



A Note From the Chair

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Dr. Jeffrey Doering,
Professor/Chairperson

Dear Friends,

The end of the past semester and beginning of the new one always brings intense activity, and this year is no exception. In this issue you are introduced to a new faculty member as well as temporarily bid farewell to another. There are also reports of the ongoing accomplishments of our faculty and achievements of our students.

The gift program for less fortunate families was most successful again this year

thanks to all of your generosity and the organization skills of the office staff. A special thanks to Audrey, Pam and Brian for helping to once again make the departmental holiday party a wonderful event enjoyed by young and old alike.

As always I want to thank all of you for your willingness to respond to the many special requests for help that I have made. Your dedication to the students and each other is a pleasure to see. Best wishes for a productive and enjoyable second semester.

Wrapping Up Another Semester

In the true spirit of the season, the Biology Department faculty and staff once again came together in force to participate in the Loyola Gives program. This year the Biology Department generously donated well over \$350 to provide gifts for a needy Chicago family. The gifts included, but were not limited to: board games, coloring books, dolls, gloves, and hats with a few gift cards thrown into the mix.

On December 7, the project became a race against the clock to have all of the gifts bought, wrapped, and delivered to Centennial Forum for pickup by Catholic Charities before the 4:30pm deadline. The troops were divided. The missions assigned. And at once, all the shopping, and buying, and cutting and taping, and wrapping, and labeling began in a mad dash to get the gifts to their destination on time.

With the final bow in place, the gifts were

loaded onto a cart and marched across campus and delivered with only minutes to spare.



Biology Staff member Kathy Hills on Elf duty, wrapping gifts in support of the Loyola Gives Program

Those gifts will go to benefit a needy family of six who has never celebrated gift giving on Christmas due to financial constraints. This year the generosity of Loyola faculty and staff helped to provide similar small miracles for 40 local families. It has been stated that the

goal for next year is to help 50 or more local families celebrate the Christmas they deserve.

Our sincerest gratitude to all those who contributed gifts or their time, to spread cheer and hope for the holidays.

Congratulations, Dr. Cuadros!



Drs. Cuadros (right) and Holgado pose at the Farewell Baby shower.

December saw the Department of Biology bidding a fond (and thankfully, temporary) farewell to Susana Cuadros. The beloved Anatomy and Physiology instructor began her leave this month to spend time with her growing family; Susana's second son is expected at the end of this coming February.

The Department held a small, going away party and baby shower December 14. Members of the Department offered their best wishes at the event which included lunch, cake, and games including a tummy measuring contest and a baby food taste test.



Dr. Cuadros poses with her Biology Family

The celebration concluded with the opening of gifts, and hugs all around. Dr. Cuadros will be on leave through the Spring and Summer 2007 semesters, returning in the Fall.

Puni Chennamaneni -President's Medallion Winner

Could you tell us a little bit about where you came to Loyola from?

I've always been a Midwest girl. I grew up in a small town in Southern Illinois surrounded by my loving parents and brother. I eventually made the move to the Chicago area for high school to attend the Illinois Math and Science Academy. I loved Chicago and Loyola's Jesuit philosophy, so the choice to attend Loyola for college was a pretty easy one for me.

What are your academic and extracurricular interests here at Loyola?

I am a senior Biology major with a minor in Psychology and Bioethics. I have also been involved in research in Molecular Biology over the past few years. I love to keep busy and staying involved in organizations on campus is important to me, such as my role as Secretary of Alpha Epsilon Delta (Loyola's Pre-Health Honor Society). Giving back to my community is also extremely important to me and over the years I have enjoyed volunteering at the Rehabilitation Institute of Chicago, Ronald McDonald House, and tutoring elementary school children.

One criterion for the Presidents Medallion is two years of field work. Could you describe what kind of work you have done?

For the past two years I have had the opportunity to work in Dr. Doering's lab studying the centromere and short arm region of human chromosome 21 (HC21). The centromere is responsible for accurate chromosome segregation during mitosis and meiosis

and is therefore implicated in the non-disjunction errors that cause trisomy 21, or Down Syndrome. The primary efforts of this lab have been centered on sequencing and characterizing this region on human chromosome 21.

Once obtained, the sequence in this region will be important to the understanding of normal and abnormal centromere functioning. An additional goal of the project is to obtain a chromosome 21 specific marker sequence that would serve as a simple diagnostic tool for Down syndrome. A tandemly repetitive sequence located on the short arm of HC21, known as satellite I, is currently a potential candidate. The goal of my project has been to fully sequence a satellite I clone (ps21SatB) in order to determine its candidacy as an HC21 specific marker that would be able to be used to identify non-disjunction events.

What direction would you like your Loyola experience to take you?

My four years at Loyola have given me some of the most meaningful experiences in my life, and I hope to be able to use the skills and values that I have developed here in many aspects of my life in the future and as a physician. As for next year, I plan to continue at Loyola as a first year medical student at Stritch School of Medicine in the fall.



Purnima Chennamaneni

Shakes hands with Loyola University President, Father Garanzini, S.J. after being awarded the President's Medallion

Annual Ho-Ho-Holiday Party



Santa delivers Holiday cheer to both the young, and younger.

The Biology Department celebrated our annual Holiday Party with tons of food and fun.

And of course, the department's favorite honorary faculty member, Santa Claus, was on hand to spread Holiday cheer to all the boys and girls, from the ones with diapers to the ones with multiple degrees.

It was great to see everyone and their families, especially our new additions, coming out and celebrating the spirit of the season. Thanks to everyone for their participation.



Dr. Stefan Kanzok and family enjoy the holiday festivities.

Undergraduate Poster Presentations

On December 11, the Biology Department once again held its Undergraduate poster presentations for students in Biology 396, 397, and 398. Congratulations to all who participated.

396 Research:

Sara Boken and Abbas Chinov

Title: Further characterization of rutabaga nitrate reductase.– Dr. Barbara Hass,.

Vince DeGrado

Title: Population Analysis of Smallmouth and Large mouth Bass in Calumet Harbor and Calumet River. Dr. Jan Savitz.

Naemah Khan

Title: Role of subunits of ADP-glucose Pyro-phosphorylase from plants. Dr. Miguel Ballicora

Rushi Parikh

Title: Strategies for Artificial Gene Synthesis. Dr. Miquel Ballicora

Magdalena Budzikowska

Title: Cloning of Transglutminase 3 gene into a C. elegans Neuron Specific Expression Vector. Dr. Gina Zainelli.

398 Internship in Biology:

Robert Maslo

Title: Restoration of Neuromuscular function. Dr. Erin Hayes.



Photo: Naemah Kahn showcases her poster at the fall semester Undergraduate Poster Presentations.
Photo courtesy of Naemah Khan

Meet the New Guy: Stefan Kanzok, PhD



Where are you from originally?

I was raised in Bamberg - a small town in Northern Bavaria (~ 150 miles north of Munich), Germany.

Could you briefly summarize your research interests?

The primary goal of my research is to find means to prevent Malaria from being spread by mosquitoes. My objective is to study and to exploit the vulnerability of the malaria parasite to oxidative stress during its life in the mosquito.

Tell us how you came to Loyola?

I was doing my second Post-doc at the Malaria Research Institute (MRI) at the Johns Hopkins School of Public Health. I interviewed at Loyola in February 2006. (Hmm, does that answer the question?)

What are your outside interests? What's a fun fact about Stefan Kanzok?

My main outside interest is my family. I have to young sons who demand (and get) a lot of attention. Besides that I am a huge Science Fiction fan, I watch movies and I like Shakespeare. I also love to cook.

A fun fact? According to my wife I know about every blockbuster, science fiction and horror movie from the 70s to the 90s (BEFORE I became a serious scientist). This manifests itself in the fact that it takes me only about 3 seconds to recognize and name most of these movies.....

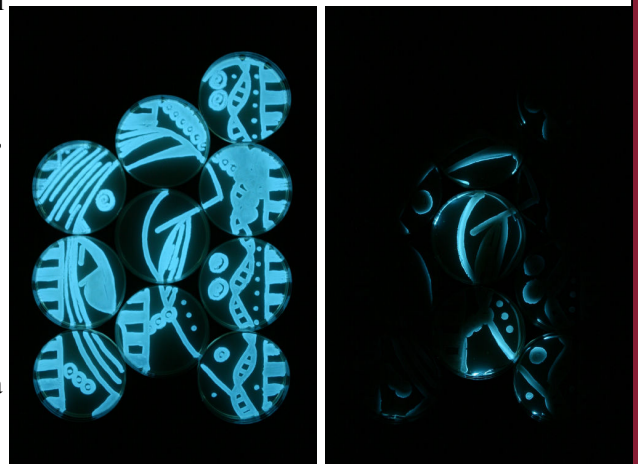
LIVING, GROWING, GLOWING ART

Dr. Hunter-O'Reilly and the Science and Art of Bioluminescence

On Thursday, January 25, Loyola Biology's own Dr. Hunter-O'Reilly acted as a featured speaker at the panel discussion **Art/Sci Collision: Aglow In the Dark**, hosted by the American Museum of Natural History. The panel focused on the applications for bioluminescence, or "living light", in the realms of science and art, but particularly where art and science intermingle.

Dr. Hunter-O'Reilly has been exploring this intermingling for years in her own art reinterpreting science by way of artistic rendering. Her most recent exhibition has been of line drawings employing bioluminescent bacteria. Hunter creates the drawing, and throughout the stages of growing and eventually dying, the bacteria manipulates the picture, becoming a collaborator in the artistic process.

Speakers on the panel held expertise in arenas ranging from Ichthyology to fine arts to journalism. All brought unique perspectives for the applications of this topic.



The piece "Her Own DNA", at different stages of development. Stage 1 (left) is faithful to the original line drawing, where in Stage 5 the drawing has become a face.



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Preparing People to lead extraordinary lives

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; bnorto1@luc.edu

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

BLURBS, TIPS and SHOUTOUTS

Biology's own Purnima Chennamaneni poses with all the President's Medallion winners and Fr. Garanzini



- **Dr. Clement S. Rose**, graduate of the Biology department (B.S. '79), has been elected President of the Illinois Division of The American Cancer Society. Rose will serve as the chief spokesperson for Illinois to the ASC on all things Medical and Scientific.
- Our own **Dr. Emma J. Rosi-Marshall** has been invited to visit the Institute of Ecosystem

Studies [IES] in Millbrook New York, as part of their *Director's Program for Visiting Scientists*. The IES is a prominent ecological organization dedicated to both ecology education and the direct address of ecological problems around the world. Congratulations to Dr. Rosi-Marshall on this honor.

- Don't forget! Registration for the **2007 Summer Session** begins February 12th. Meet with your Biology advisor to see if summer courses would help with your academic plan.
- Just an idea! If you find yourself in the market for a new set of wheels in the near future, you might want to check out the list of eco-friendly vehicles just released by the American Council for an Energy-Efficient Economy (ACEEE). Topping this year's list is the Honda Civic GX with a "Green Score" of 57. Bottoming out the list as the "Meanest" vehicle for the environment was the Volkswagen Touareg with a score of 14.