted to learning about issues in health care, medical school admissions, financial aid, and the medical school curriculum. Opportunities to learn about family medicine, internal medicine and pediatrics will also be provided. The second week is a clinical shadowing experience that can be completed in the students' home community. Applicants must have completed their sophomore year in college. Entry into the program is competitive. Special consideration is given to students interested in primary care, wishing to practice in underserved rural or urban areas, or under-represented minorities. You must apply through the Pre-Professional Advisory Committee at BU. Applications must be received by February 7, 2011 for full consideration. For further information and application materials, contact Dr. Joseph Ardizzi, 145 HSC.



### Dental Association Conference

The Student National Dental Association is hosting its 98<sup>th</sup> annual conference at the Baltimore Waterfront Marriott on July 24-25, 2011. The conference aims to expose students to dentistry through hands-on workshops, information sessions with admissions recruiters, and panels on current issues in community dental health. Register by April 28 at [www.sndanet.org](http://www.sndanet.org), or email [usndaconf@gmail.com](mailto:usndaconf@gmail.com).

### Summer Human Anatomy Course

The Johns Hopkins University School of Medicine is offering a 4- credit summer course in Human Anatomy for undergraduates from June 6 to July, 2011. The course includes lectures, cadaver demonstrations, and experiences with computer simulations, and imaging modalities. Grades are based on written and practical exams. To be eligible, students must have completed their sophomore year and have had an introductory college biology course. Tuition is \$3800 and housing is available (\$1300.) Applications are due March 15, 2011. For further information, consult <http://www.hopkinsmedicine.org/FAE/anatomyinstitute>



### Planning for the MCAT

The Medical College Admission Test, MCAT is a computerized exam required for admission to medical school. The MCAT assesses mastery in biology, general and organic chemistry, physics, scientific problem solving, critical thinking, and writing skills. Scores are provided in four categories: biological science, critical thinking, physical sciences, and writing. It is typically taken in the spring of the junior year or the summer before the senior year. It is administered over 20 times per year with your choice of a morning or afternoon testing session. Score reports are available in 30 days. Dates for 2011 are January 28, 29; March 26; April 9, 16 and 29; May 7, 20, 21, 28; June 16; July 6, 16, 28, 29; August 5, 6, 12, 18, 19, 23; Sept 1, 2, 8, and 10. Additional information can be found at <http://www.aamc.org/students/mcat/>

### Interested in applying to professional schools in medical fields?

Then the upcoming "March Madness" workshops are just what the doctor ordered! BU's pre-professional committee will be sponsoring workshops in March for sophomores and juniors who are interested in careers in various medically-related professions (medicine, dentistry, veterinary medicine, optometry, etc.). The workshops will review the application process, how to tell your story in a personal statement, and how to write a resume. Stay tuned for dates and times.

### Check out the Pre-Pro Community

Dr. Bell, chemistry department, has set up an online community on BOLT to assist students interested in attending professional or graduate school. The site contains exam study aids, helpful links, a discussion board, announcements, and a "word of the week" to build that ever important vocabulary for standardized tests. For more information, see Dr. Bell.

See **Dr. Ardizzi** to register with the pre-professional committee. If you have any questions, please feel free to contact any member of the Pre-professional Committee. The co-chairs of the committee are **Drs. Ardizzi** and **Melnychuk** (BAHS). Other committee members include **Drs. Surmacz** (BAHS), **Morgan**, and **Bell** (Chemistry).

Best wishes for continued success. Stay in touch!

A blue graduation cap with a yellow tassel. The cap is a mortarboard style with a square top and a flat brim. The tassel is yellow with a blue ring at the top. The image is a simple, stylized illustration.

Honors Program Graduate: **Daniel Bertschman.**

We wish the best of luck to all health science students who are currently interviewing for clinical programs. Keep us posted. **Dr. Judy Kipe-Nolt**, 269 Hartline, is currently serving as the interim Allied Health Coordinator.



## Celebrating Student Success

Congratulations to Biology and Allied Health Students who earned a GPA of 3.5 or greater and were named to the Dean's List for Fall Semester 2011. Great job!

B.S. Medical Imaging

**Jessica M Albright**  
**Kellina M Beers**  
**Lauryn A Belcher**  
**Torie B Brillhart**  
**Andrew T Christman**  
**Morgan J Cioffi**  
**Alyssa Falco**  
**Jamie W Hessels**  
**Kirk J Jarrett**  
**Erica L Jurgensen**  
**Ashley V Kalage**  
**Lindsay M Kida**  
**Jason Kneller**  
**Sarah C Lech**  
**Brittany A Levengood**  
**Lisa M Magulak**  
**Ellen M Meisel**  
**Alison N Meter**  
**Ellen M Meisel**  
**Alison N Meter**  
**Valerie Niedelman**  
**Sarah J Pagni**  
**Corey P Pappas**  
**Sebastian O Ramirez**  
**Moiria K Sheridan**  
**Katherine L Sweger**  
**Brooke R Thompson**  
**Alita N Umberger**  
**Daniel A Wetzel**  
**Jonathan S White**  
**Victoria L Williamson**  
**Angela C Worley**

Pre-Pharmacy

**Uri Anderson**  
**Rachel E Fisher**  
**Theresa R Fuchs**

B.S. Health Sciences,  
 Clinical Lab Science

**Alaina L Egger**  
**Heather M Ressler**

B.S Health Sciences, pre-physician assistant

**Joelle N Bittner**  
**Brittany Carper**  
**Heather N Love**  
**Ariel N Middleton**  
**Michael J Molesevich**  
**Gretchen C Moore**  
**Kaitlynn N Nale**  
**Justine A Okurowski**  
**Kelly M Pidgeon**  
**Jenelle L Romig**  
**Kimberly Schnur**  
**Jessica L Shisler**  
**Lauren Sosnoski**  
**Stephen U Taylor**  
**Michael J Wechsler**  
**Heather D Yohnke**

B.S Health Sciences, pre-physical therapy

**Ashley J Bossert**  
**Courtney J Bush**  
**Shannon M Carper**  
**Angela M Cipolla**  
**Maria G Destefano**  
**Melanie A Dimartino**  
**Marykate Gallagher**  
**Melissa K Goff**  
**Catherine M Hughes**  
**Amanda L Kaehler**  
**Lindsay M Kupferschmidt**  
**Matthew Q Maun**  
**Keaghan A Mcnaughton**  
**Patrick A Miles**  
**Andrea B Miller**  
**Alison M Reigle**  
**Alexander M Riegg**  
**Ashley E Robertson**  
**Julia S Rush**  
**Megan E Scully**  
**Lauren E Statile**  
**Krysta N Whitmoyer**

Secondary Education, B.A. Biology

**Patrick J Deblase**  
**Alyssa M D'imperio**  
**Jessica A Fisher**  
**Christine L Huntington**  
**Brandon C Kundrick**  
**Kenneth E Pallis**  
**Jenelle L Petresky**  
**Meredith J Salmon**  
**Tracy D Stutzcage**  
**Brittany L Vaszlavik**

B.A. Biology

**Nihal J Coutinho**  
**Larissa R Johnson**  
**Corey P Scheeler**

B.A. Biology, natural history

**Sarah R Dodgin**

B.S. Biology

**Michael K Biersd**  
**Corey D Bower**  
**Michael C Brabander**  
**Elisa B Busada**  
**Kent A Cooper**  
**Laurel Downs (and Anthropology)**  
**Meghan E Duell**  
**Laura D Laidacker**  
**Sarah A Monaco**  
**Renee L Risaliti**  
**Michelle E Stipanovic**  
**Leah Subsak**  
**Marcus Sullivan**  
**Michael P Tekin**

BS Biology, pre-medical sciences

**Alexander C Aul**  
**Ryan D Austin**  
**Samantha Bussanich (and Spanish)**  
**Derick J Carr**  
**Kyle N Correll**  
**Darrin E Doran**  
**Brandon M Dunbar**  
**Chardei L Eshleman**  
**James D Kearns**  
**Kimberley R Lebron**  
**Kelsey L Matthews**  
**Jason M Nolt**  
**Amanda R Pulsifer**  
**James J Redinski**  
**Tatiana A Samson**  
**Cassandra K Thompson**  
**Chareese M Wilson**  
**Melanie R Yodock (and Anthropology)**

B.S. Biology, Environmental Biology

**Gabriel M Barrile**  
**Robert J Dorosky**  
**April J Magill**  
**Renee A Noll**



## Internships = Great Experience!

An internship is a supervised learning experience that allows you to apply your classroom knowledge to the work environment. Internships can be very beneficial. In addition to helping you to clarify your career goals, internships can assist you in gaining admission to graduate school, professional programs, or clinical experiences. They provide great opportunities to learn more about your field of study and to network with professionals. Internships can count for 3 to 15 hours of credit; however only 3 credits may be applied as biology elective credits. For more information on internships, contact your academic advisor. Advanced planning is required!

### Internship Feature

**Aaron Emick** (B.A. biology, natural history and anthropology) interned at Lake Tobias Wildlife Park, Halifax, PA where he served as a safari tour guide. Aaron maneuvered a converted open-air topless school bus, the "Safari Cruiser," through over 100 acres of terrain. Along the way, he provided visitors with information regarding the natural history of the park's bison, yak, water buffalo, Texas longhorns, watusi, elk, red deer, sika deer, fallow deer, emu, llama, rhea, and eland. Tours typically last under an hour and for the small price of admission, visitors get an opportunity to get up close and personal with the Lake Tobias wildlife. Aaron used his biology background to give park visitors a truly unique and informative tour. Check out Aaron and the friendly elk in the photo at right!



### Spring Interns

Medical imaging majors **Donna Rosenberg** and **Danielle Strausbaugh** are interning in the Radiology Department at Geisinger Medical Center. Applications for the Summer 2011 and Fall 2011 internships in medical imaging at Geisinger are due to **Dr. John Hranitz** (HSC 268) on February 28, 2011. Applications may be downloaded at <http://facstaff.bloomu.edu/jhrantz/Courses/Internships/Internship.htm>. Please use the Adobe Acrobat tools to complete the form.

Several BAHS students are gaining valuable experiences in area healthcare facilities. **Melissa Goff** and **Katie Leeper** are serving as interns at Phoenix Rehabilitation & Health Services and **Anthony Forman** is conducting an internship at Susquehanna Physical Therapy Associates. **Brittany Carper** is interning with a physician assistant at Susquehanna Valley Medical Specialties. Brittany is learning about pre-surgery and post-surgery procedures in patients with orthopedic disorders such as carpal tunnel syndrome and knee replacements. **Brandon Petrone** is gaining experience in the various clinical laboratories at Bloomsburg Hospital and is looking forward to observing surgery. The Shamokin Hospital Emergency Room is **Lauren Sosnoski's** internship site. She has observed cases ranging from strep throat and hypertension to pericarditis and Chron's disease. She has gained exposure to EKGs, preparation of intravenous solutions, and the measurement of parameters such as blood pressure, temperature, pulse, and oxygen levels. **Michael Brabander** is serving as an intern with a family practice physician at Geisinger Reichart Road.



### Calling all Sophomores!

BU's new Sophomore Experiential Learning (SEL Program) is designed to help students gain meaningful job experience and shadow a professional in their field of study. This 25-40 hour not-for-credit mentoring program provides students with opportunities to explore different options during a week-long observation. A notation will be put on your transcript. Observations will occur during the month of June or Winter break. The SEL Program aims to help students become familiar with new professions and job fields, to be exposed to career or industry ideas; and to begin to build a network of professional contacts. Students must attend one of the following information sessions in order to apply to the program:

Monday, February 1, 2011, Ballroom, Kehr Union, 10:00-10:30 a.m. and 10:30-11:00 a.m.

Tuesday, February 2, 2011, Ballroom, Kehr Union, 1:30-2:00 p.m. and 2:00-2:30 p.m.

Wednesday, February 3, 2011, Multipurpose Room A, Kehr Union, 2:30-3:00 p.m. and 3-3:30 p.m.



## Who's Who

Who's Who is an organization that recognizes students based on leadership ability, scholastic achievement, personal traits, service to society, and professional promise. The students below join past Who's Who awardees and current seniors **Jason Nolt, Stacy Brussell and Samantha Bussanich** in receiving this honor:

**Kyle Correll**, a biology major in the pre-medical science option, has learned about medicine firsthand by attending Hershey Medical Center's Primary Care Day, interning at Lehigh Valley Health Network in the 2010 Summer Research Scholar Program, and participating in Geisinger's Jan Plan. Kyle is president of Tri-Beta biology honor society and is a member of Phi Kappa Phi. Kyle is also a Spanish minor and studied at the Veritads Universidad in Costa Rica. He is a member of the Student Organization of Latinos, a tutor of English as a second language, and a translator for Spanish-speaking workers.

**Megan Dager**, is a B.S. Biology major and a chemistry minor. (is this true?) Megan is president of the Biology and Allied Health Sciences Club and the vice-president of Tri-Beta. Megan has studied abroad in Australia where she took marine ecology. Megan's research investigating the effects of protease inhibitors during isolation on heat shock proteins was supported by a student grant from Tri-Beta. Megan is an Anatomy and Physiology tutor, a work study student in the College of Liberal Arts, a BAHS scholarship recipient, and a Husky Ambassador. She has served as an intern at Geisinger Medical Center and plans to become a physician assistant.

**Melanie DiMartino** is a B.S Health Sciences major who plans to enter a doctoral program in physical therapy. She conducted and internship at Phoenix Rehabilitation and Health Services and has extensive shadowing experiences in the field. She is a dean's list student and member of Tri-Beta biology honor society. Her extracurricular activities primarily revolve around her leadership in her sorority where she focused her efforts as Vice-President on supporting and recognizing scholarship. She has also participated in numerous service activities.

**Melissa Goff** is a B.S. Health Sciences major in the pre-physical therapy option. She has dedicated many hours to shadowing in physical therapy settings. Melissa will serve as an intern at Phoenix Rehabilitation and Health Services during spring semester 2011. She is a dean's list student and a member of Tri-Beta Biology honor society. Melissa participates in Biology and Allied Health Club activities, is a life guard, and has been employed in several part-time and full-time jobs.

**Ghaith Ibrahim**, is a B.S. Biology major, pre-medical sciences option. Ghaith is a Tri-Beta member and is president of the pre-medical sciences club. He has been a BAHS work study student for over three years. Ghaith has conducted three research projects on MRI Noise-induced affects on the auditory nerve, cellular stress responses, and melanoma. He received a Kozloff grant and a Tri Beta research award to support his investigations. He has presented research results at the national meetings of the Society of Integrative and Comparative Biology and the Institute of Noise Control Engineering. Ghaith plans to attend graduate school in cellular and molecular biology.

**Amanda Kaehler** graduated in December 2011 with a B.S. in Health Sciences. Amanda was an intern at Hanover orthopedics and plans to pursue her doctoral degree in physical therapy. She was the secretary of Tri-Beta, the biology honor society, a dean's list student, and a member of Phi Kappa Phi. She has conducted research on stress responses in blackworms and ahs presented her work at COST Research Day. She was the captain of BU's club volleyball team, serving as its captain. She was a work study student in the library and a member of Colleges against Cancer.

**Matthew Maun**, is a B.S. Health Sciences major enrolled in the pre-physical therapy option. He interned at Phoenix Rehabilitation and Health Service in Bloomsburg and was employed there part-time as an aide. Matt is a dean's list student and member of Tri-Beta, the biology honor society. He is an International Sports Science Association Certified Fitness Trainer. His outside activities include a volunteer for campus girl scouts, a member of the Bloomsburg University Iron Club, and a participant in Intramural Volleyball.

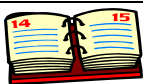
**Paige Ricci** is a B.S. Biology major in the molecular biology option with an enthusiasm for biology research. Paige has gained international experience by participating in the National Science Foundation Research Experience for Undergraduates program. While conducting field work in Turkey and Greece, she collected leafcutting bees. When she returned, she continued her research in the laboratory by cloning and characterizing putative microsatellite loci for population genetic studies of an invasive leafcutting bee. She is currently drafting a manuscript for publication from this work. Her research has been presented at national meetings of the Society of Integrative and Comparative Biology.

## More Who's Who Students

**Amy Schultz** is a B.S. Biology major in the pre-medical sciences option. Amy, a dean's list student, is the current historian of Tri-Beta and established the group's website. She has extensive health care experience including EMT certification, CPR/First Aid certification, EMT volunteer work, and job shadowing experiences. She is a member of the Pre-Medical Sciences Club, the Chemistry Club, and was inducted into Kappa Mu Epsilon, the mathematics honor society.

**Michelle Stipanovic** is a B.S. Biology major. She is the student vice-president of Phi Kappa Phi, the interdisciplinary honor society, and a recipient of their outstanding freshman award. Michelle is also a Tri-Beta member and a BAHS scholarship winner. She served for two years as Biology and Allied Health Sciences Club Vice-President and was a tutor and mentor in the Science and Health Science Living Learning Community. Michelle conducted research on cellular senescence at the Weis Research Center at Geisinger. She has also participated in the pre-medical science club, the BU Dance Ensemble, Developing Ambitious Student Leaders and a host of community service activities.

**Neil Sullivan** is a B.S. Health Science major in the pre-physician assistant option. Neil is a dean's list student, member of Tri-Beta Biology honor society, and a peer tutor. Outside the classroom, Neil is active in Catholic Campus Ministry, where he has been involved in community outreach and service. He has volunteered in clinical settings such as Reading Hospital, Reading Pediatrics, and Good Physical Therapy.



## Mark your calendars!

The annual meeting of the Pennsylvania Academy of Science (PAS) is in Altoona, PA (near Harrisburg) on April 1 to 3, 2011 at Penn State Altoona. The meeting features a keynote address and research posters and presentations on a wide variety of topics. Deadline for abstracts is February 11, 2011. For more information see <http://pennsci.org/index.htm>. This is a good meeting for students to present the results of their research.

The 2011 Health Sciences Symposium will be held on campus on Thursday, April 7 and Friday, April 8, 2011. This year's theme is "Analog Minds in a Digital World." Featured will be keynote speaker, Dr. David Strayer from the University of Utah. His talk is entitled "Digital Technology and Multi-Tasking: Effects on Brain Function." This year's symposium will be sponsored by the Central Susquehanna Community Foundation, the Provost's Lecture Series, the Suicide Prevention program, and the Science and Health Science Living Learning Community.

The Commonwealth of Pennsylvania University Biologists (CPUB) will be hold their annual meeting at California University of PA on April 16, 2011. The annual meeting is an opportunity for faculty and students from universities in the PA State System of Higher Education to join for a day of research presentations and workshops.

Tri-Beta, the Biology Honor Society, will host its district meeting at Lincoln University on March 26, 2011. Tri-Beta members are encouraged to attend to present their research and to meet with students from other colleges and universities.

## Summer Opportunities

### Summer Research Internship at The Weis Center for Research

The Weis Center for Research, Geisinger Health System in Danville, PA is sponsoring a 10- week summer research internship program. Interns will have the opportunity to do hands-on scientific research under the direct supervision of a Weis Center scientist on topics related to the molecular, cellular, and genetic basis of human disease. Interns will receive a stipend of \$8 per hour. The deadline for applications is January 31, 2011. A flyer detailing the application procedure is located on the BAHS bulletin board on the green floor across from the elevator.



### Camp counselor

Volunteer and staff positions are available as a camp counselor for children and teens with Type I diabetes through Setebaid Services. The camps provide diabetes education and social support for children, teaching them to manage their diabetes while pursuing an active lifestyle. Camp dates and locations may be found at [www.setebaidservices.org](http://www.setebaidservices.org). **Dr. Surmacz**, 146 HSC, also has applications and flyers.

### Summer Internship with Susquehanna River Basin Commission

The Susquehanna River Basin Commission offers a paid, summer internship for students to assist staff with a stream and river sampling and biological monitoring in streams and rivers throughout the Susquehanna Basin. To be eligible, students must be working towards a bachelor's in biology, ecology or environmental science. The position involves field work, travel, and experience with Microsoft programs and GIS systems. For more information see [www.srbc.net](http://www.srbc.net). Cover letters and resume are due to [employment@srbc.net](mailto:employment@srbc.net) by February 18, 2011.

## Tri-Beta Initiates New Members

New and current members of Beta Beta Beta Biological Honor Society pose for a picture following their induction ceremony in November. Beta Beta Beta (Tri-Beta) is a society for students dedicated to improving the understanding and appreciation of biological sciences and extending boundaries of human knowledge through scientific research. Since its founding in 1922, more than 175,000 persons have been accepted into lifetime membership, and more than 430 chapters have been established throughout the United States and Puerto Rico. The mission of Tri-Beta is: 1) to stimulate scholarship; 2) to disseminate scientific knowledge; and 3) to promote biological research. To fulfill this mission, the national organization of Beta Beta Beta recognizes the accomplishments of outstanding individuals and chapters and publishes a national journal, *BIOS*.



The induction ceremony was led by current officers: President, **Kyle Correll**; Vice-President, **Megan Dager**; Secretary, **Amanda Kaehler**, Historian, **Amy Schultz**, and Treasurer, **Michael Brabander**. **Dr. Jennifer Venditti** was the featured speaker and addressed “*Alpha-L-fucosidase as a predictor of fertility?*” Congratulatory remarks were offered by **Dr. George Chamuris**, BAHS chairperson, and Dr. Marande, Dean of the College of Science and Technology.

Check out the Tri-Beta Bulletin board adjacent to the Cell Biology/IPL lab for photos and highlights.

### 2010 Initiates

#### Regular Members

Erin Crane, Darrin Doran, Meghan Duell, Brandon Dunbar, Alaina Egger, MaryKate Gallagher, Melissa Goff, Amber Kolk, Jacquelyn Koren, Lindsay Kupferschmidt, Heather Love, Matthew Maun, Sarah Monaco, Justine Okurowski, Michael Parks, Brandon Petrone, Julia Rush, Lauren Sosnoski, and Neil Sullivan

#### Associate Members

Amanda Caso, Laura DiBernadino, Kristin Hein, Keith Kinek, Michael Quintans

#### Graduate Members:

Jonathan Bobek, Benjamin Evancho

#### Current Members:

Michael Bierds, Joelle Bittner, Michael Brabander, Stacy Brussell, Samantha Bussanich, Shannon Carper, Marisa Cipolla, Kyle Correll, Megan Dager, Melanie DiMartino, Chardei Eshleman, Dustin Hunsinger, Ghaith Ibrahim, Amanda Kaehler, James Kearns, Laura Laidacker, Jason Nolt, Amy Schultz, Sean Scubelek, Michelle Stipanovic, Than Vu, Krysta Whitmoyer, Melanie Yodock



## NEWS FROM BAHS ORGANIZATIONS

### Tri-Beta Updates

Tri-Beta had a busy fall semester! The group provided weekly tutoring sessions for students in introductory courses at ABLE, the Academic Biology Learning Environment, at the Science and Health Science Living Learning Community at Columbia Hall. Thanks to all of the Tri-Beta members who donated their valuable time to helping their classmates. The group plans to continue this program in the spring semester. New Tri-Beta members are encouraged to participate.

Tri-Beta contributed \$200 to the Rabb Research Fund, an account dedicated to supporting undergraduate research in the Department of Biological and Allied Health Sciences. The funds were raised from a variety of events and presented to the Bloomsburg University Foundation. Presenting the check are shown top right (L-R) **Amanda Kaehler**, secretary; **Megan Dager**, vice-president; **Michael Brabander**, treasurer; **Dr. George Chamuris**, chair of biological and allied health sciences; **Amy Schultz**, historian; and **Kyle Correll**, president. The Society also donated \$100 to the National Tri-Beta Research Fund, leading to its recognition as a "gold chapter." Two members of the BAHS Tri-Beta Chapter, **Ghaith Ibrahim** and **Megan Dager**, received national grants to support their independent study research (pictured bottom right.) Ghaith is investigating the expression of EphB4 and its ligand ephrin-B2 between poorly aggressive and highly aggressive human melanoma cells in **Dr. Hess's Lab**. As part of a larger project studying cellular stress responses, Megan examined the use of protease inhibitors during measurement of heat shock protein 70 in blackworms. **Drs. Hranitz** and **Surmacz** are her mentors.

Tri-Beta ended fall semester by hosting its popular Free Coffee and Donuts during finals week. For more information about Tri-Beta, check out the bulletin boards opposite 99 Hartline or check out the organization's website <http://orgs.bloomu.edu/betabetabeta>



### Pre-medical Sciences Club News

The pre-medical science club welcomes all students interested in any of the medical sciences (allopathic or osteopathic medicine, optometry, podiatry, dentistry, veterinary medicine, etc.) The club sponsors a variety of activities such as guest speakers, visits to professional schools, community service, and fundraisers. Public relations officer **Jessica Willis** is shown at the Thanksgiving bake sale fundraiser at left. The spring semester opening meeting of the pre-medical sciences club will be held on Monday, January 31 at 5 pm at ABLE, first floor Columbia residence hall. The officers will be discussing activities for the upcoming semester. Please come and participate. For further information contact **Ghaith Ibrahim**, president of the pre-medical sciences club.

### BAHS Club

The BAHS Club will hold its meetings every other Monday at 6 p.m. in G38 Hartline beginning February 7 with a Get-To-Know-You session. Programs scheduled for upcoming meetings include a genetics movie night (February 21), resume building (March 14), and the graduate school admission process (March 28.) Future activities include a trip to the American Museum of Natural History in New York City (March 26), a clean-up at Town Park and/or Fishing Creek (April 9) and a kickball tournament (April 23.) Everyone is welcome to attend and participate. Check out the big green bulletin board on the first floor for announcements of upcoming events. See club president **Megan Dager** for more information.



## Research Experiences in Turkey and Greece: Stress Responses and Foraging Behavior in Honey Bees by Dr. John Hranitz



With dust from renovation of Hartline Science Center still in the air and sharing a temporary office with Dr. Rier reminiscent of graduate school, it seemed strange that our research expedition to Turkey and Greece was the one thing that seemed ordinary this past summer. The one thing that research for seven weeks in Turkey and Greece is not, ordinary. Each year, a new cadre of students forms a research team to study the behavior and ecology of bees. This year students came from American Samoa, California, Oklahoma, and Pennsylvania: Talei Apted, Leah Bates-Alberts, Nora Hall, Loma Pendergraft, Enoc Zuniga, and our own **Meghan Duell** and **Jonathan Bobek** representing Bloomsburg University.



Meghan collaborated on six different research projects with U.S. and Turkish students, some field studies and some laboratory studies. She gained experience measuring nectar flow and standing crop in two very different flowers. She also measured learning under complex reward systems in honey bees. For her own Honors Independent Study research, she conducted toxicological studies on honey bees and is continuing to study stress responses of the bees she collected in Turkey in Dr. Hranitz's laboratory.

Jon (at left) collaborated on five different research projects and collected the behavioral observations to support his Masters Thesis research project. Jon is currently busily dissecting bee brains and isolating RNA in Dr. Hranitz's laboratory. He will analyze microarrays to test the hypothesis that flower color constant foraging behavior is caused by gene expression in the brain.

Dr. Çakmak, our host in Turkey, and Dr. Aydin of Uludag University operate the new Bee Reproduction and Development Center. This facility supported our activities in Turkey and collaborative research Turkish (Veterinary School and Agricultural Engineering) and American students and faculty. At right (left to right), Meghan Duell, Loma Pendergraft, and Enoc Zuniga (USA) and Dilan İkizoğlu (Turkey) review experimental design with Dr. Hasan H. Oruc (Turkey)



### Graduate Student News

**Lauren Lowenberger** has begun working on her masters degree in biology. Lauren's undergraduate degree in biology is from Lock Haven University. Lauren has a longstanding interest in the behavior and conservation of cetaceans and other marine mammals, zoobiology and the effects of captivity on organisms. She is also interested in birds and birding. For her graduate research, Lauren is working on a project with **Dr. Corbin** assessing ecomorphological concordance between wild communities and captive groups of birds. She is particularly interested in motivation levels and the performance link (bite force) between ecology and morphology.

**Anna Simpson** received her BA in Biology from BU and is currently working towards her M.S. degree. Anna is very interested in ecology and evolutionary biology of animals at the organismal level and prefers to be in the field whenever possible shooting photos of critters. She has an extremely diverse background in zoology. For example, during spare time as an undergraduate, Anna explored museum curatorship (particularly skeletonization using dermestid beetles), fish and invertebrate community composition of local streams, snail behavior, and raptor skull morphometrics. The latter interest was part of a research project with Dr. Corbin resulting in two professional presentations, one at the annual meetings of the Pennsylvania Academy of Sciences and the other at the 2008 Raptor Research Foundation annual meeting. A manuscript of this research is currently in preparation for publication in a peer-reviewed journal. For graduate research Anna intends to study patterns of allometry and sexual dimorphism related to behavioral fitness traits in spotted salamanders. **Drs. Corbin** and **Hranitz** are her research advisors.





## Faculty and Students Present Research

BAHS faculty and students presented the following posters with their collaborators at the annual meeting of the Society for Integrative and Comparative Biology in Salt Lake City:

**Corbin, C.E., Miles, D.B.** [Small Clade Peripheralization in Three Flycatcher Radiations](#)

**Evancho, B.D., Gerard, N.R., Hranitz, J.M., Klinger, T.S., and Corbin, C.E.** [Island Toads Mature at Smaller Sizes than Mainland Toads on Three Atlantic Coast Barrier Islands](#)

**Barthell, J.F., Redd, J.R., Clement, M.L., Hranitz, J.M., Petanidou, T., and Wells, H.** [Nectar Levels of a Highly Invasive Flowering Plant Species Correlate with Pollinator Size within Island Ecosystems in America and Eurasia](#)

**Pendergraft, L., Bates-Albers, L., Duell, M., Zuniga, E., Abramson, C.I., Cakmak, L., Barthell, J.F., Hranitz, J.M., and Wells, H.** [Feature Positive and Feature Negative Learning in Honey Bees](#)

**Duell, M., Apted, T., Hall, N., Bates-Albers, L., Pendergraft, L., Zuniga, E., Sorcu, A., Abramson, C.I., Aydin, L., Barthell, J.F., Cakmak, I., Oruc, H.H., Wells, H., Hranitz, J.M., Ikizoglu, D., Selova, S.** [Lethal and Sublethal Effects of Flumethrin \(Varostop®\) on the Anatolian Honey Bee in the Republic of Turkey.](#)

**Ricci, P.R., Hranitz, J.M., Barthell, J.F., Freeman, B., Lui, L., Stevison, B., Giannoni, M., Redd, J., Preskym M., Cakmak, I., and Petanidou, T.** [Existing Microsatellite Primers for \*Osmia rufa\* Amplify Homologous Microsatellite DNA in an Invasive Leafcutting Bee](#)

**Ibrahim, G., Kaehler, A., Hranitz, J.M. and Surmacz, C.A.** [Effects of Acclimation and Aeration on Stress Responses in Blackworms](#)

**Wassmer, G., Amin, A., Corbin, C., Hansen, C., Henry, K., Hess, A., Hranitz, J., Nolt, B., Rier, S., Surmacz, C., Till, M., Wood, M.** [Building a Biology Learning Community in a Campus Residence Hall](#)

The following BAHS students presented at the COST research Day in December:

**Michelle Stipanovic** (shown at right) [The Role of the GNG11 subunit in cellular senescence](#) (mentors: **Dr. Carl Hansen** and **Dr. Janet Robishaw**)

**Megan Dager.** [Cellular Stress Responses in a Bioindicator: Use of Protease Inhibitors During Measurement of HSP70 in \*Lumbriculus variagatus\*](#) (mentors: **Drs. John Hranitz** and **Cindy Surmacz**)

**Paige Ricci.** [Microsatellite Primers for \*Osmia rufa\* amplify homologous microsatellite DNA in an invasive leafcutting bee](#) (Mentor, **Dr. John Hranitz**)

**Meghan Duell,** [Responses by Anatolian Honey Bees to Toxicological Effects of Flumethrin in Turkish apiaries.](#) (Mentor, **Dr. John Hranitz**)



## Alternate Spring Break Weekend

Want to make a difference while meeting new friends and making contacts in the scientific community? The Marine Science Consortium at Wallops Island, Virginia will hold an "Alternate Spring Break Weekend" experience on March 4 to 7. Volunteers are needed at the Marine Science Center for spring cleaning, organizing fish specimens, building trails, and cleaning beaches. An information flyer is on the BAHS Club Bulletin Board on the first floor.



While in Salt Lake City, why not "escape" the meeting briefly to experience local habitats? **Meghan Duell, Nicole Gerard**, (BU Students) and **Enoc Zuniga**, a student from the Research Experiences for Undergraduates in Turkey program, did just that! They took a break from the Society for Integrative and Comparative Biology meeting to see Antelope Island, the largest island (a state park) in the Great Salt Lake, UT. The bison (seen at left) population was introduced to the island in 1893 and are an important source of genetic variation in the bison conservation genetics program. Pronghorn antelope and many other western U.S. wildlife also inhabit the island.

## APPLY NOW

### Biological & Allied Health Sciences Scholarships

Scholarship	AMOUNT	CRITERIA
Biology and Allied Health Scholarship	\$500 or \$250	Biology (including Secondary Education Biology) and Health Science majors who are currently sophomores or juniors and have completed 12 credits in biological science courses at BU
James E. Cole Scholarship	\$425	Current BU Medical Imaging majors who will be on campus fall 2011
James E. Parsons Microbiology Scholarship	\$400	Biology and Allied Health Science majors who are currently sophomores or juniors. Preference to microbiology option or Clinical Lab Science majors.

#### HOW TO APPLY:

##### APPLICATION:

Required: BU Scholarship Application Form (may be downloaded from STINF or obtained from the Financial Aid Office, 119 Warren Student Services Center.)

The following additional materials are required for the Biology & Allied Health Scholarship only: official transcript, one reference letter from a biology faculty member, one reference letter from a faculty member outside biology and a paragraph describing your career and educational goals.

**DEADLINE:** Applications are due to **Dr. Surmacz**, 146 HSC, by Friday February 4, 2011 at 4:30 p.m.

## We saw you at the Great American Smoke-Out!



BAHS students were well-represented at the Great American Smoke-Out Fair at Kehr Union in mid-November. Posters were prepared by students in Anatomy and Physiology II, while informative brochures were displayed by Human Biology students. Concepts in Biology I students were in attendance to hear talks, view posters, and visit exhibits.



## Congratulations to Paige Ricci and Kyle Lewis!

During the Thanksgiving holiday, Paige and Kyle had real occasion to celebrate. They have a new addition to their families! Introducing Elliot Scot Lewis, all 6 lbs, 3 oz, and 19 inches of him, born on November 24.