

SMCM BioLog

Summer 2008 Edition

Included in This Edition

- Biology Class of 2008
- SMPs for 2008
- Alumni Scholar Spring 2008
- Biology Alumni win SMCM alumni awards
- Price Gets Tenure!
- New Department Chair
- Research Labs Almost Ready
- Internships?
- Alumni Publications
- Alumni Grants/Awards
- Faculty Grants/Awards
- Faculty Presentations
- Alumni Updates
- SMP Presentations

Biology Class of 2008

At the SMCM commencement on May 10, 2008 there were 41 students who received the Bachelor of Arts degree in biology.

- 7 had a 2nd major [biochemistry (2), English (4), and mathematics]
- 19 had minors [environmental studies (9), neuroscience (4), art studio, asian studies, german, music, and philosophy].
- 16 students received Latin honors [summa cum laude (2), magna cum laude (4), and cum laude (10)].
- All were a pleasure to have in the department

SMPs for 2008

On April 28th and 29th, 37 students presented their St. Mary's Projects in biology. During these two days we celebrated the great research accomplishments of our students. The whole presentation schedule, including titles, is included at the **bottom of this email**. There you can see the diversity of the projects. Mark your calendar for next year's SMP days, May 4 & 5, 2009. Come and help us honor these budding scholars!

Alumni Scholar Spring 2008

- **Ashani Weeraratna '91** of the National Institutes of Health was the Alumni Scholar for spring 2008. On March 5, Ashani gave a presentation entitled "Hear the Wnt ROR: Signaling mechanisms that mediate melanoma metastasis." The presentation was warmly received by the 55 students and faculty in attendance. She also held a session at noon to discuss student questions about graduate school. Thanks Ashani!
- **If you would like to participate in this program please sent us an email. The divisional colloquia are on Wednesday afternoons and scheduled a semester in advance. If you are in the SMCM area and would like to talk to our students, we might be able to set up a special time on another day!**

Biology Alumni win SMCM Alumni awards

At the SMCM alumni reunion weekend (June 13-15, 2008)

- **Stephen Thur '00** received the Outstanding Young Alumni Award
- **Christopher Kohler '73** was received into the Society of Distinguished Alumni. Congratulations to both alums!

Price gets Tenure!

Jordan Price was awarded tenure and was promoted to Associate Professor. I know all of the alums that had Jordan join the department in congratulating him. Well done Jordan!

New Department Chair

As of July 1, 2008, Rachel Myerowitz will be the new chair of the biology department. Rachel has been at SMCM for 15 years so we know the department will be in good hands. Jeff Byrd will remain the alumni liaison.

Research Labs Almost Ready

This summer the old chemistry research labs are being renovated into biological research space. Drs. Crawford, Myerowitz, Kerry, Ramcharitar, Cass, and their research students will begin calling these labs home this coming August. This will finally allow research space for each of the faculty member and their 4-6 SMP students. The old general chemistry lab will become the new genetics lab and will be renovated next summer (though we will begin using it for genetics labs this fall under the old configuration). The old organic lab will have all of the hoods removed to make way for research space and a small conference room. Work on the organic lab will also begin next summer.

Internships?

If you know of internships at your place of employment or are looking for a good employee, please send the information along. We have an internal listserv for students. We will post them to the students instantly.

Alumni Publications

Michael T. Davis, **Paul Auger**, Chris Spahr, Scott D. Patterson. Cancer biomarker discovery via low molecular weight serum proteome profiling - Where is the tumor? *Proteomics - Clinical Applications* (2008). 1, 12; 1545-1558

Mark Wilson '86. Spring 2008. Novel Archaea and Bacteria Dominate Stable Microbial Communities in North America's Largest Hot Spring. *Microbial Ecology*

Alumni Grants/Awards

Donna L. West '76 - the Promising Practices Award. This category honors common sense and ingenuity. Matt Rhoads and his team of experts for the Quarantine 56 (Q-56) rule revision and implementation were recognized. Mr. Rhoad's team included the Office of the General Counsel and several APHIS units: from the Policy and Program Development staff--Regulatory Analysis and Development and Policy Analysis and Development; from PPQ's Plant Health Programs--Planning, Analysis and Regulatory Coordination; and Permits, Registrations, Imports, and Manuals, Commodity Import Analysis, and Operations (**Donna L. West**). **AND** In October, Acting Secretary Chuck Conner presented **USDA's 2007 Honor Awards** and hosted the 60th annual ceremony. The agency's Irradiation and Indian Mango Approval Team, led by Alan Green and Paul Gadh, received the award for facilitating, against all odds and in a timely manner, the import of Indian mangoes treated with newly approved, environmentally friendly irradiation technology—while at the same time protecting American agriculture from quarantine pests. **Donna L. West**, SMCM Class of 1976 Biology Major was part of this team and an award recipient

Emily Huff '03 – Was awarded the Outstanding Science Teacher of the Year award for St. Mary's County, MD for 2008.

Faculty Grants/Awards

Samantha Kerry – Was appointed as a Biology Scholar under the NSF funded Biology Scholars Program. This program seeks to enhance biologists' understanding and practice of evidence-based teaching and learning.

Bob Paul - received a \$78k + grant from NOAA (National Oceanographic and Atmospheric Administration) for the field work on a St. Mary's River WRAS (Watershed Restoration Action Strategy). Five SMCM students are field assistants and the work is being completed as a part of a two-year study sponsored by Maryland DNR, St. Mary's County government and the St. Mary's River Watershed Association.

Jordan Price – received a National Science Foundation Research Opportunity Award (“A phylogenetic study of female bird song in the New World orioles (*Icterus*)”), Supported field work in Veracruz, Mexico with a colleague and a grad student from UMBC.

Faculty Presentations

Jeff Byrd was the keynote speaker at the Council on Public Liberal Arts Colleges disciplinary meeting in biology at UNC-Asheville. His talk was entitled “Research for all: a private model improved for the public college.” He also gave a talk at the National Institutes of Health to the post-doctoral group entitled “Teaching, Research, or both? Life in the professoriate”

Holly Gorton and Bill Williams, with their colleague Tom Vogelmann at the University of Vermont, presented a poster on diffuse and direct light at the ASPB meeting in Mexico and the ESA meeting in Milwaukee.

Samantha Kerry – Presented a poster at the general meetings of the American Society for Microbiology in Boston and at the Undergraduate Education meetings of the American Society for Microbiology entitled “Design and Evaluation of an Active Learning Demonstration in Immunology.”

Bob Paul - gave a paper at AERS with Kevin Boyle ('06) as a co-author on oyster community development in artificial aquaculture reefs

Jordan Price – is presenting a seminar at the University of Michigan Biological Station (“Reconstructing the evolution of bird song in the New World blackbirds”) this summer.

Alumni Updates (supplied by the alums themselves or we picked up on the news service)

Mark Wilson '86 - : After graduating from St. Mary's in 1986, I earned an M.S. at Virginia Tech and a Ph. D. in Microbiology from Cornell University. At Cornell I met my wife Patty, and we are now both biology Northern California among the redwoods. We're co-PIs on an NSF-sponsored Microbial Observatory called Life in Boiling Acid, looking at acid- and heat- loving organisms in Lassen Volcanic National Park. I also study the genetics of pollutant-degrading microorganisms. My maturing knees have required a shift from ultimate frisbee back to the frisbee golf I enjoyed at SMC.

Elizabeth Santini '96 - After graduating from SMC, I attended the veterinary school at Virginia Tech. My husband, Tom (also a veterinarian), and I moved to central Pennsylvania where I worked in small animal and dairy practice. I now work for the PA Department of Agriculture. Our son, Braden, was born in July of '07.

Amanda Jonczak '00 and Greg Palmer will be married on July 4, 2008

Katie Painter '00 is putting her Peace-Corps experience to work here at home, helping Somali refugees in Idaho work community-garden plots. Her local television station recently featured her in a news broadcast, available here: <http://www.kivity.com/Global/story.asp?S=8510739&nav=menu536_6_14#>.

David Azfal '01 will begin his residency in family medicine this summer at the Lehigh Valley Hospital in Pennsylvania.

Erin Johnson '03 - I have just received my PhD in neuroscience from the University of Rochester School of Medicine and Dentistry (graduation date May 08). I am going to be starting a postdoctoral research position in the Molecular and Behavioral Neuroscience Institute at the University of Michigan (in Ann Arbor, MI). I am getting married May 25th in Andover, MA. I am marrying Karthik Venkatesh. We met in grad school, and he also graduates with a PhD in neuroscience from the University of Rochester this May. He also is a postdoctoral fellow at the University of Michigan.

Emily Palmisano '05 – I'm working at the Johns Hopkins University School of Medicine in July 2005, as the research coordinator for the National Familial Pancreas Tumor Registry.

Kathleen Sanders '05 and **Jon Stephanos '06** were married on May 24, 2008.

Biology - SMP presentations - 2008

Oral Presentations – Schaefer 106

Monday, April 28

BYRD – Session Coordinator

9:00am - Rebecca Lyzinski: “Using a Mathematical Model to Describe and Predict the Population of Blue Crabs (*Callinectes sapidus*) in the Chesapeake Bay” (Kerry)

9:20 - Alexander Arguello "Molecular phylogenetic analysis of the 'rudis' species complex of the ant genus '*Aphaenogaster*' (Hymenoptera: Formicidae)" (Price)

9:40 - Elizabeth Northfield "The Role of Growth Factors in Intercalary Regeneration and Bone Healing." (Crawford)

10:00 - Brian Russell “Effects of heavy metals on growth rates in *Crassostrea virginica*” (Tanner)

10:20 - BREAK

WILLIAMS – Session Coordinator

10:40am - Zachary Borman: “Gene Expression Microarray Analysis of Two Sublines of HMC1 Human Mast Cell Line” (Kerry)

11:00 - Rowena Conway “Effects of Diffuse vs. Direct Light on Photosynthesis” (Williams)

11:20 - Viani Kamleu “Phytoplankton Population and its Relationship to Water Reflectance” (Myerowitz)

11:40 - Hartman Rosemary “Untapped Resources: an evaluation of several invasive plant species for introduction into the American diet” (Gorton)

12:00-2:00 - BREAK

PRICE – Session Coordinator

2:00pm - Luke Whalen “Reconstructing Plumage Evolution in the Oropendolas and Caciques” (Price)

2:20 - Kelley Hernandez “Analysis of the Anterior Region in *Lumbriculus Variegatus*, Getting A Head of Oneself” (Crawford)

2:40 - Khachatryan, Alexandra "Analysis of the Ketogenic Diet as an Effective Treatment for Epilepsy" (Byrd)

3:00 - Tammy Zemke "Growth of *Helianthus annuus* in Direct vs Diffuse Light" (Williams)

3:20 - BREAK

KERRY – Session Coordinator

3:40pm - Christina Haramis "The effects of aquatic interactions between wild dolphins and humans" (Tanner)

4:00 - Rice, Rachel The origin of intercalated structures during regeneration of *Ambystoma mexicanum* (Crawford)

4:20 - Rachel Clement "Parachuting in the strawberry poison dart frog, *Dendrobates pumilio*" (Price)

4:40 - Kali Gates: "Role of ELT transcription factors in *C. elegans* survival to pathogens". (Kerry)

Tuesday April 29th –

Poster Session - ARC – 9:00-12:00am

First session

Amber Buel: "Microarray Analysis of ELT-2 controlled gene expression in the *C. elegans* immune response to *Enterococcus faecalis*" wishes to do a poster presentation. (Kerry)

Bridgin Lee: "Analysis of the HPV Vaccine and its Potential for Distribution" wishes to do a poster presentation. (Kerry)

Megan Turner : "The Efficacy of 3-trimethoxysilylpropyldimethyloctadecylammonium chloride (Polyquat) as an Anti-Microbial Surface Polymer" (Byrd)

Alice Volpitta "How do direct and diffuse light differentially affect chlorophyll fluorescence parameters in morphologically distinct leaves?" (Gorton)

Second Session

Constance Foreman "The Genetic and Cultural Influences on the Prevalence of Obesity in African-American Women" (Myerowitz)

Samantha Roy "Can Cranberry Extracts Inhibit UV-Induced Mutagenesis?" (Byrd)

Courtney Kiphart "Optimization of the Purification of a *Leishmania* Secretory Nuclease" (Byrd)

Helen Overman "The Germination and Growth Rate of *Zostera marina* seeds and adult plants when planted with *Ruppia maritime*" (Tanner)

Third Session

Emily Bzdyk "a guide to native plants of Historic St. Mary's City" (Williams)

Kulveen Virdee "The spatial-temporal expression patterns of β -catenin and MAPK in the development of *Logilo pealei* using immunocytochemistry." (Crawford)

Gabriella Zabel "A Comparison of the Biodiversity of Two Tributaries of the St. Mary's River". (Williams)

Alexander Josberger (Tanner)

Oral Presentations – Schaefer 106

Tuesday – April 29

TANNER – Session Coordinator

2:00pm - Mary Clapp "Decoding the evolutionary history of croakers and drums using molecular phylogenetics." (Price)

2:20 - Pablo Barreyro "Applications for Biochemical indicators in studying stress and metabolism in Blue Crab (*Callinectes sapidus*)" (Tanner)

2:40 - Katherine Clark "Worming the way through the Human vermiform appendix" (Williams)

3:00 - Jacob Smith "Sound Source Localization in Fish" (Ramcharitar)

3:20 - BREAK

GORTON – Session Coordinator

3:40pm - Anna Murphy "Effect of Brominated Flame Retardants on the Mexican axolotl, *Ambystoma mexicanum*." (Crawford)

4:00 - Craig Sturgeon: "Timeline of Intestinal Distension Seen in *elt-2* and *elt-7* knockdown *C. elegans*" (Kerry)

4:20 - Lee Ramsey "'Oyster Aquaculture in the Chesapeake Bay" (Tanner)

4:40 - Doug Decker "Relationship between Water Quality and Waterbird Community Integrity on the St. Mary's River." (Price)