



Newsletter

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 Department of Biological Sciences
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Volume 2, Issue 4

Fall 2008

The Boss' Corner

There were two events, which I would like to share with you, since our last newsletter. In April of this year, we had four distinguished faculty visit the Department as part of an external review process, which occurs on a regular basis and is mandated by the Illinois Board of Higher Education. It took a lot of work pulling data together regarding our undergraduate program in Biochemistry, and our B.S, M.S, and PhD. programs in Biological Sciences. This effort along with a lengthy self-analysis, led to the generation of a "book-sized" document for our four reviewers. I would like to thank faculty and staff from the Department of Chemistry and Biological Sciences for all their hard work in this external review. It was a great opportunity for us to reflect on our accomplishments as well as the challenges ahead. Late August, we organized a retreat for the faculty and instructors in the Department of Biological Sciences at the UIC Forum. The retreat was a good chance to get together to review our Departmental organization, efforts in teaching, and hiring plans. Plus it was fun to compare notes about our summer experiences. Given the positive value of the experience, I hope we can do this again next year, but with an additional focus on our research. I wish everyone a good Fall.



Sincerely yours,
 Brian Kay, PhD
 Professor & Head



UIC Biological Sciences faculty photo take at the retreat in August.

WISE: Women in Science and Engineering

The UIC Women in Science & Engineering program (WISE) is an academic support program for all UIC women students studying in a science, technology, engineering, and math field.

WISE works to accomplish this goal with workshops, seminars, travel grants, and scholarships.

For more information on how WISE can help you, visit the website at www.uicwise.org

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Director of
Graduate Studies:
Roberta Mason-
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robie@uic.edu

Admissions:
Margaret Kleist
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(312) 996-2955
Kleist@uic.edu

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Students:
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Faculty Spotlight: Professor Liang-Wei Gong



I did my first postdoc in Dr. Manfred Lindau's lab at Cornell University shortly after attaining my Ph.D. from South Medical University in Guangzhou City, China in the area of ion channel regulation. At the School of Applied and engineering Physics at Cornell University, I was investigating the relation of fusion pore dynamics and neurotransmitter release using the method of "patch amperometry" that Dr. Manfred Lindau pioneered. This is not just a straight forward patch-clamp set-up, but a patch-clamp with a 5- μm carbon fiber inside the recording pipette. It was a lot of fun watching real-time measurements, and cheers would erupt and a crowd would gather together when we would see "vesicle fusion."

To expand my knowledge in the cell biology of synapse, I joined Dr. Pietro De Camilli's lab in the Department of Cell Biology at Yale University. There I continued to apply biophysical methods that I learned at Cornell University to expose new understanding of phosphoinositide metabolism and its relationship to synaptic vesicle recycling. One of the advantages for me in a cell biological lab is that I was able to learn state-of-art imaging methods such as confocal microscopy and total internal reflection microscopy.

I have just arrived at UIC in the summer of 2008. It is exciting to establish a lab and new home for my family in the city of Chicago. The research goal in my lab is to understand how exocytosis, endocytosis, and intracellular trafficking are regulated in combination of biophysical, cell biological, molecular biological, and genetic tool.

Bodmer International Travel Award

The Bodmer International Travel Award was instituted by a professor in the Physics Department, Arnold Bodmer. This award provides three or four students the opportunity to travel abroad and participate in science seminars, summer sessions, or workshops. The application process has already begun for this year. The application is available online and must be submitted by Monday, January 12, 2009 to:

Tonia Nikopoulos
College of Liberal Arts and Sciences (M/C 228)
University of Illinois at Chicago
601 S. Morgan Street
Chicago, IL 60607



Pictured above, the recipients of the 2008 Bodmer International Travel Award. From left, Arnold Bodmer, Marta Witek, William Michaels, Carrie Seltzer.

One-Year Secondary Science Certification/Graduate Degree Program



- In five science concentrations: Chemistry, Physics, Biology, Earth Science, and Environmental Science
- Earn a secondary teaching certificate and a master's degree in only one calendar year.
- Aimed at college graduates with undergraduate degrees in science-related fields and who are interested in urban education and teaching in the Chicago Public Schools (CPS)
- Classes for the first cohort are scheduled to begin May 2009.
- National Science Foundation Noyce Scholarships will be awarded based on financial need and commitment to teaching for a minimum of two years in a high-need school in CPS.

UIC applications are due January 1, 2009

For additional information, please contact:

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3266 SES
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Call
(312) 996-2211
to make an
appointment.
Monday,
Wednesday,
Thursday, and
Friday 9:30a.-
12p.m.
1p.m.-3:30p.m.

Walk-ins Tuesday
from 9:30a.-
12p.m.
1p.m.-3:30p.m.
for quick
questions or to
change major.

Undergraduate Advisors Corner

We know not everyone wants to work in a lab...

You have spent more than 10,000 hours in class, more than 50,000 hours studying, and can finally see that light at the end of the tunnel. You have almost completed a bachelor's degree from UIC! Being a responsible student, you make an appointment to see an academic advisor to ensure you have completed all biological science requirements. The answer is a resounding yes!. Then she asks you that horrifying question....so, what are you going to do with a degree in biological sciences?

There are several resources that can aid you in figuring out your career goal. Here are a few to get you started....

Office of Career Services

1200 W. Harrison Street
Room 3050 Student Services Building (SSB)
Chicago, Illinois 60607

Call 312-996-2300 to schedule an appointment or consult the Office of Career Services website for drop-in advising times.

Resources Library open Monday-Friday, 8:30-5:00

<http://www.explorehealthcareers.org>

A website that provides several health-related options. It provides information on working conditions, preparation, job outlook, and salary.

<http://www.careers.siu.edu/majors/majors/pdf/biological.pdf> – from Southern Illinois University, Edwardsville.

A website that provides diverse career options for people with a degree in biological sciences.

<http://www.uic.edu/depts/bios/ungradstudy.shtml>

UIC Department of Biological Sciences website

Scholarship Opportunities

Scholarship	Deadline
National Merage Foundation Application	12/15/08
National Elie Wiessel Essay Contest	12/19/08
National Carnegie Endowment Application	1/15/09
National NDSEG Application	1/09 (varies)

Goldwater: For sophomores and juniors with research experience and intent on research careers in math, science or engineering, \$7500 toward remaining undergraduate years. Deadline for UIC nomination: November 14, 2008
www.act.org/goldwater

NSF: For graduating seniors in most social sciences, math, science and engineering, funding for 3 years of graduate study (not MD or JD) of \$40,500/year. National deadlines: November 3-12, depending on subject area
<https://www.fastlanebeta.nsf.gov/grfp/Login.do>

Merage: For seniors who are immigrants in any discipline, \$20,000 covering two years of support for your "American Dream." Deadline for UIC nomination: November 14, 2008

http://www.meragefoundations.com/mfad_fellows.html

For more information....

- Visit the Office of Special Scholarship Programs at <http://www.uic.edu/depts/oa/ssp/sspmain.htm>

SCHOLARSHIPS!!

The Office of Special Scholarship Programs (OSSP) assists undergraduate and professional students in applying for nationally-competitive and UIC scholarships.

For more info on upcoming scholarships, visit them in 2506 University Hall, or at their website: <http://www.uic.edu/depts/oa/ssp>.

Internship Opportunities Available at the Field Museum!

The Field Museum is an educational institution that houses many collections in the areas of paleontology, botany, zoology, anthropology, and geology. The museum facilitates self-motivated learning through engaging natural history exhibits.

The Field Museum offers many internship opportunities!

- Open to both undergraduate and graduate students of all majors
- Full and part time positions
- Paid and unpaid positions

To sign up visit the Field Museum Website at <http://www.fieldmuseum.org>.



Faculty News

- Joel Brown, Professor of Biological Sciences, is quoted in Chicago "Time Out" magazine commenting on the gray fox, Virginia opossum, southern flying squirrel, and muskrat. Read the article <http://www.timeout.com/chicago/articles/features/32391/this-place-is-a-zoo>
- Oliver Pergams, Visiting Research Assistant Professor of Biological Sciences, is quoted in an article at Forbes.com commenting on participation in nature-based activities. Read the article http://www.forbes.com/travel/2008/06/12/travel-parks-america-forbeslife-ex_rr_0612parks.html

Congratulations to the following award recipients!

- Professor Hormoz Bassirrad received an award from the National Science Foundation.
- Professor John Leonard, Professor Simon Alford, and Professor Jennifer Schmidt were the recipients of an award from the National Institutes of Health.
- Professor Thomas Park was presented an award from the National Science Foundation.
- Professor Mary Ashley and Research Specialist David Zaya received an award from Chicago Wilderness.
- Professor David Featherstone was granted an award from NARSAD.

Grass Foundation Faculty Fellow

Professor Robert Malchow was a Grass Foundation Faculty Fellow this past summer. The award allowed him to pursue collaborative research at the Marine Biological Laboratory with colleague, Professor Richard Kramer, who is from the University of California at Berkeley. They used special optical imaging techniques to study the processing of neural signals in the retina.



Robert Malchow standing on the left and Richard Kramer sitting on the left.

Photo taken at the Marine Biological Laboratory by Tom Kleindinst, an MBL photographer.

Work with faculty and conduct research!

BIOS 399: Independent Research

- Gain experience working in a lab.
- Earn credit
- Strengthens your application to professional school or graduate school

Find more information and the application

online at:

http://www.uic.edu/depts/bios/courses/bio_courses.shtml#399

BIOS 196

Biology Colloquium (BIOS 196) has had another great semester! We've had a variety of speakers share presentations with us ranging from professors from UIC, such as Dr. Molumby, Dr. Schmidt, Professor Paloucek, and Professor Brown to professionals from neighboring institutions, such as Mark Colip, O.D. from Illinois College of Optometry and Rachel Santymire, PhD, from Lincoln Park Zoo. Each one offered us something unique and inspirational. As well as having visiting lecturers we have traveled to see professionals working on site such as researchers, neurosurgeons, NICU nurses, andrology lab specialists, and more. The Biology Colloquium also traveled to Saukville, WI (pictured on right) to learn about the ecology of bogs. We spent an entire weekend there hiking the bogs with Professor Murray from UIC, roasting marshmallows around the campfire, and exploring a new setting. As the semester continues, the Biology Colloquium looks forward to meeting new people, traveling to new places, and learning more about biology through alternative settings.



**Interested in the
Biology
Colloquium?**

**Want to know
more?**

**Check out the
BCQ website at:
[http://
www.uic.edu/
depts.bio/bcql/
index.htm](http://www.uic.edu/depts.bio/bcql/index.htm)**

**Need help with your
science class?**

**Then visit the Science
Learning Center**

**201 SES
845 W. Taylor Street
Chicago, Illinois 60607**

**SLC offers tutoring
Monday-Friday
7:30a.m.-5p.m.**

Curriculum News

New Courses for Spring '09 Semester!

BIOS 294: Topics in Biological Sciences: Animal Behavior (3 hrs)

This course will examine the proximate and ultimate causes of animal behavior; neural and hormonal mechanisms and, diversity of behaviors and their relationship to an organism's ecology and evolution.

*Prerequisites: BIOS 101
Instructor: Karin Nelson*

BIOS 322: Advanced Cell Biology (3 hrs)

This course will address advanced topics in eukaryotic cell biology, with special emphases on structure-function analyses of the nuclear pore, chromosomes, and transcriptional regulation.

*Prerequisites: BIOS 222
Instructor: Brian Kay*

BIOS 490: Plant Evolution (3 hrs)

This course will focus on the macroevolution mechanisms and population genetics influencing plant diversity; examine speciation, spatial diversification, and extinction; and, survey current issues related to plant conservation.

*Prerequisites: BIOS 230 and 240
Instructor: Boris Igic*

Neuroscience Advisors

Dave Featherstone in the Biological Sciences Department at def@uic.edu

Dave Wirtshafter in the Psychology Department at DaveW@uic.edu



Career Spotlight: Genetic Counselor

Genetic counseling is a rapidly growing career that couples the knowledge of science with the desire to support others. Genetic counselors are prepared to communicate information about the probability of having children with inherited disorders. They are also well equipped to accommodate families already adapting to a family member having an inherited disorder. They provide support assistance and knowledge to families with children born with birth defects or inherited disorders such as cleft palate, congenital heart defects, Huntington's disease, Down syndrome, and cystic fibrosis. In addition they support families of children with visual impairments, learning disabilities, and mental retardation.

Genetic counselors can work in a variety of settings including hospitals, public health agencies, diagnostic labs, and colleges. They can also take on other roles in research, teaching, and pharmaceutical companies.

People from a wide variety of backgrounds seek careers as genetic counselors including biology, nursing, social work, and psychology. However, a career in genetic counseling requires a graduate degree in the field of genetic counseling. Following the successful completion of graduate school, certification by the American Board of Genetic Counseling is recommended and looked highly upon. This requires experience at a training site, documentation of at least fifty cases, and the successful completion of an exam. For more information, visit the following websites.

National Society of Genetic Counselors <http://www.nsgc.org/>
 American Board of Genetic Counseling <http://www.abgc.net/>

UIC Experience Certificate Program

Participate in 6 UIC experiences and earn a certificate.

- Experience in Urban Exploration
- Experience of Inquiring Minds
- Experiences of Community

For more information ask an advisor or go online to <http://www.uic.edu/depts/ovcsa/uicexperience.html>

Important Dates to Remember

November 5: Registration begins

November 27-28: Thanksgiving Holiday. No classes

December 5: Instruction ends

December 8-12: Final examinations

December 13: Semester ends

January 12: Instruction begins

January 19: Martin Luther King Jr., Day. No classes

January 23: Last day to complete late registration; last day to add a course(s) or make section changes, last day to drop individual courses without receiving W (Withdrawn) grade on academic record via UIC Web for Student.

