



# BioSynthesis

Volume 7 Issue 2 (April 2008)

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

### Spring Semester Dates

**APR 28:** Reception for BAHS graduating seniors, patio between east and west HSC, 3:00 to 5:00 p.m.

**APR 29 to MAY 2:** READING DAYS: No classes

**APR 30:** Master's Thesis Defenses, HSC

**MAY 1:** BU Research and Creative Projects Poster Session, Kehr

**MAY 2:** College of Science and Technology Research Day, HSC

**MAY 5 & 6:** Free Coffee & Donuts courtesy of Tri-Beta, 178 HSC

**MAY 5 to 9:** Final Exams

**MAY 9:** Graduate Commencement

**MAY 10:** Undergraduate Commencement

**MAY 19:** Summer Session I begins



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## Congratulations Graduates!

### SPRING 2008

#### B.S. Biology

Nicholas Bixler, pre-medical sciences  
 Mary Sue Buss, microbiology option  
 Travis Castleberry, pre-medical sciences  
 Deidre Fahy  
 Jared Geissinger  
 Chad Gensemer  
 Anh Hong Ho, pre-medical sciences  
 Catherine Holtmaster, pre-medical sciences

Pamela Hudock, pre-medical sciences  
 David Kolb, microbiology  
 Joanna Kraynak, pre-medical sciences  
 Valerie Letukas

Amanda Meholchick  
 Joshua Montgomery, molecular biology  
 Kyle Norton, pre-medical sciences  
 Anthony Rigard  
 Cara Shellenberger, pre-medical sciences  
 Jaskaran Singh, pre-medical sciences  
 Brock Spinks, microbiology

#### Biology minor

Tammy Stump

#### B.A. Biology

Kimberly Dodson, pre-physical therapy  
 Kelli Foster  
 Allison Grimm, pre-physical therapy  
 Jennifer Heckler, secondary education  
 Christine Hoffman  
 Jennifer Krott, pre-physical therapy  
 Tiffany Lombardi  
 Kelly Murr, pre-physical therapy  
 Sarah Reynolds, physician assistant  
 Alicia Del Rossi  
 Amy Savitski  
 Kenneth Thomas, pre-physical therapy

#### B.S. Medical Imaging

Kara Ballantine  
 Janelle Bickle  
 Kristen Cheek  
 Kelleigh Eckenrode  
 Lynn Gera  
 Wendy Grumbein  
 Carrie Kelley  
 Ashley Brokenshire  
 Regina Pollard



#### ★ Honor Graduates:

★ **Magna Cum Laude:** Ashley Brokenshire, Richard Carter IV, Chad Gensemer  
 ★ **Cum Laude:** Nicholas Bixler, Kimberly Dodson, Kelleigh Eckenrode, Jared Geissinger, Allison Grimm, Pamela Hudock, Jennifer Krott, Kimberly Maddalozzo, Cara Shellenberger



#### Summer 2008

**B.S. Biology**  
 Richard Carter IV  
 Broc Wenrich, pre-medical sciences  
 Melissa Scubelek  
 Michelle Lenchak

#### Medical Imaging

Talia Bartko  
 Rachel Boring  
 Kristin B'Oris  
 Bruce Bortree  
 Jeffrey Brannon  
 Alyssa Brenner  
 Raymond Castillo  
 Megan Enterline  
 Stephanie Gabel  
 Mallory Hock  
 Katie Horoschock

Ryan Jones  
 Erin Kappenstein  
 Sara Keeney  
 Lauren Keeney  
 William Knapick  
 Amanda Knepp  
 David Lindemann  
 Amy Maurer  
 Emily Miller  
 Thomas O'Malley  
 Krista Paneo  
 Heather Pennell  
 Shaquanna Simmons

Edward Stefanowicz  
 Lauren Sterkenberg  
 Jill Stoudt  
 Stephanie Fornwalt  
 Brett Wiest  
 Bryan Wiest  
 Sara Zerbe

#### Clinical Lab Sciences

Alessa Dalpiaz  
 Andrea Finch  
 Zane Hoover  
 Kimberly Maddalozzo

## CELEBRATING STUDENT ACHIEVEMENT



### BAHS graduates first RA students!

The Radiologist Assistant program at Bloomsburg University will soon graduate its first students. **Brianna Wilkins** will graduate in August 2008 and will participate in the May commencement ceremony. **Jacqueline Ritz** will also graduate in August 2008 and will participate in the December commencement. Both Brianna and Jacqueline will present their research projects on May 9, 2008 from 1 to 3 p.m. in HSC 178. Brianna's project is entitled *Increasing roles and success rates of radiologists in orthopedic and neurosurgical procedures*. Jacqueline will present her work on *Determining the cause of death by utilization of multi-detector computed tomography as an alternative to conventional autopsy in cases of blunt aortic injuries*.

### BAHS Scholarship Winner

**Danielle Yoder** is the recipient of a \$500 scholarship awarded by the Department of Biological and Allied Health Sciences. Danielle is a junior biology major who is interested in pursuing a career in physical therapy. Danielle is a dean's list student and member of Tri-Beta Biology Honor Society. Next year she will serve as the chapter secretary. She has served as an intern in physical therapy at Reading Hospital. Danielle plans to conduct research with Dr. Hranitz next year. Danielle's commitment to helping others is shown by her membership in Colleges Against Cancer and her leadership role in Relay for Life. Danielle has been employed for several years and holds a campus work study position as a student secretary.



### James Cole Scholarship in Medical Imaging Awarded

**Rose Novinger** is the recipient of the \$450 James Cole Scholarship in Medical Imaging. Dr. Cole is a retired professor who taught the freshmen biology course for majors for many years, served the department as chairperson and allied health coordinator, and was instrumental in developing allied health programs at Bloomsburg University. Rose is a freshman medical imaging major. She hails from outside of Herndon, PA and is a graduate of Line Mountain High School where she was active in FFA, FBLA, and 4-H. She is active in her community and church. Rose and her family knits baby hats and donates them to neonatal intensive care units at area hospitals. Rose's hobbies include photography, 4-wheeling, horse riding, reading, hunting, and the outdoors. She is employed as a welder. Her goals include admission to a good clinical program in medical imaging and starting a photography business. We wish Rose well in her quest and congratulate her on receiving this award.



### BAHS students inducted into Phi Kappa Phi

Phi Kappa Phi is the nation's oldest, largest, and most selective honor society that recognizes and promotes academic achievement in all fields of higher education. Only the top 7.5% of juniors and the top 10% of seniors are eligible to join the society. The following BAHS students were inducted in March at a ceremony attended by faculty, administrators, and family members: **Kyle Bartol, Travis Castleberry, Kimberly Dodson, Allison Grimm, James Heim, Pamela Hudock, Logan Karas, Jennifer Krott, Essie Reed, Ross Klausing, Jacqueline Ritz, Joshua Tussing, Christine Hollenbeck, and Andre Pascal**. BAHS students who were inducted previously include **Nicholas Bixler and Jared Geissinger**.



## BAHS Outstanding Biology Student

**Kimberly Dodson** was selected as outstanding biology student. Kim is a senior biology major who is interested in pursuing a career in physical therapy. Kim was an intern at Susquehanna Physical Therapy Associates in Bloomsburg, PA. She will enroll in the doctoral program in physical therapy (DPT) at the University of Maryland School of Medicine in Baltimore in the fall. Kim is a dean's list student and will graduate cum laude in May 2008. Kim is vice-president of Beta Beta Beta, the biology honor society. She has also recently been elected to Phi Kappa Phi, the interdisciplinary honor society. She is a university tutor and a peer mentor in our Supplemental Instruction program in human biology. Kim participates in Big Brothers/Big Sisters. She was a member of the women's basketball team. Kim is a work study student in the Department of Biological and Allied Health Sciences and has assisted with visitation day programs. She was recently recognized as BU's outstanding biology student by the Commonwealth of PA Biologists at their annual meeting.



## Outstanding Allied Health Student

**Kimberly Maddalazzo**, a senior clinical lab science major from Kennett Square, PA, was named outstanding allied health student. Kim is a dean's list student and will graduate cum laude in summer 2008. She is the recipient of a Krapf Bus Scholarship, and an American Legion Scholarship. While on campus, Kim worked at the BU Foundation. She also worked in the York Hospital Blood Bank. Kim is currently completing her clinical experience at York Hospital and is involved with the hospital's Performance Improvement Committee. She is a member of the American Society for Clinical Pathologists. Kim has accepted a position at Chester County Hospital, where she will work as a generalist.

## BAHS Students honored by College

The College of Science and Technology held its annual spring banquet in March at Kehr Union. The following BAHS students were awarded for their achievements: **Katura Andrews, Chelsea Barnes, Kyle Bartol, Nicholas Bixler, Richard Carter IV, Travis Castleberry, Kimberly Dodson, Deidre Fahy, Jared Geissinger, Allison Grimm, Kelsey Grabert, Christine Hoffman, Anh Hong Ho, Zane Hoover, Pamela Hudock, Deborah Hunsberger, Aubrey Jones, Joanna Kraynak, Jennifer Krott, Christopher Krum, Valerie Letukas, Kimberly Maddalazzo, Amanda Meholchick, Kelly Murr, Rose Novinger, Christopher Ort, Andrew Paluch, Krista Rae Petruskevich, Anthony regard, Melissa Scubelek, Cara Shellenberger, Kendra Sobolesky, Stephanie Solomon, Jonathan Snavelly, Kenneth Thomas, Andrew Troutman, Margaret Yesalavage, Danielle Yoder.**



## COST Research Day

The College of Science and Technology will host its fifth annual Research Day on Friday, May 2, 2008 to showcase faculty and student research. Everyone is welcome to attend. All events will be held in Hartline Science Center. The program features a variety of poster presentations and talks. Many of the students will also present their work at the Student Research and Creative Activities Poster Session on Thursday, May 1 at Kehr Union in Multipurpose Rooms A and B.



## Check out BU's Research and Creative Activities Poster Session

BU's Student Research Poster Day will be held on May 1 and 2, 2008 in Kehr Union, Multipurpose Rooms A and B.

This year's event will feature a competition for best poster. Judging the posters will be members of the local community, the BU Foundation, and the Husky Research Corporation. Criteria for evaluation include content, presentation, and overall quality. The winner will represent BU at the State House in Harrisburg at "Undergraduate Research at the Capital of Pennsylvania." Applications may be obtained at the Office of Research and Sponsored Programs. The deadline to register is April 25, 2008.

## Updates from CPUB

### Annual meeting

Shippensburg University recently hosted the annual meeting of the Commonwealth of PA University Biologists (CPUB). The annual meeting is an opportunity for faculty and students from all the universities in the PA State System of Higher Education to join for a day of research presentations, workshops, and meetings. **Dr. Hranitz** enjoyed contributing to the annual business meeting, while **Dr. Nolt** and graduate student **Kendra Sobole-sky** (right) attended the research presentations and workshops. Kendra presented a talk entitled "Optimization of methane gas production from anaerobic digestion of cheese whey and animal manures" with co-authors **Drs. Nolt** and **Kipe-Nolt**. She received a second place award among the graduate student presentations. Congratulations, Kendra! **Kimberly Dodson** was honored by receiving BU's outstanding biology student award.



### Student Research Grants Available

The Commonwealth of Pennsylvania Biologists (CPUB) is awarding grants of up to \$400 to undergraduate and graduate students to fund equipment and supplies for research. To apply, students must submit a cover letter, a detailed proposal, a resume, and a supporting letter from the faculty research mentor. Proposals must be written by the student and must include an introduction, materials and methods, references, and a budget. The deadline is September 9, 2008. Application materials will become available on the CPUB website <http://academics.sru.edu/cpub/>

## Biology Prize Scholarship

Pearson Benjamin Cummings, a publishing company, invites all biology majors who are currently enrolled in or have successfully completed Concepts in Biology I and II in the past two years to apply for the Biology Prize Scholarship, a \$1,000 award. Scholarships will be awarded based on a 1-2 page letter written to an elected official that expresses your views on any biology-related issue. The topic is open to any issue that concerns you—funding for biomedical research, science education, coverage of evolution in high schools, stem cell research, environmental concerns, health care concerns, etc. The publisher has established a website that offers tips on writing letters to elected officials and links to various scientific issues. See [www.pearsonhighered.com/scholarships/biologyprize](http://www.pearsonhighered.com/scholarships/biologyprize). A poster describing the scholarship competition has been placed on the bulletin board outside the Concepts in Biology I lab (149 Hartline). Applications can be obtained from **Dr. Surmacz** (268 Hartline) and are due November 4, 2008

## BAHS at PAS

BAHS was well represented at the 84<sup>th</sup> annual meeting of the Pennsylvania Academy of Science (PAS) held at Grantville, PA on April 5 and 6, 2008. The mission of PAS is to promote scientific inquiry in the commonwealth, to support science education efforts, and to provide an opportunity for students and scientists to present research and grow professionally. The annual meeting provides a forum for students and faculty to give posters and oral presentations on their research and to network with scientists throughout Pennsylvania. Attending this year's meeting were undergraduate students **Jared Geissinger** and **Christopher Krum**, graduate student **Andrew Paluch**, and professors **Hansen, Hranitz, Surmacz**, and **Till**. Dr. Till presented a talk at a special symposium on science education on the use of classroom response systems, "clickers," in general education classes in biology. The BAHS presenters, their collaborators, and the titles of their presentations are listed below. To learn more about PAS, see [www.pennsci.org](http://www.pennsci.org).

**Jared Geissinger, Cynthia Surmacz, and Steven Rier.** Using *Lumbriculus variegatus* to assess the remediation of streams affected by acid mine drainage.

**Carl Hansen, TinChung Leung\***, and **Janet Robishaw\***. Zebrafish G protein gamma 2 is required for VEGF signaling during angiogenesis. \* Weis Center for Research at Geisinger, Danville, PA.

**Christopher Krum, Amy Savitiski, John Hranitz, Kristen Brubaker, John Barthell\***, and **George Yocum\*\***. Comparison of stress protein cDNA and amino acid sequences among three megachild solitary bees. \*University of Central Oklahoma, \*\* USDA Laboratory, Fargo, ND.

**Andrew Paluch, William Schwindinger\***, **Janet Robishaw\***, and **Carl Hansen**. Gng11 modulates senescence in mouse embryonic fibroblasts. \* Weis Center for Research at Geisinger, Danville, PA.

**Margaret Till.** Mass lecture, general education, science courses: Taming the nightmare.



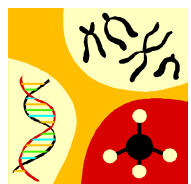
### Attention Graduating Seniors

Students graduating with a BS or a BA in Biology in May or August must take the ETS Major Field Test in Biology. Sign up at the department office to take the test on Saturday, April 26 at 1:00-3:00 PM or Thursday, May 1 at 1:00-3:00 PM (one of the reading days before finals). Contact **Dr. Wood** if you have any questions.



## Fall Biology Electives: What will you be learning?

Read on... Electives can help you explore new fields or strengthen an area of particular academic or career interest. Check your biology elective choices against your curriculum guide for approved biology electives. The following 3-credit electives will be offered fall semester 2008:



### Human Genetics (50-233)

Dr. Hansen

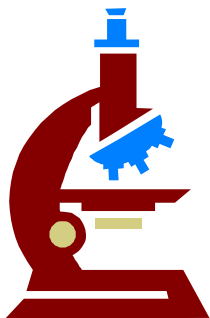
**Prerequisites:** Concepts in Biology I; or Cells, Genes and Molecules; or Human Biology

*Biology has its own periodic table, although it includes not 100 elements but 100,000 of them - the genes of the human genome.* Eric Landers, 1998

Human genetics provides one path to understanding who and what we are. We will address human heredity and variation from several perspectives: from the molecular basis of a gene to its expression as a trait; from the single cell to the individual; and from individuals to the human population. We will apply our understanding of genetics to address major issues in human society.

- Human disease - from cystic fibrosis to schizophrenia to cancer.
- Implications of the human genome project for medicine, biotechnology and genetic engineering.
- Human origins and the relatedness of human populations.
- Nature versus nurture: Just how much of what we are is encoded in our genes?

Three hours lecture/discussion per week.



### Vertebrate Histology (50.364)

Dr. Corbin

**Prerequisite:** Cell Biology or consent of instructor

This course takes a form-function perspective on microanatomy. Emphasis will be placed on cellular arrangement and properties of tissues as they relate to organs and organ systems. While the material is primarily centered on human systems, other vertebrate tissues will be used in a comparative fashion to highlight the diversity of life that can be seen through a microscope. The laboratory studies include the use of prepared microscope slides and color photomicrographs. Three hours lecture/two hours laboratory per week.



### Developmental Biology (50.431)

Dr. Hansen

**Prerequisites:** Cell Biology (50.271), Organic Chemistry I (52.231) or Fundamentals of Organic Chemistry (52.230)

*Developmental Biology is at the core of all biology. It deals with the process by which genes in the fertilized egg control cell behavior in the embryo and so determine its pattern, its form and much of its behavior.* Lewis Wolpert, 1999

The development of multicellular organisms from a single cell - the fertilized egg - is a brilliant triumph of evolution. During embryonic development, the egg divides to give rise to many millions of cells, which form structures as complex and varied as eyes, arms, the heart, and the brain. In developmental biology we will address a diversity of interrelated questions, such as:

- How do cells arising from division of the fertilized egg become different from each other?
- How do they become organized into structures such as limbs and brain?
- What controls the behavior of individual cells such that highly organized patterns emerge?
- How is the organizing information embedded in the egg and, in particular, the genetic material?

We will examine these processes in lecture and in a hands-on-lab. In lab we will learn novel microscopy techniques, collect gametes from sea urchins and follow fertilization, perform micro-surgery on chicken embryos, and examine developmental changes in gene expression.



## Virology (50.442)

Dr. Nolt

**Prerequisites:** Microbiology (50.242) and Cell Biology (50.271)

Examines the common strategies viruses employ to infect diverse hosts as well as the unique characteristics of viral pathogenesis in the human host. Topics will include the nature of viruses, how viruses are classified, the molecular events in the infection and replication of viruses in prokaryotic and eukaryotic cells, how viruses cause disease in humans, the host response to virus infection, and the spread and control of viruses infecting humans. Prions and other subviral agents will also be examined. Three hours of lecture/week.

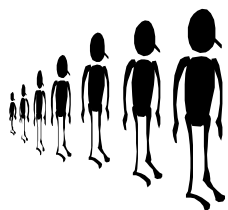


## Conservation Biology (50.451/551)

Dr. Wood

**Prerequisites:** Ecology or consent of the instructor.

This class presents the science of preserving biodiversity and sustaining the earth. Draws on and synthesizes information from the fields of ecology, evolution, genetics, philosophy, economics, sociology, and political science. Emphasis on the development of strategies for preserving populations, species, biological communities, and entire ecosystems in the face of growing human populations and their impact on the environment. Brings scientific principles and theory to bear on problems of management for preserving the richness of life on earth. Conservation Biology is an opportunity to apply science to real-world conservation issues. We'll examine conservation challenges and solutions, both locally and around the world. Three hours of seminar per week.



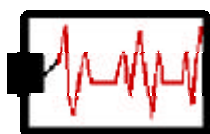
## Population Biology (50.460)

Dr. Hranitz

**Prerequisites:** Genetics OR Ecology OR permission of the instructor (note that the prerequisites listed in STINF are not the most current version.)

This course is an advanced study of the population dynamics, biodiversity, genetics, and evolution of organisms. Fundamental principles and contemporary models presented in lecture will be reinforced with research techniques, computer modeling, and molecular techniques used to study population ecology. Class projects and homework give hands-on experience in data analysis of protein, DNA, and ecological data. Feel free to visit with Dr. Hranitz if you have any questions about the course. Three hours of lecture and discussion per week.

## Fall Physiology Offerings



### Vertebrate Systems Physiology (50.474)

Dr. Till

**Prerequisites:** Cell Biology and competence in college algebra.

This is a course in human physiology; it is an upper division course and requires regular (i.e. several times per week, every week) study to pass. Quizzes are given at most classes; these come from assigned homework. The course studies the major organ systems and how they work together to maintain body conditions compatible with life. Mechanisms by which the systems' functions are integrated in the whole organism are emphasized. Three hours lecture and discussion per week.



### Microbial Physiology (50.478)

Dr. Kipe-Nolt

**Prerequisites:** Microbiology, Cell Biology, and Chemistry for the Sciences II

In this course you will learn how and why certain microbes synthesize the following: xanthan gum that gives smooth texture to "gushers" and keeps gravy thick; monosodium glutamate that enhances the flavor of all those oriental dishes; insect toxins that are used to control gypsy moth and Japanese beetles; proteases that act as stain removers in your detergents; plastics that are biodegradable; and antibiotics that you use to treat nasty bacterial infections. Which microbes can breakdown cellulose and lignin? How do they do it? Meet the best ethanol producers, those that grow at 110° C, and those that prefer a pH of 1.0. How can some organisms survive several megarads of ionizing radiation? Learn about the microbes that fix nitrogen (they are my favorites), those that get their energy by oxidizing heaps of coal mining spoils, those that produce sulfur granules instead of oxygen in photosynthesis, and many, many more. Three hours lecture and discussion per week.



# Pre-professional Committee News

## Summer Opportunities in Podiatry

The Temple University School of Podiatric Medicine is offering a 1-week summer internship program from June 6 to 13, 2008. Topics covered in the program include: gross anatomy of the foot and ankle; introduction to podiatric medicine; biomechanics and pathomechanics of the foot and ankle; foot screening and evaluation; diabetes; sports injuries; geriatric conditions; pediatrics; and wound healing. To be eligible, a student must have completed 30 credit hours and submit an application. Additional information can be found at: [http://podiatry.temple.edu/pages/prostdnts/internship\\_prog.html](http://podiatry.temple.edu/pages/prostdnts/internship_prog.html) The deadline to submit applications is April 25, 2008.

The New York College of Podiatric Medicine is sponsoring a 2008 Pre-Matriculation Summer Program from July 7, 2008 through August 15, 2008. The program includes a combination of courses, an introduction to podiatry, and a review of skills necessary to succeed in medical school. The program costs \$700. To be eligible, a student must have completed 80 credits. For more information and application materials, see <http://www.nycpm.edu/admissions/prematriculation.html>

## Pre-Medicine Club News

The Pre-Medicine Club had a busy spring semester. The club ran MCAT review sessions, raised funds on Valentine's Day, and participated in the recent Health Sciences Symposium. Shown at right are **Samantha Bussanich**, **Megan Kopec**, and **Essie Reed** at the Pre-Med club's exhibit on melanoma at the Health Sciences Symposium. The group is also sponsoring a team in the upcoming Relay for Life to benefit the American Cancer Society. Officers for the 2008-2009 academic year were recently elected. Leading the pre-medicine club will be: President, **Kyle Bartol**; Vice President, **Essie Reed**; Secretary, **Samantha Bussanich**; Treasurer, **Laura McCourt**; and Public Relations, **Courtney Waltmyer**.



## What are your Summer Plans?

### Summer MCAT

The MCAT is a standardized exam required for admission to allopathic, osteopathic, and many veterinary schools. The exam assesses mastery in biology, general and organic chemistry, physics, scientific problem solving, critical thinking, and writing skills. Summer MCAT exams are offered May 10, 23, 27, and 31; June 13; July 8, 10 and 18; August 5, 7, 15, 22, and 26; and September 3, 5, 6, 12, and 13. To register go to: <http://www.aamc.org/students/mcat/start.htm>



### Summer Vacation Ideas

The committee wishes all pre-professional students a rewarding, relaxing, and rejuvenating summer. Remember summer is a great time to job-shadow. Many students also choose to do their volunteer work during the summer. Rising juniors are reminded to submit their completed application packets to the committee by the end of the summer or the start of the fall semester at the latest.

### Check out the Pre-Pro/Pre-Grad Community

Dr Bell, Chemistry Department, has set up an online community on Blackboard 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.



# Allied Health Updates



## IMPORTANT NOTICE FOR MI AND CLS STUDENTS

**ALL CLS and MI students who applied for clinical programs this year must see Dr. Kipe-Nolt before the end of the semester if you have not yet done so. This includes those who have been accepted into clinicals and those who have not.**

## BAHS Students Accepted to Clinical Programs

The following students have signed-up (completed the paper work with Dr. Kipe-Nolt):

### Clinical Lab Science Clinical Students

**Catherine Stone** – Williamsport Hospital

**Phillip Zak** – York Hospital

**David Kolb** – Robert Packer Hospital

Good luck as you begin this new chapter in your education!

### Medical Imaging Clinical Students

Johns Hopkins: **Jillian Anthony, Morgan Fox, Hanna Koch, Erin Laedlein, Amanda Malles, Grant Poppenwimer, Jenna Ruppert, Nicole Seward, Justin Singer**

Wyoming Valley Radiography: **Leslie Antolick, Brenda Bride, Jessica Johnson, Michelle, Morgis, Jamie Whitenight**

Wyoming Valley Sonography: **Nicole Lopata, Ashley Moro**

Misericordia Sonography: **Ellie Daniels, Laura Labiak, Kaitlyn Manley**

Abington Memorial Hospital: **Amanda Peterman**

Albert Einstein Medical Center: **Lisa Gifford, Jayme Snavelly**

Clearfield Hospital: **Nicole Monroe**

Geisinger Medical Center: **Heather Gladfelter, Elyssa Goldstein, Jennifer Kubilus, Heidi Portzline, Natasha Puskavich, Kristina Slabonik**

## BAHS Students Consider “Aging with Grace”

A full house was present at the Kehr Union Ballroom for “Aging with Grace: Findings from the Nun-Study,” the keynote address of the 17<sup>th</sup> annual Health Sciences Symposium. The featured speaker was Dr. David Snowdon, Professor in the Department of Neurology in the College of Medicine and the Sanders-Brown Center on Aging at the University of Kentucky. The symposium also included student posters and a wellness fair. Many BAHS students participated in the event. **Kim Dodson** introduced Dr. Snowdon at his Friday workshop, **Joanna Kraynak** and **Kyle Bartol** were on the student poster judging committee, and **Kenny Thomas** and **Travis Castleberry** met with Dr. Snowdon at breakfast. The Pre-medical Sciences Club presented a booth at the Wellness Fair on melanoma. Our cheerful poster set-up committee (even at 7 a.m.!) consisted of **Kayleen Balliet, Tara Martines, Jason Nolt, Nija Owens, John Redinski, and Tiffany Tobias**. The following students were on the facilities committee: **Erica Brady, Alison Carney, Brittany Conrad, Lauren Dyer, Lara Fecondo, Matt Fickinger, David Francavilla, Erica Harmsarth, Breanne Hardy, Dave Kessler, Tresa Imparato, Mara Lagerman, Kristen Levy, Andrea Marino, Sarah Marino, Brittany Martin, Jordan Mellinger, Alicia Musser, Laura Postles, Katie Raymis, Erika Raymond, Steve Rockwell, Kaitlyn Schiccatano, Lain Sheatler, and Shawna Yearick**. Thanks to all our students who made the symposium a success!



The following students in Anatomy and Physiology II were award winners:

First place: Tornadoes, Hurricanes, & Thyroids All Produce Grave Results

**Chris Hall, Sarah Marino, Andrea Marino,**

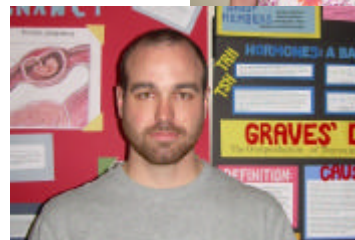
**Megan Leonhartsberger** (at right from bottom).

Third Place: Do you ‘ear me now?

**Erica Brady, Meghan Dowzycki, Brittany Martin.**

Honorable Mention: What’s under your skin? MRSA.

**Diana Agroskin, Andrea Klacik, Chelsea Pierce.**





## Faculty Updates

**Dr. Clay Corbin** received the Provost's Award for Excellence in Research and Scholarly Activity. See Dr. Corbin posing second from left. Congratulations Dr. Corbin!



**Dr. Steven Rier**, along with colleagues at the Stroud Water Research Center in Avondale, PA and Bucknell University, have received a \$214,725 grant from the Pennsylvania Department of Environmental Protection's Growing Greener program to expand an on-going study that demonstrates the impact of acid mine drainage on stream ecosystem function, particularly nutrient processing. He is currently looking for a full-time research assistant for this summer and a part-time assistant for the fall and spring of next year. If anyone is interest in either position, please contact Dr. Rier.

**Mrs. Christine Mehlbaum** attended the Radiologist Assistant (RA) educators council meeting in Albuquerque, New Mexico. This is a meeting of all the RA program directors across the country to discuss current issues affecting RAs. The group also examines certification requirements, curriculum revisions, and state and national licensure issues. Mrs. Mehlbaum has submitted documents for the Radiologist Assistant program's ARRT recognition.

**Dr. Karl Henry** received a Research and Disciplinary Projects grant for \$9,910 to study the "Molecular mechanisms behind multidrug resistance gene expression and identification of novel therapeutics against the opportunistic fungal pathogen *Candida glabrata*."

**Drs. John Hranitz** and **Kristin Brubaker** received a \$20,000 grant from Cherokee Pharmaceuticals LLC to fund an outreach program for area secondary schools to promote inquiry-based education in the field of molecular biology. Cherokee Pharmaceuticals LLC is the company that operates the pharmaceutical plant in Riverside, PA formerly owned by Merck, Inc. The program entitled "Bridging the Gap through Summer Research Experiences in Molecular Biology" will pair college students and high school students on campus this summer in research projects in molecular biology under the supervision of BAHS faculty. Funding for student stipends was provided by a \$4,960 grant from the Special Projects in Academic Affairs program to **Drs. Brubaker, Hranitz** and **Surmacz**.

**Drs. Gary Wassmer** and **Cindy Surmacz** served as science fair judges at the PA Academy of Science regional competition held at Susquehanna University.

**Dr. Surmacz** attended the fifth annual Biology Leadership Conference, *Shaping the Future of Majors Introductory Biology*, held in Charleston, SC. She presented a poster on the use of crime scenes to teach fundamentals of microscopy.

**Dr. Angela Hess** recently returned from the 99th annual meeting for the American Association for Cancer Research, held in San Diego, CA. The annual meeting attracts more than 17,000 scientists from 60 countries around the globe. Participants had the opportunity to discuss approximately 6000 abstracts and hear from 500 invited presenters all of which addressed new and significant discoveries in basic, clinical, and translational cancer research. Dr. Hess presented a poster entitled "EphA2 as a potential therapeutic target for malignant melanoma."

**Dr. Angela Hess** was also invited to be a panelist for a session titled "Penn State McNair Alumni: Life beyond the bachelor's degree" at the 16<sup>th</sup> annual McNair summer research conference held at the Pennsylvania State University in State College. The Ronald E. McNair Scholars program is a nationally funded program that is designed to assist talented first generation low-income undergraduates or undergraduates from underrepresented populations to enter graduate school and complete a doctoral program. The program was established in memory of Dr. Ronald E. McNair who was an astronaut-physicist who died in the Challenger space shuttle disaster. Being a part of the McNair Scholars program at Penn State was my gateway to graduate school and I am very excited to have an opportunity to talk to students about my graduate and post-graduate experiences.

Many BAHS faculty and their research students have traveled to state meetings recently to present research. **Drs. Hansen, Hranitz, Surmacz**, and **Till** attended the annual meeting of the PA Academy of Sciences in Grantville, PA. Shippensburg, PA was the site of the annual CPUB meeting attended by **Drs. Nolt** and **Hranitz**. See pages 4 and 5 for details.

## Bringing BAHS into the Science and Health Science Living and Learning Community.

BAHS faculty received a Teacher-Scholar Award from TALE (BU's Teaching and Learning Enhancement center) to establish an Academic Biology Learning Center (ABLE!) into the Science and Health Science Learning Community in Columbia Residence Hall. ABLE will be open to all students enrolled in Concepts in Biology or Anatomy and Physiology. ABLE's mission is to improve student performance and strengthen the academic community in introductory courses. Biological resources currently accessible only in the classroom and labs will be replicated at ABLE and made available to all students enrolled in these courses. These will include biological models, learning kits, microscopes, bones, and software. Faculty who teach these courses will provide scheduled review sessions and office hours at the ABLE location. BAHS participants includes **Drs. Corbin, Hansen, Henry, Hess, Hranitz, Nolt, Rier, Surmacz, Till, Wassmer, and Wood.** Hope to see you in the fall! Be on the look-out for our Open House!

## Seniors plan for life after BU.....

Congratulations to all of our seniors. We are proud of you! Here's what some of our graduating seniors have planned following graduation. For those of you are who are not certain of your plans, please send an e-mail to Dr. Surmacz in the future so we may share your good news!  
([csurmacz@bloomu.edu](mailto:csurmacz@bloomu.edu))

**Nick Bixler** will attend the Pennsylvania College of Optometry in the fall and will live in Jenkintown.

**Mary Sue Buss** may work on a master's degree, join the Peace Corps, or seek employment in research. Regardless, it will be interesting and intellectually stimulating!

**Travis Castleberry** will enter dental school at Temple University.

**Kim Dodson** will enter the Doctoral Program in Physical Therapy at the Univ. of Maryland School of Medicine in Baltimore.

**Jared Geissinger** plans to move to Mexico to help build an orphanage and to teach (hopefully biology).

**Allison Grimm** will attend Nazareth College in Rochester, New York in the doctoral program in physical therapy.

**Anh Hong Ho** will enter the physician assistant program at Georgetown University.

**Christine Hoffman** has applied to the Peace Corps and has an upcoming interview. Christine would teach biology for the first year and after that would join the administration to work with the schools, teachers, and community to develop programs.

**Kate Holtsmaster** plans to apply to medical school in the fall and to find a job in biology.

**Jennifer Krott** will study for her doctorate in physical therapy at Shenandoah University in Winchester, VA.

**Amanda Meholchick** will attend the University of Hawaii in the pharmacy program.

**Sarah Reynolds** plans to work as an intern doing laboratory research at Incyte, a drug discovery pharmaceutical company. She hopes to enter a Physician Assistant graduate program.

**Kenny Thomas** will attend Thomas Jefferson University in the doctoral program in physical therapy.



Congratulations to **Brittany Conrad** who has been accepted in the Occupational Therapy program at Thomas Jefferson University and to **Steve Uhl** who will attend Penn College in the Physician Assistant Program.

# News from our Organizations...

## Biology and Allied Health Club

The Biology and Allied Health Club has been active this semester. They sponsored a career night featuring healthcare professionals from Geisinger Medical Center. On hand were physician assistant and BU alumnus **Jason George**, Steve Procopio, pharmacist, and surgical resident Dr. Mini Varghese. Other speaker's included BAHS own **Dr. Karl Henry** who talked about his research. The club also held a bake sale fundraiser in Hartline lobby. A highlight of the semester's activities was a trip to Baltimore's Inner Harbor. See article below. The club celebrated the end of a successful academic year at a picnic held at town park. Dr. Hranitz was king of the grill and a fun time was had by all. The fun bio door prizes were a big hit. Leading the club in the 2008-09 academic year will be President, **Erin Buckwalter**; Vice-President, **Andrea Marino**; Secretary, **Emily Bar-kanic**; Treasurer, **Sarah Marino**; Activities Coordinators, **Rachel Shankweiler** and **Anna Lee Pflomm**.



### BAHS Club Invades Inner Harbor – bodies strewn everywhere!

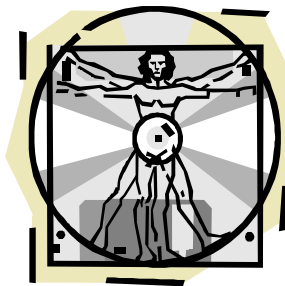
February BAHS Club members traveled to Inner Harbor of Baltimore to visit the Maryland Science Center and the National Sea Aquarium. In total, more than 35 people visited the Body Worlds exhibit at the science center, the National Sea Aquarium, or both. If you have never visited either of these exhibits, know that both exhibits are highly recommended by our club members. The comments below are from a handful of the students that attended. Thank you to **Jen Bowen** for contributing some fun pictures from the trip! Please see comments from students below. Body Worlds will remain in Baltimore until May. Check the Maryland Science Center web site for details.

“My favorite experience of the trip was being able to see how the muscles look when being acted upon in different situations. The trip showed me how important it is to keep your body in healthy condition.” -- **Jen Bowen**

“The most interesting part of the trip was Body Worlds. The Body Worlds exhibit gave a very interesting insight into the human body and how it works.” – **Ghaith Ibrahim**

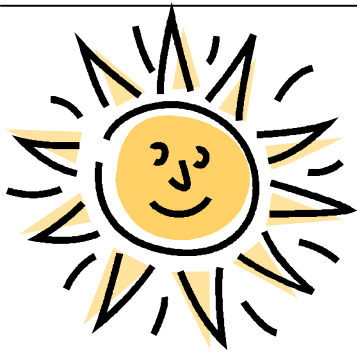
“I enjoyed the Baltimore trip very much. It was a very enriching experience because I got to see everything (human cadavers) in its true detail.” – **James Kearn**

“My favorite experience on the trip was seeing the Body Worlds exhibit and talking with my friends about the things we saw. The whole trip was an enriching experience for me because I was able to explore Baltimore's Inner Harbor, which I hadn't done before, and there was just so much to see in the museum of science.” - **Jessica Kloc**



Thanks to all of you who helped to make this academic year a successful one! That includes our departmental secretary, student secretaries, work study students, lab assistants, members of our clubs and organizations (Biology and Allied Health Club, Pre-Medicine Club members, and Tri-Beta Honor Society) volunteers at Open House, the Science Iditarod, and the Health Sciences Symposium, graduate assistants, research students, and all of you who make this a great place to teach and learn!





## What's up this summer?

### BAHS Summer College Offerings

The following courses will be offered by BAHS during summer 2008:

Session I: Human Biology (Dr. Melnychuk); Anatomy & Physiology I (Drs. Surmacz & Corbin); Intro. Microbiology (Dr. Kipe-Nolt), Human Sexuality, Field Botany (Dr. Williams); Current Topics in Biology (Dr. Chamuris); Research Methods (Dr. Hranitz); Radiology Procedures & Image Evaluation II (Mrs. Mehlbaum).

Session II: Cells, Genes, and Molecules (Dr. Chamuris); Anatomy & Physiology II (Drs. Hranitz and Wassmer); Human Sexuality (Dr. Wassmer).

#### Summer Sessions 2008

- Session I - May 19 to June 27 (6 weeks)
- Session II - July 1 to Aug 8 (six weeks)
- Session III - May 19 to Aug. 8 (twelve weeks)

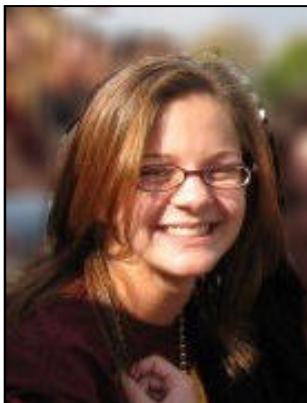


## Summer Adventure in Africa

**Melissa Scubelek** and **Deborah Hunsberger** will take part this summer in an internship program run by Operation Wallacea. Operation Wallacea maintains a number of biological and conservation management research programs that operate in remote locations across the world. These programs all focus on wildlife conservation, including identifying areas needing protection, implementing conservation strategies, and assessing conservation management programs. Operation Wallacea consists of teams of university academics who specialize in biodiversity or various social and economic studies. Their efforts have resulted in a large number of publications in peer-reviewed journals each year and have led to the discovery of 30 new species of vertebrates, the re-discovery of 4 species thought to be extinct, and the acquisition of \$2 million in grant funds to set up best practice management examples at the various study sites.



**Deborah Hunsberger** is a senior majoring in Biology and Biochemistry. She is the president of the Biological and Allied Health Sciences Club. She is also a member of the Chemistry Club and Tri Beta—the biology honor society. Debbie tutors chemistry during the Chemistry Club's evening tutoring sessions. She is also involved with Quest, an outdoor adventure program where she helps lead water and hiking courses. She plans to go to South Africa to study birds in Mkhuzi and serve as a general surveyor at Operation Wallacea's new site at Sodwana Bay. She hopes to gain valuable field skills while helping Operation Wallacea assess the biodiversity of one of their newer locations.



**Melissa Scubelek** is a senior Biology major with a minor in Chemistry. She is the secretary of the Biological and Allied Health Sciences Club and tutors biology and chemistry through Bloomsburg University Tutorial Services. Melissa has worked with Dr. Corbin investigating the morphological integrity of the African blue flycatcher and presented the research at the College of Science & Technology Research Day. She plans to go to South Africa to pursue her dream of working with elephants and gaining field experience in the African bush. After this internship she is hoping to go to graduate school to pursue a degree in zoology to study the conservation of endangered species around the world.

their

Debbie and Melissa received a BU Internship Scholarship to help defray the costs involved with internship. Have a safe trip and a wonderful experience, Debbie and Melissa. Take lots of pic-

## Take a Biology Elective this Summer!

A great opportunity to catch up or get ahead



**Field Botany (50.263), 3 credits, Session 1, MTWTh 8 to 8:55 a.m., TTH 9 a.m. to 12:50 p.m.**

**Dr. Williams**

Sometimes you have to stop and smell the flowers, or admire the ferns, or maybe marvel over the sedges. This summer learn not only to sniff the flowers but also learn their names, characteristics, and habitats. You will learn techniques to collect and identify the non-woody plants common to central Pennsylvania. A great chance to get hands on experience in the field and learn practical skills that will make walking in the woods even more fun.



**Current Topics (50.489 & 589), 3 credits, Session 1, MTWTH 3:20 to 5:00 p.m.**

**Topic: Human Evolutionary Genetics**

**Dr. Chamuris**

In this course we will examine key aspects of human evolution from a genetic perspective. First we will review the basics of evolutionary theory, and the current understanding of hominid phylogeny. We will also review some fundamental aspects of molecular genetics and cytogenetics, with a focus on the methods used to gather data of evolutionary significance. We will then explore several major areas of human evolution genetics using recent and current peer-reviewed literature: hominid phylogeny, early human migrations and the ancestry of indigenous populations, and examples of natural selection and genetic drift in human populations. Issues of medical, anthropological, and phylogenetic significance will be stressed

## Dr. Corbin heads to Ocala National Forest

**Dr. Corbin** will be conducting field work with some colleagues at Ocala National Forest (at right) in Northern Florida, supported with funding from the Provost's Award for Excellence in Research. The trip will provide opportunities for both training and research. Dr. Corbin will be collaborating with Dr. John Steffen from Auburn University, an expert on carotenoid pigmentation in *Anolis* lizards. Dr. Corbin will further his training on a portable spectrophotometer which allows measurement of color in the field and will then will collaborate with Dr. Steffen in collecting dewlap color data from brown anoles.

Dr. Corbin will also work with Dr. Lance McBrayer, a colleague from Georgia Southern University. They will collect various species of lizards to measure bite forces - a major predictor of foraging mode and possibly of reproductive performance. This will help them to continue their collaborative work on lizard head morphology (McBrayer and Corbin. 2008. Patterns of head shape variation in lizards: morphological correlates of foraging mode. In Reilly et al. (eds) *Lizard Ecology*. Camb. U. Press). This will allow Dr. Corbin to advance his training on bite-force transducers, technology that has recently been acquired by BAHS under the leadership of Dr. Hranitz. As Dr. Corbin puts it "Hence, I'm very excited about this trip. In only 4 or 5 days and with relatively little funding, I'll accomplish tons of field training and collaborative research. Much of the training will transfer to Bloomsburg University students and colleagues." We wish Dr. Corbin a safe and successful trip.



## Summer Internships

### Physical therapy

Several pre-physical therapy students are heading out for summer internships at various outpatient and in-patient clinical sites. **Megan Krajewski** will intern at Somerset Spine and Wellness Group, PC in Raritan, NJ. **Scott Pfaff** will intern at Bucks Physical Therapy and Sports Rehabilitation in Richboro, PA. **Alex Hilderbrandt** will serve as an intern at Phoenix Rehabilitation in Bloomsburg; **Allison March** will intern at Children's Development Center in Williamsport.

### Medical Imaging Internships

Students who have applied for the medical imaging internships for the summer and fall 2008 semesters will be invited to interview during the week of April 21<sup>st</sup>. Please check your e-mail for a message from Dr. Hranitz. If you have questions, feel free to visit Dr. Hranitz at his office (HSC 131) or e-mail him at [jhranitz@bloomu.edu](mailto:jhranitz@bloomu.edu).

## Alumni Updates

BAHS welcomed back several alumni for COST Career Day on April 11. At the event alumni shared information about their careers and their experiences. Pictured at right are:

**Karl Luxardo** '95 BS Physician, Geisinger Health System

**Stephanie Findley** '07 BS Environmental Consultant, AquaNiche

**Peter Licon** '98 MS Director Upward Bound, Kutztown University

**Donna Counterman** '91 BSEd; '93 MS Biology, Biology Teacher, Danville High School

### Alumni News:

**Jamie Wilhour** (BA Biology, 2007) will attend Lock Haven University in the Physician Assistant program.



## BAHS Photo Album

RA Students practice lumbar punctures



**Christine Hoffman** and **Brock Wenrich** are experts in measuring metabolic rate!

