

# The Biology Flash

Fall 2011

Photograph by Phillip Harchack  
Senior Biology Student

## Student News

**Chris Buzas** began his first semester at Lake Erie College of Osteopathic Medicine.

**Simon George** is enrolled in Mylan School of Pharmacy, Duquesne University.

**Tyler Gillmen** and **Joshua Greenleaf** are first-year medical students at Philadelphia College of Osteopathic Medicine.

**Melissa Heinz** is pursuing a MS in Marine Science at University of North Carolina Wilmington.

**Amanda O'Brien** graduated from Altoona Regional Health System School of Medical Technology, and **David Lingenfelter** is now enrolled in the program.

**Nicole Nastasi** is enrolled in Conemaugh Health System's School of Medical Technology

**Kristen Ritchey** has begun veterinary school at the Ohio State College of Veterinary Medicine.

**Nora Standley** is in her second year of the 3+4 program at Salus University, Pennsylvania College of Optometry.

## SFU Biology Students Use Summer to Gain New Experiences

This past summer, SFU students sought out a variety of activities that broadened their learning experiences outside of SFU classrooms. Here is a sampling of what they did!

**Tony Bellmore** took a class in Marine Ichthyology at the Marine Science Consortium at Wallop's Island, Maryland.

**Erin Bench** worked at Pittsburgh Zoo and Aquarium, where she maintained aquaria and cared for penguins, sea turtles, and fishes.

**Erika Bendick** worked at Shaver's Creek Environmental Center, conducting educational programs for visitors.

**Duncan Black** completed an internship with Genex Cooperative, Inc., which provides artificial insemination services for cattle farmers.

**Maria Cacciotti** researched protein expression in pregnant women with preeclampsia at

the Magee-Women's Research Institute in Pittsburgh, PA.

**Patrick Green** worked with the Pennsylvania Department of Environmental Protection doing macroinvertebrate sampling and other hydrological assessments.

**Curtis Hollen** conducted research with Dr. Justin Merry at SFU, surveying the visual systems of local damselflies.

**Becky McMakin** worked at Wildlife Safari in Winston, Oregon, where she maintained animals and provided educational programs for children.

**Thomas McWilliams** conducted research with Dr. Irene Wolf at SFU, evaluating heat shock protein expression in plants found in acid mine drainage (see page 2).

**Krystina Olsen** worked at Mystic Aquarium in Connecticut. There she served as an interpreter, explaining the



Krystina Olsen describes her experiences at Mystic Aquarium this past summer.

behavior of animals to visitors.

**Scott Seaman** did research to help develop immunization-based cancer therapies at Penn State Hershey Medical Center.

**Emily Zagorski** conducted research on the effects of diet on protein expression in cardiac muscle at the University of Maryland School of Medicine.

### What's New in the Biology Department?

- SFU broke ground on the new Science Center, scheduled to open Fall 2013!
- Dr. Sue Morra is on sabbatical this fall. She is developing an IACUC animal care protocol for the campus, revising the Marine Biology Track II curriculum, and taking an animal nutrition course.
- Dr. Justin Merry's article "Variation in compound eye structure: effects of diet and family" was published in *Evolution* 85(6):2098-2110.
- A grant to Dr. Morra permitted the biology department to debut its new STARS program, which will provide research opportunities to freshmen during their second semester at SFU.

## Department of Biology

*Dr. Marian Langer, Chairperson*  
*Biology Department*  
*Saint Francis University*  
*P.O. Box 600*  
*Loretto, PA 15940-0600*  
*Phone: 814-472-3080*  
*Fax: 814-472-2773*

*Office of Admissions*  
*Saint Francis University*  
*117 Evergreen Drive*  
*P.O. Box 600*  
*Loretto, PA 15940-0600*  
*Phone: 814-472-3100*  
*Phone: 866-342-5738 (toll free)*  
*Email: admissions@francis.edu*

***Alumni: do you have news to share? New job? Attending graduate school? Please contact us and let us know:***  
***Dr. Justin Merry, Editor***  
***jmerry@francis.edu***

## *Biology Professor Serves as Fulbright Scholar*

John J. Trimble, Ph.D., served as a Fulbright Scholar from January to July 2011 at the Vilnius Pedagogical University in Vilnius, Lithuania. The Fulbright Program is the flagship international educational exchange program sponsored by the U.S. State Department and Dr. Trimble is only the second Fulbright Scholar from SFU. Accompanying Dr. Trimble were his spouse and sons in 10<sup>th</sup> and 6<sup>th</sup> grades. They lived in the old town section of Vilnius, a UNESCO World Heritage site. No one in the family is Lithuanian, so learning the Lithuanian language and living in the capital city of over 550,000 were among the challenges they faced.

Dr. Trimble's interest in Lithuanian education began in 2009 as a volunteer in summer teacher training programs sponsored by A.P.P.L.E., the American Professional Partnership for Lithuanian Education. During this trip, in addition to lecturing in English on molecular biology, microbiology, and evolution, he established a new molec-



Dr. John Trimble spent six months in Lithuania on a State Department-sponsored educational exchange program.

ular biology laboratory course. "The state-of-the-art equipment was all familiar to me, and yet I had never seen these models. And while the Polish centrifuge, the German PCR thermal cycler, and the Belgian electrophoresis apparatus gave me pause, it was the chemical reagents labeled in the Russian Cyrillic language that I found most challenging," said Dr. Trimble.

## *Student Profile: Thomas McWilliams*



Thomas McWilliams, with his research mentor, Dr. Irene Wolf, prepares a cattail for protein extraction.

Thomas McWilliams is researching the expression of heat shock proteins (HSPs) in both plants and animals found in acid mine drainage. HSPs are chaperone proteins that promote proper folding and stability of other proteins within cells. When cells are subjected to stress, they often produce more HSPs, like HSP70, to combat adverse cellular conditions. Therefore, HSP70 can serve as a biomarker to reveal stress in organisms found within acid mine drainages.

Thomas is a junior Biology/pre-med student at Saint Francis University. He began his research in the summer of

this year after taking Vertebrate Physiology, which was taught by his research mentor, Dr. Irene Wolf.

Thomas is an international student from Gold Coast, Australia. Beyond his research activities, he is involved on campus playing for the Red Flash Men's Soccer team. He is also the Chair of Philanthropy for Sigma Chi.

Dr. Wolf completed her Ph.D. at the University of Toledo Medical School. She then continued her work as a Post-doc at the University of Pittsburgh School of Medicine. Her dissertation exploring the role of stress proteins

in hormone receptor activity is the driving force behind this current research project. She and her students employ a variety of techniques in the lab, including protein extraction, protein assay using a new Bio-Rad microplate reader, SDS-PAGE and immunoblots. They expect the results of this research to be published in a peer reviewed journal.

This research opportunity has given Thomas experience and insight into the life of a researcher and has inspired him to pursue a combined M.D./Ph.D. degree and become a physician scientist.