

Department News

UIC Dept. of Biological Sciences

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The Boss' Corner

I am happy to report that the Department of Biological Sciences successfully recruited two new Assistant Professors, Drs. Emily Minor and Liang-Wei Gong, who are ecologists and neuroscientists, respectively. They will be joining the Department in August 2008. It was a lot of hard work identifying qualified candidates and then recruiting them, but it was worth it. As the end of the Spring term approached last month, I remember telling my Cell Biology (BioS 222) students that faculty look forward to the end of the semester as much as the students, which surprised them. Now that the term is over, I, for one, hope to spend more time in the lab area, guiding graduate students and undergraduates in their experiments, reading the scientific literature, writing overdue manuscripts and reviews, and attending scientific conferences. Many of my colleagues are engaged in similar research pursuits, both in the laboratory and the field. I wish everyone a happy, and productive summer.

Sincerely yours,
Brian Kay, Ph.D.
Professor & Head



Faculty Spotlight: Dr. Jennifer Schmidt

I'm a Chicago native, and grew up in the Jefferson Park area. I received my BS in Biology from DePaul University, and then worked as a hospital lab technician for several years. I returned to graduate school at the advanced age of 28, and earned my PhD from the Department of Molecular Pharmacology & Biological Chemistry at Northwestern University Medical School. I was interested in the field of epigenetics, and went to Princeton University for a postdoctoral fellowship studying epigenetic processes during mammalian development. I arrived back in Chicago to establish my own lab at UIC in the fall of 2000.

The overall research goal of my lab is to understand how mammalian embryonic development is regulated by the controlled activation and silencing of specific genes. Mammalian embryos undergo dramatic growth and morphological changes in a short period of time – in our favorite model system, the mouse *Mus musculus*, the embryo goes from a single cell to a full term mouse pup in just 20 days – and this process is controlled by a complex pattern of gene activation in specific cells at specific times. Improper regulation of any one of the thousands of genes that are required for development can cause human disease. While I try to keep the lab somewhat focused, I have broad scientific interests and love exploring different areas of biology. Our diverse Biological Sciences department provides terrific opportunities for collaboration with scientists in many different fields of research. In addition to mouse development, my lab has worked on mating strategies in prairie voles, and we are currently studying the population genetics of the whale shark.

Since coming to UIC, I've directed the Bios 325 Vertebrate Embryology course, and I also teach graduate Developmental Biology, a variety of research seminars, and give several lectures in the medical school. I've recently become one of the faculty coordinators for the Biology Colloquium, which comes with the opportunity to drive the big departmental bus on our trips to the UP and the Ozarks! These trips are lots of fun, and a great opportunity (continues on page 2)

Faculty Spotlight: Dr. Jennifer Schmidt (continued)

to get out of the lab while getting to know some of the students. Off campus, I enjoy running, biking and recently learned to scuba dive, which forces me to travel to exotic tropical destinations. Coincidentally, whale sharks often turn up in terrific diving locations, which means I get to call it research! I'm also an avid birder, and I volunteer with a wildlife rescue group, which explains why I recently found myself chasing an injured wild turkey down the middle of Canal Street during the morning rush hour.

Biology Colloquium Field Trip

At the end of every spring semester, the Biology Colloquium, a course which introduces students to a variety of fields in biology through lectures and field trips, takes a weeklong field trip. This year, we had a blast staying at the Reis Biological Field Station in the Ozark Region of Missouri. We were privileged enough to be accompanied by Dr. Karin Nelson and Dr. Jennifer Schmidt of UIC's biology department. Dr. Nelson took the group herping in order to find the various amphibians and reptiles of the region. We caught a few salamanders, frogs, and even some snakes! Dr. Schmidt took the group bird watching bright and early every morning, and about 60 different species of birds were observed including a Pileated Wood Pecker! However, the majority of our time was spent enjoying nature by hiking and caving at the various state parks we visited, including Elephant Rocks State Park, Mark Twain National Forest, Meramec State Park, and Taum Sauk State Park.



Pictured above, BCQ students in full caving gear during a field trip last semester at Mark Twain National Forest.

Applying for Grad School—how to get started

Are you thinking about applying to graduate school? If so, now is the time to begin the process because applications are typically due in January and February. Graduate school is different from what you have experienced as an undergraduate. Much of a graduate student's time is spent on research rather than on classes. Graduate students also have a faculty advisor, a professor whose lab the student is a part of, and who is largely responsible for directing the graduate student's research and even the classes they take. The faculty advisor should be an important consideration in your search for graduate schools.

You should begin the process by searching through the current scientific literature and compiling a list of professors actively publishing articles on the subjects you are most interested in doing research on. This is a list of potential faculty supervisors. You should identify the specific university and departments or programs each professor is associated with. Once you have a number of names, go through the list and eliminate any whose school, department or program is not a good fit for you. You should be left with about six to eight good candidates.

The final list should be completed by early fall semester. You can then begin contacting the professors on your list and inquiring about their potential interest in you as a new graduate student. Some will likely not be interested, but do not be discouraged—they may simply be lacking funding or space for a new student. Others will be interested in you, and will request that you apply to their school. Be aware of the application requirements and deadlines for each school you plan to apply to, and be sure to mention the professor you have been in contact with in your application materials. They can serve as an invaluable advocate for you through the admissions process.

Interested in the
Biology
Colloquium?

Want to know more?

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

Need help with your
science class?

Then visit the
[Science Learning
Center](#)

201 SES
845 W. Taylor St.
Chicago, IL 60607

SLC offers tutoring
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7:30am-5pm

**WISE: Women in
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academic support
program for all UIC
women students
studying a science,
technology, engineer-
ing, and math field.

WISE works to ac-
complish this goal
with workshops,
seminars, travel
grants, and
scholarships.

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

Alumni Spotlight: Dr. Richard Morimoto

My lifelong interest in Science was stimulated by the chance opportunity while in high school to work in the laboratory of Professor Howard Buhse. A project to develop an assay to examine the carbohydrates in the cell wall of different protists resulted in sharing the top prize at the Chicago Public School Science Fair and third place at the International Science Fair in Dallas-Fort Worth. Upon entering UIC as an undergraduate, I worked in a number of laboratories with Professors Helen Gutman, MAQ Khan, and Buhse and co-authored my first publication with Prof. Khan. While at UIC, I was the Student President of the James Scholars Society (predecessor of the Honors College). I graduated from UIC in Biological Sciences in 1972, received a MS at UIC Medical Center in 1974, and entered the University of Chicago PhD program in Molecular Biology in 1974. I later did postdoctoral research in the Department of Biochemistry and Molecular Biology at Harvard University in Cambridge, MA. In 1982, I joined the faculty of the Department of Biochemistry, Molecular Biology, and Cell Biology at Northwestern University in Evanston, Ill. At present, I am the Bill and Gayle Cook Professor of Biology, Professor of Biochemistry, Molecular Biology and Cell Biology, and Director of the Rice Institute for Biomedical Research at Northwestern University.

My research focuses on the regulation of the heat shock stress response and the function of molecular chaperones. My current research is to understand how organisms sense and respond to physiologic and environmental stress through the activation of genetic pathways that integrate stress responses with molecular and cellular responses that determine cell growth and cell death. The stress of misfolded and damaged proteins influences neuronal function and lifespan at the level of the organism. Consequently, these studies provide a molecular basis to elucidate the underlying mechanisms of neurodegenerative diseases including Huntington's disease, Parkinson's disease, ALS, and Alzheimer's disease.

In addition to giving frequent talks at universities and scientific symposia throughout the world, I have been a Visiting Professor at the Technion University in Israel, Osaka University, Kyoto University, University of Rome, Peking University, Abo Akademi in Finland, and Ecole Normale Superieur in Paris.



Undergraduate Advisors Corner

- Thinking about taking the GRE, MCAT, PCAT or other standardized exam? The Academic Center for Excellence offers a full-semester course (ASP 091), as well as short-term courses to help students prepare for their exams. Short-term courses are free! For more information, visit the [ACE website](#), or contact Cecelia Downs at 312-413-7396.
- Before you register for a course, crack open that Undergraduate Course Catalog and check what the prerequisites are for that course. If you have not yet taken the prerequisite courses, then do NOT register for the course.
- If you are a pre-health student, then along with seeing a Biological Sciences advisor for your major, you should also be seeing a pre-health advisor. Pre-health advisors can assist you with your pre-health questions, course planning for prerequisites for your program, goal planning, selecting schools, and so forth. Pre-health advisors can help you be a more competitive applicant for your specific program. To schedule an appointment, phone 312-996-3366, and ask to schedule an appointment with a pre-health advisor.
- Many students are unaware that they can receive credit towards their Biological Sciences major for taking MVSC 251 and 252. As long as you've earned credit in MVSC 251 and 252 at UIC (not transfer credit), then you can earn 5 credit hours of lab credit towards your Biological Sciences major requirements. There is a waitlist for these courses, that is managed by the department of Kinesiology and Nutrition: <http://www.uic.edu/ahp/knad/wait/wait.html>.
- Looking to add another course in Fall 2008? BIOS 490 (CRN 29065) Topics in Ecology & Evolution—Tropical Ecology (3 credit hours) will be offered to graduate students and upper-level undergraduates for Fall semester. This course will be taught by Dr. Henry Howe on Tuesdays and Thursdays 2:00-3:15pm in Taft Hall. To read the course description, click [here](#).

Jason Cashmore
(3266 SES)
Tricia Stark
(3276 SES)

Monday, Wednesday,
Thursday, and Friday
9:30-12p
1p-3:30p
Call 312-996-2211 to
make an
appointment

MAKE A GIFT TO BIOLOGY

We are committed on developing support for our Biology students. We have a number of scholarships to fund students and their research. We are focused on increasing the scholarship opportunities provided to them, and enhancing the classroom experience by acquiring up to date technology for our laboratories. Making a gift is easy and tax-deductible, and it has an immediate impact on the experience on Biology students.



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LASAA Board with Dean Christopher Comer at the 2006 LAS Scholarship Dinner

We are a diverse group of alumni volunteers donating our time to enhance the UIC experience in the College of Liberal Arts and Sciences.



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Alumni News

View the newsletter on-line at:

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



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Name _____

Address _____

Email Address _____

Phone _____

Cut along the dotted line and please mail to: Tricia Stark, Dept. of Biological Sciences (M/C 066), 845 West Taylor Street, 3276 SES, Chicago, Illinois 60607-7060,
-or-
email us the information at tricia@uic.edu so we can stay in touch with you!

CUT OUT, COMPLETE, AND MAIL FORM TO:

**TRICIA STARK,
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845 WEST TAYLOR ST.,
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CHICAGO, IL 60607**

Faculty News

- Brian Kay, Head of the Department of Biological Sciences, was recently interviewed by *Science*. His thoughts on the importance of mentoring to those pursuing science careers in academia can be found in the article, [Global Feature: Mentoring](#).
- Joel Brown, Professor of Biological Sciences, is quoted in the *Chicago Sun-Times* about small wild animals seeking refuge in, and doing damage to automobiles during the cold and snowy winter. Read the article [here](#).
- An article focusing on research by Oliver Pergams, visiting research assistant professor of biological sciences, appeared in the March 30th issue of the *Chicago Sun-Times* and in the April 27th issue of the *Arkansas Democrat Gazette*. Pergams and his colleague Patricia Zaradic have written several scholarly articles about the link between the decline in camping, fishing, trips to national parks and other nature or outdoors-related activities over the past generation with the rise in in sedentary, at-home video-related activities. The Sun-Times article, headlined "Great Lakes gives natural relief," also suggests nearby places Pergams and Sun-Times reporter Andrew Herrmann recommend to "get back to nature" with relative ease.
- Biological Sciences faculty members Alan Molumby and Dave Featherstone were both recipients of the 2008 Silver Circle Award for undergraduate teaching. Winners were chosen by graduating seniors. The Department of Biological Sciences received 2 of the 11 awards given this year.
- Dr. Nava Segev was granted an award from the National Institutes of Health
- Dr. Hormoz Bassirirad received an award from the National Science Foundation.
- Dr. Simon Alford, and one of his Ph.D. students, Edaeni Hamid, were granted a NRSA from the National Institutes of Health.
- Dr. Henry Howe, and one of his Ph.D. students, Carrie Seltzer, received awards from Bat Conservation International and The Field Museum. Dr. Howe also received an REU award from the National Science Foundation.
- Finally, the department has hired two new faculty members, Dr. Emily Minor and Dr. Liang Wei-Gong. Dr. Minor will join the department and the Institute of Science and Environmental Policy at UIC as an Assistant Professor. Dr. Wei-Gong will join the department as an Assistant Professor in the Neuroscience program. Welcome to UIC!

Undergraduate Research Opportunity

- ⇒ Are you interested in working alongside a faculty member on your own research?
- ⇒ Are you interested in working in a lab for credit?
- ⇒ Want to earn lab and research experience for graduate school, medical school, or other post-baccalaureate education?

Then you should consider registering for **BIOS 399: Independent Research**. For more information on pre-requisites, student responsibilities, and how to find a research instructor, visit http://www.uic.edu/depts/bios/courses/bio_courses.shtml#399

Graduate Departmental Contacts and Information

Director of Graduate Studies

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Continuing Students:
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Email:
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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/oaa/ssp>.

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Cover page banner photo:

Grad students playing
baseball at the annual
Biological Sciences
department picnic
(09/2007)

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Student News

Ying (Amy) Ye, a senior and Biological Sciences major, is one of 20 students nationwide named to the USA Today All-USA College Academic Team. Ms. Ye was featured in the Feb. 14 USA Today for making the academic team, which honors undergraduates who excel in the classroom and dedicate their talents to benefiting society. Ye is conducting medical research with Dr. Andre Kajdacsy-Balla, Director of Transdisciplinary Pathology, to learn whether Raman spectroscopy can be used to detect cellular changes indicative of tumors. Read more about Ms. Ye in the February 14th, [UIC News](#) article.

Jessica Harper, a Biological Sciences major, and new graduate, is just one of just nine students who recently won a Fulbright Fellowship. Ms. Harper will be traveling to Greece, where she will work at the Biomedical Sciences Research Center and study how neural stem cells from mice can be manipulated and controlled, and look for possible human applications from the research, including new cancer treatments. Read the May 18th, [UIC News Release](#) on Ms. Harper for more details.



The department held its annual Undergraduate Awards Day on April 10th. Pictured to the left, recently graduated Ashley Michelsen (left), a Biological Sciences major, is seen celebrating her Highest Departmental Distinction honor with her BIOS 399 faculty supervisor and lab associate, Dr. Nava Segev (center) and Shu Hui Chen (right), respectively.

The following students were honored:

- **Mark A. Wyatt Award**, honors the memory of Mark A. Wyatt (a former biology major and Honors College student), and given to a pre-medical biology junior who actively participates in the Honors College and Tri-Beta: **Anup Reddy**
- **Elmer Hadley Award**, given to a student with high academic achievement who has conducted an outstanding research project in the area of ecology, evolution, or conservation biology: **William Michael**
- **Edward G. Rietz and Stanley K. Shapiro Award in Biochemistry**, honors an outstanding graduating senior in Biochemistry: **Daina Ringus**
- **Louis Pasteur Award**, given to a graduating Biological Sciences major who meets the requirements for highest departmental distinction: **Emma-Leigh Pearson** (seen pictured to the right accepting her award presented by Dr. Howard Buhse)
- **Hirsch Family Award**, given to an undergraduate Biological Sciences major with high academic achievement: **Ji-in Choi**
- **Hodgkin and Huxley Neuroscience Award**, given to an outstanding Neuroscience major with a GPA above 3.9 and conducted an exceptional research project: **Mechu Narayanan and Zinal Thakkar**
- The following undergraduates received Outstanding Scholarship Awards:
BIOS 100: **Keerthi Ranganath, Max Friedman, Louisa Ng, and Keith Patel**
BIOS 101: **Lisa Stelter, Kent Truong, Eugenia Kyriakopoulos, and Christopher Baptist**
BIOS 220: **Chen Shi**



Important Dates to Remember

- June 16: 8-week summer session begins.
- June 20: Last day to late drop without receiving a "W" on your academic record.
- July 4: Independence Day holiday. No classes.
- July 18: Last day to late drop and receive a "W" on your academic record.
- August 6: 8-week summer session instruction ends.
- August 7-8: Final exams.
- August 25: Fall instruction begins.