



A Note From the Chairperson



Jeffrey Doering, PhD,
Department Chair

Dear Friends,

The new academic year brings new faculty to the department as well as the departure of some of our long-time colleagues. They are all reported in this issue. A hearty welcome as well as farewell.

This semester also brings the largest group of new babies at one time that I have ever seen in the department! Congratulations to all the new parents.

This issue reports the continued outstanding research productivity of the numerous students who work with our faculty, and the recognitions they receive for it. Some of our latest endeavors to support student research are also featured.

Thank you all for your dedicated service to students and the department as a whole, and best wishes for a productive and enjoyable rest of the semester.

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REU: YEAR FOUR

Thanks to careful budget management over the past three summers, Dr. Howard Laten was able to stretch his 3 year NSF grant to extend the Research Experience for Undergraduates program (REU) in Bioinformatics to a fourth consecutive year. Four students received fellowships in the program this year, including three LUC biology students. As in previous years, REU students assigned to Biology faculty spent nine weeks of the summer conducting research that incorporated aspects of molecular genetics, evolution, and computer science. In addition to Dr. Laten, this summer's Biology Department faculty mentors were Drs. Putonti, Kanzok, and Grande.

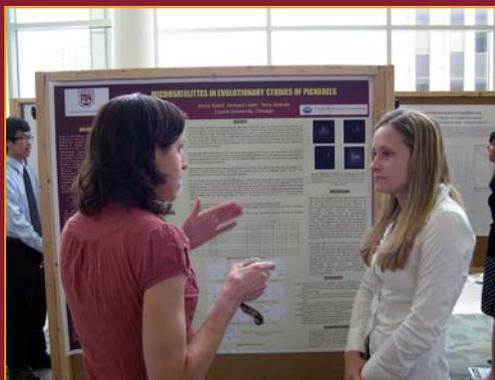
One of this year's highlights included a 4-day trip to the University of Wisconsin-Madison to attend the 33rd Annual Steenbock Symposium. This year the symposium honored H. Gobind Khorana who won the Nobel Prize for cracking the Genetic Code while a professor at UW-Madison in the 1960's. The intimate symposium gave the students a chance to listen and talk to



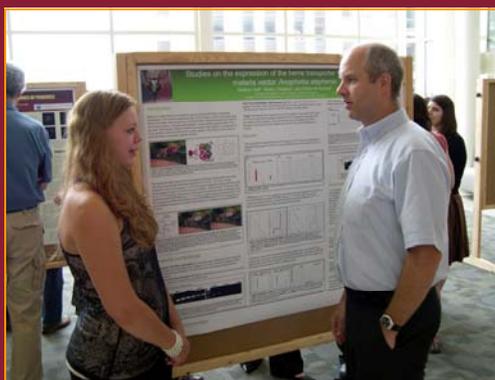
Summer 2009 REU Cohort: (From left to right) Mallory Hall (Loyola, Biology major), Anna Sobol (Loyola, Biology major), Lauren Mogil (Loyola, Biology and Bioinformatics double major), Mailan Pham (Mt Holyoke College, Mathematics major).

some of the most renowned scientists in the world, including four other Nobel Laureates, who have provided many of the foundations for the research the students are currently doing. “They read in their textbooks about the work these scientists have done, and now there are in flesh and blood,” said Dr. Laten of the students’ reaction to the conference, “They were just awestruck.” The REU group was also treated to a tour of the UW Biotechnology Center by postdoctoral fellow and former Loyola biology major, Lisa Farmer (BS, 2002), who earned her Ph.D. in Genetics at UW earlier this year.

With the last of the funds for the program spent, Dr. Laten looks forward to the future of the REU program. “We are reapplying,” he says, “to bring in a group of 16 to 20 students each summer for the next three years.” Should funding be secured, new cohorts of students will reap the benefits of one of the few national programs that provides undergraduates with full financial support to gain valuable learning experiences and gives them exposure to what it’s like to be part of a tight-knit scientific community.



REU Poster Presentations: Part-time faculty member Alona Banai (left) converses with REU student Anna Sobol about her poster.



REU student Mallory Hall presents her research to Professor Stefan Kanzok

Biology Department Bids a Fond Farewell



Above: Dr. Rosi-Marshall (center) poses with her family and Dr. Doering (right) at her farewell party. Below: Dr. Doering tributes Dr. John New (right) during a party in his honor.



Recently, the Biology department said goodbye to two beloved and respected faculty members: Drs. Emma Rosi-Marshall, and John New. At a going away party in late August, Dr. New expressed his appreciation to all his colleagues for a long and fruitful career at LUC that has included twenty years and a staggering number of research contributions and the teaching of literally thousands of students. Dr. New has gone on to a clerkship for the United States Court of Appeals for the Federal Circuit in Washington D.C.

Dr. Rosi-Marshall came to Loyola in 2004 and has contributed so much to our department in a relatively short time, proving to be both a prolific researcher and a dedicated teacher. In 2007, Dr. Rosi-Marshall was honored with an Edwin T. and Vivijeanne F. Sujack Award for Teaching Excellence for her work with our undergraduate students. Rosi-Marshall leaves Loyola to study human-dominated ecosystems at the Cary Institute of Ecosystem Studies in Millbrook, New York. The Biology Department would like to express our deepest gratitude to Drs. New and Rosi-Marshall for their years of service. We wish them all the best in their future endeavors.

Babies! Babies! Babies!



A new job at Loyola isn't the only thing new in faculty member, **Sushma Reddy's** life. Daughter **Anisha Elena Reddy Makovicky** was born March 7, 2009.

This young gentleman goes by the name of **James Colin Feeney**, and he was born April 30, 2009 to Instructor **Emma Feeney**.



Professor **Stefan Kanzok** and his wife welcomed their third child, and first daughter, **Annika Barbara Ilse Kanzok** on May 24, 2009 at Northwestern Memorial Hospital in Evanston.

Three month old **Lydia Claire Cole** and her mommy, **Dr. G. Hunter-Cole** sport matching smiles. Lydia was born April 26, 2009.



Instructor **Brees Sines** and her husband welcomed their first child, **Gemma Zooney Sines** on August 5, 2009. Gemma was born 6 lbs. 15 oz. and 19 inches long.

Mila Andrade was born August 30, 2009 to proud mother, and part-time Instructor, **Priscilla Andrade**.



Liam Kelly, born Sept. 16, 2008, is the elder statesman of our group. His father, Professor **John Kelly**, titled this photo "Liam vs. Oatmeal." Who won this battle is still a question of open to debate.



Katerina Marie Dimitropoulos was born July 7, 2009 to Instructor **Holly Dimitropoulos**.

Not Pictured: **Christina Ann Buldak**, daughter of Dr. **Gerald Buldak**, was born at 5:45pm on Saturday, Oct. 3.



Summer 2009 Fellows Poster Presentation

Ayers, Mary - Identification of Denitrifying Genes in Bacterial Cave Isolates *Dominic Castignetti*.

Bawa, Gurmeet - Effects of the b-adrenergic Antagonist Propranolol on Memory after Chronic Stress. *Louis Lucas*.

Chan, Ernest - The Structure of the Subtelomeric Region of Human Chromosome 21p. *Jeffrey Doering*.

Gomulka, Jennifer - Does Eph/Ephrin signaling contribute to the targeting of sensory nerves in the juvenile and adult rat and mouse tongue? *William Rochlin*.

Hall, Mallory - Studies of the expression of the heme transporter FLVCR of the malaria vector *Anopheles stephensi*. *Howard Laten*.

Kachaochana, Akadia - Filling the Gaps in the HC21p Physical Map. *Jeffrey Doering*.

Linchango, Richard - The search for the deferrioxamine B-metabolizing gene in the bacterium *Mesorhizobium loti*. *Domenic Castignetti*.

Mogil, Lauren - Production of a Recombinant Retroelement Envelope-like Protein from *Lotus japonicus* in Yeast and E.coli. *Howard Laten*.

Patel, Nirav - Analysis & Cloning of the Zebrafish fezf2 Promoter. *Eric Schroeter*.

Policht, Katherine - Impact of Application of Biosolids on Nitrogen Cycling in Agricultural Soils. *John Kelly*.

Russo, Linda - Surviving transmission-Antioxidant gene expression in the mosquito stages of the malaria parasite Plasmodium. *Stefan Kanzok*.

Sanchez, Juan - Effects of the b-adrenergic Antagonist Propranolol on Memory after Chronic Stress. *Louis Lucas*.

Schmidt, Richard - Interfacing with Metagenomic Data. Catherine Putonti.

Sobol, Anna - Microsatellites in Evolutionary Studies of Pickerels. *Howard Laten and Terry Grande*.

Thakkar, Pankti - Role of Aldose Reductase in Diabetic Complications. *Jeffrey Doering*.

Ton, Son - Eph/Ephrin Expression in Posterior Trigeminal Ganglion Neurites in Vitro. *William Rochlin*.

White, Tyler - Effects of an Experimental Flood on the Diets of Invertebrates in the Grand Canyon. *Emma Rosi-Marshall*.

New Faculty Profile: Sushma Reddy

Dr. Sushma Reddy came to the Loyola Biology Department this Fall from The Field Museum . She took some time to tell us a little about herself, where she has been, and what coming to Loyola means for her.



1) Please tell us a little about your background; where do you come from originally? From where did you earn your degrees? Where did you work before coming to Loyola?

My parents are from India. I was born in the US, lived in India between the ages of 1-9, then moved back to New York where I spent most of my life before moving to Chicago 5 years ago. I got my undergraduate degree from Barnard College, Columbia University. I then went back to Columbia for my PhD in Ecology and Evolutionary Biology. After graduating, I worked as a post-doctoral research scientist at the Field Museum of Natural History, Chicago.

2) What ultimately made you decide to come to Loyola?

I was ready to move on to a position that allowed me to pursue my research interests as well as teach. I am excited to be at Loyola where the undergrads seem to be very eager for research experience, which I think is an essential complement to classroom learning. I am also happy to have colleagues that do research on other aspects of biology and I look forward to stimulating interactions with them.

3) What are your primary research interests? Please tell us about a recent project and how direction you plan to take your work now that you are here at LUC.

My research covers a broad range of topics related to evolution and genetics, primarily using birds as the subject. To date, these subjects include molecular evolution, phylogenetics, biogeography, diversification, patterns of diversity, and conservation. In terms of evolutionary genetics, my research scope includes recent divergences within species groups to the deep evolutionary history of the entire class Aves--the bird tree of life. One main project that I have developed since my dissertation is to examine the evolution and biogeography of birds across tropical Asia. I use genetic, morphological, and geographic data to examine patterns of speciation in a highly diverse group of birds called babblers. These studies will help us understand how geological and environmental changes in the landscape of Asia have shaped the evolution of its endemic birds. It will also address fundamental questions for conservation, such as what are the distinct species, what are the distributions of these species, and what are the areas of high diversity.

4) Please tell us a little about yourself. What is life like outside of work?

My household includes my husband, 6 month old daughter, 2 dogs, and 2 tortoises. We generally enjoy walks in the park, doing things in the city, and eating good food (but who doesn't?). I used to enjoy reading novels but it has been exactly a year since I last had time to pick up a book. Such is life.

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Submission Guidelines

The newsletter will be used to promote and be devoted to covering the activities, seminars and events; initiatives and developments; faculty, student and staff awards. Creative works by our Departmental members, announcements and profiles will be covered.

The newsletter is circulated within the department and will be made available on the Internet via the Biology website. Our goal is to publish online on a bimonthly basis throughout the year.

Authors/contributors should keep in mind that readers may not specialize in their particular area of work.

Articles vary in length between about 50 and 600 words.

We welcome photographs and images to accompany articles; please provide captions when submitting the photographs/images. Either hard copy or digital formats of the images are acceptable.

Articles may be submitted by any method; however, the preferred transmittal is electronic format via e-mail; bnor-to1@luc.edu

The Department of Biology newsletter is prepared and edited by Audrey Berry, Pam Bradley, Brian Norton and Jeff Doering.

Congratulations



2009 Service Recognition Award Recipients: (From Left) Jan Savitz, Joseph Schlupe and Robert Hamilton along with Biology Department Office Manager, Pamela Bradley.

- Three department members were recognized for their years of service to Loyola at the Service Recognition Dinner Hosted by President **Michael J. Garanzini, S.J.** Congratulations to Drs. **Robert Hamilton** and **Jan Savitz** (each 40 years), and Electron Microscope Technologist **Joseph Schlupe** (25 years). Thank you for your many years of dedication to our department.
- Congratulations to Associate Professor **John Kelly** and former faculty member **Emma Rosi-Marshall** on their recently awarded grant from the Illinois Sustainable Technology Center (ISTC). The grant is will fund a study of the potential ecological impacts of personal care and pharmaceutical products. The project, begun in June of this year, will focus on the antibacterial compound triclosan's presence in stream ecosystems.
- Congratulations also to Drs. **Eric Schroeter**, **Bill Rochlin**, **Kim Williamson**, **Louis Lucas** and **Bryan Pickett** on their new equipment grant award from the National Science Foundation for the purchase of a Confocal/Multiphoton Microscope. The amount of the total grant came to \$141,494.00.
- The Academy of Applied Sciences awarded Dr. **William Kroll** a grant of \$13,000 from June 1, 2009 through June 1, 2010 for the Research and Engineering Apprenticeship program.