The homeless on campus: Panhandlers or nuisance?

By Mike Helenthal
Assistant Editor

There is a fine line between panhandling and nuisance, according to area police, and a number of homeless people who have set up shop in Campustown have been crossing it. Following a recent rash of complaints from residents and business owners, police officers from the UI and the city of Champaign have made a renewed effort to target aggressive panhandling.

It’s not illegal to stand on the sidewalk and ask passersby for money. But it is against the law to touch, follow, block or otherwise pressure someone into giving, police say. “If they’re grabbing you or intimidating you, it’s a strong-arm robbery,” said UI Police Lt. V.G. “Skip” Frost. “But they’re probably not going to do that when police are around. We need people to call us when it happens.”

Frost said increased police visibility, especially near Sixth and Green streets – considered the Campustown panhandling nexus – will only go so far without the public’s help. “If it’s making people feel unsafe, we’re going to address it,” he said.

Champaign Police Lt. Brad Yohnka said police are at somewhat of a disadvantage because many of the homeless know the law – for example, panhandling is prohibited within 10 feet of an ATM or bus stop – and the fact that begging in public is not illegal.

“If they’ve been hassled, they know the laws pretty well,” he said. “The worst ones have been kicked out of the shelter because they weren’t able to abide by the rules – like having alcohol or drugs.”

Yohnka said many of the homeless in the area have drug and alcohol problems, as well as undiagnosed mental health issues and long arrest records. Earlier this month police issued a UI letter of warning to trespass a panhandler accused of being aggressive. A review of his arrest record showed he was a convicted sexual predator with 15 arrests, including 12 for sex-crimes. A review of his arrest record showed he was a convicted sexual predator with 15 arrests, including 12 for sex-crimes.

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On the same day, a vagrant in the Illini Union turned out to be a registered sex offender and the UI deemed HOMELESS, PAGE 2.

Campus street closures announced for race events, April 29-30

The 2011 Chris- tie Clinic Illi nois Marathon will take place the weekend of April 29-30. The race and related events are expected to attract more than 20,000 people to the campus area at various times April 28-30.

Some streets will be closed temporarily. Traffic will not be allowed to cross these streets during these times. SEE STREET CLOSURES, PAGE 2.

Fruit flies on meth: Study explores whole-body effects of toxic drug

By Daina Yates
Life Sciences Editor

A new study in fruit flies offers a broad view of the potent and sometimes devastating molecular events that occur throughout the body as a result of methamphetamine exposure.

The study, described in the journal PLoS ONE, tracks changes in the expression of genes and proteins in fruit flies (Drosophila melanogaster) exposed to meth.

Unlike most studies of meth, which focus on the brain, the new analysis looked at molecular changes throughout the body, said UI entomology professor Barry Pittendrigh, who led the research. “One of the great things about working with fruit flies is that because they’re small, we can work with the whole organism and then look at the great diversity of tissues that are being impacted,” Pittendrigh said. “This is important because we know that methamphetamine influences cellular processes associated with aging, it affects spermatogenesis, and it impacts the heart. One could almost call meth a perfect storm toxin because it does so much damage to so many different tissues in the body.”

By tracking changes in gene expression and protein production of fruit flies exposed to meth, the researchers identified several molecular pathways significantly altered by the drug.

Toxic results By studying fruit flies, UI scientists will get a broad view of the sometimes devastating molecular events that occur throughout the body from exposure to methamphetamine. Researchers include (from left): Barry Pittendrigh, a professor of biology; Kent Walters, a postdoctoral researcher; and Manfredo Seufferheld, a professor of crop sciences.

Many of these cascades of chemical reactions within cells are common to many organisms, including humans, and are similar even among very different families of organisms.

The researchers found that meth exposure influenced molecular pathways associated with energy generation, sugar metabolism, sperm cell formation, cell structure, hormones, skeletal muscle and cardiac muscles. The analysis also identified several new molecular players and unusual disruptions of normal cellular events that occur in response to meth, though the authors acknowledge that further work is required to validate the role of these pathways in response to meth.

Illinois crop sciences professor Manfredo Seufferheld, a co-author on the study, saw changes that indicate that meth exposure may alter the cell’s energy me-
Health care choices remain uncertain

By Mike Helenthal
Assistant Editor

UI employees concerned about recent health-insurance carrier changes may have had little recourse but to wait for news updates.

The same goes for Jim Davito, the interim executive director of University Payroll and Benefits.

“We haven’t gotten any more formal information recently,” he said April 18.

According to Davito, officials may not get new information until the annual Benefit Choice Seminar of the Illinois Department of Central Management Services set for the end of this month. CMS administers state employees benefits programs.

So far, everyone has had to keep in
tformed through news reports. It was announced earlier this month that Health Alliance and PersonalCare HMOs would not be part of the enrollment choices for UI employees for the coming year. The two were dropped after the Illinois Depart-
ment of Healthcare and Family Services awarded fiscal year 2012 health-insurance contracts for state employees.

The offerings include two new HMOs through Blue Cross-Blue Shield and two open-access plans through HealthLink and PersonalCare, as well as the Quality Care Health Plan. (As things stand today, the current health plans, Quality Care Health Plan and Horizons Link OAP are the only plans that will be available next year for UI employees.)

Health Alliance and Horizons Link have appealed the Illinois Department of Health-care and Family Services’ decision, though state officials have supported the open-bid-
ning process used in the selection and say the new configuration could save the state $1 billion.

UI President Michael Hogan sent a letter to the IDHS and to Gov. Pat Quinn April 12 “to communicate the impact of this deci-
sion upon the university.”

Davito said the uncertainty has caused challenges, not only for his office, but also for the thousands of UI employees covered under the elimination.

“We all know that is the Benefit Choice period will begin May 1 and our em-
ployees will be given ample time to make informed decisions regarding their insur-
ance coverage,” Davito said.

Davito said his office has little choice but to wait for more news from the state.

“As soon as we get information we’re intending to share it,” he said. “I guess the only advice I can give right now is, ‘stay tuned.’”

Two receive Guggenheim Fellowships

By Dusty Rhodes
ARTS AND HUMANITIES EDITOR

Two UI professors – Anne Dawson Hedeman, in medieval studies and art history, and Kenneth Suslick, in chemistry – have received Guggenheim Fellowships.

They are among 180 award recipients selected from the almost 3,000 scientists, artists and scholars who applied.

Hedeman specializes in medieval manu-
scripts and the history of books, focusing on the role of visual imagery, or “iluminations,” in translating past or distant cultures for 15th century French readers.

She is in the midst of writing a planned four-book series on the impact that French notaries and secretaries had in shaping the visual environment of the French court from 1365 to 1483. With the first book al-
ready published, Hedeman will use her fel-
lowsip to finish researching and writing a second, analyzing the impact of secretarial patronage on the visual culture of early 15th century France.

Hedeman also has worked with UI’s National Humanities Alliance in preparing App-
lications, where she had a faculty fellow-
ship during the 2008-09 academic year. She collaborated with Peter Bajcsy, a specialist in pattern recognition and image analytics, to use computer analysis to examine the medieval French book trade. Their work re-
ceived three National Science Foundation grants.

Suslick, the Marvin M. Chayes profes-
sor of chemistry, works at the forefront of chemical sensing. He developed an artificial “nose” capable of detecting harmful sub-
stances in the air.

He has built a small optoelectronic de-
tector to “sniff” toxic gases, toxins and explosives. The device uses dots of chemically sensitive pigment printed in an array.

The pigments change color when they sense chemicals in the air, and can identify both mixture composition and concentration. His team developed easy-to-use handheld proto-
type devices to sense industrial chemicals and the explosives used in bombs.

Suslick also is a professor of materials science and engineering and a member of the Beckman Institute for Advanced Sci-
cience and Technology. He previously had been honored with a research fellowship from the Sloan Foundation, and is a fel-
low of the American Chemical Society, the Materials Research Society, the Acoustical

Society of America and the American As-
sociation for the Advancement of Science.

Guggenheim Fellowships are awarded annually on the basis of exceptional achievement and exceptional promise. More than $290 mil-
ion has been granted to more than 17,000 individuals since the program’s inception in 1925.

Frost said the police departments do not have a vendetta against the homeless – many of whom have been in the area for years.

“We’re really trying to change their behavior,” Frost said. “If those folks who choose not to abide by the rules already in place, then we’ll do our best to remove them from the campus district.”

HOMETOWN, CONTINUED FROM PAGE 1

center of several harassment complaints filed by female UI students riding the bus system.

“They’re not just asking for money,” Yohnka said. “They’re down there to com-
mit crimes as well. A lot of them are op-
portunists. They sit there and wait for an opening.”

The officers said panhandlers come to the campus area hoping to find empathet-
ic students, many of whom become more likely to act on that empathy when alcohol is added.

Both officers advised against giving any money to area panhandlers.

“If reinforces their behavior,” Frost said. “For some of them, this is their choice. If people stopped giving them money, they’d find another place to go. The students have huge hearts and they feel like they’re help-

ing someone. But in the end, you’re help-

enabling them to continue the lifestyle they’ve got.”

“The bottom line is, so,” Frost said. “That’s why they hang out there day after day, year after year,” Yohnka said. “If you’re going to donate money, donate it to the places where they can turn to. There are lots of services here set up to help them.”

Frost said进未入数令ta students don’t always call the po-
lice if a panhandler becomes aggressive, because they’re afraid they’ll get into trouble as well.

“We’ll get calls two to three days later,” he said. “Sometimes, when we get there the vic-
tim is already gone,” Yohnka said.

“We’re not going to cite a victim,” Frost said. “That’s not our main focus. If they’re being aggressive, we’ve got to get the com-
plaint so we can act.”

STREET CLOSURES, FROM PAGE 1

FIRST, APRIL 29 (from 6:15 p.m.

until about 7:30 p.m., for the 5K race)

First Street, from St. Mary’s Road to Green Street

Green Street, from First Street to Wright Street

Sixth Street, from Green to Pennsylvania Avenue

Pennsylvania Avenue, from Sixth Avenue to Fourth Street

Peabody Drive, from Sixth Street to Fourth Street

Fourth Street, from Peabody Drive to Kirby Avenue

Kirby Avenue, from Fourth Street to First Street

Satur

April 30 (from about 6:45 a.m.

until noon for the marathon/ half-marathon, 10K and relay race)

First Street, from St. Mary’s Road to Green Street

Green Street, from First Street to Race Street

Lincoln Avenue, from Green Street to Kirby Avenue (west side only)

Pennsylvania Avenue, from Lin-

coln Avenue to Fourth Street

Sixth Street, from Pennsylvania Avenue to Gregory Drive

Peabody Drive, from Sixth Street to Broadway Street

Fourth Street, from Peabody Avenue to Kirby Avenue

Kirby Avenue, from Fourth Street to Oak Street •

HOMELESS, CONTINUED FROM PAGE 1

Inside Illinois
Summer 2011 Publication Schedule

May 19 June 2 June 16 July 7 July 21 Aug. 4 Aug. 18

www.news.illinois.edu/ii • dkdahl@illinois.edu

Inside Illinois
Editor

Dorit K. Dahl
217-333-2895, ddkahil@illinois.edu

Assistant Editor

Phyllis K. Smith
217-333-2895, pksmit@illinois.edu

News Bureau contributors

Liz Ahlberg
Science editor, physical science

Craig Chamberlain
Media, international programs, social sciences

Phil Cicina
Business, law

Shantia forest
Education, social work

Dusty Hodges
Arts

Diana Yates
agriculture, applied health sciences, life sciences

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ON THE WEB

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04/21/11

InsideIllinois
On the Job

Ivory Bobo

Tina Weeordon Smith Memorial Hall was built in 1921. It houses UI School of Music staff members, 60 practice rooms and plays host to countless performances and recitals inside two large auditoriums. Ivory Bobo, a building services worker for Facilities and Services, has been working there for the overnight shift — 11 p.m. to 7 a.m. — at Smith Hall for 11 months. He is one of a group of 800+ employees with about 90 percent working the night shift.

What makes your job interesting? At Smith Hall, the building is alive. When I’m working, someone is always playing music somewhere. There are times when it’s a challenge to get everything done, but someone is always in there playing an organ or someone’s up on stage playing a sax or percussion. It’s such a variety, it really broadens your horizons. I never thought I’d learn to haul music and enjoy it much.

How late do students practice? We have to lock it up at midnight, but if they’re inside, they’re welcome to stay, according to the building maintenance reports. Students can be out so they can come and go when they need to. They stay late because they’re studying so hard. There will be students in here until 3 or 4 in the morning.

Do you ever worry about getting home so late? I always have to make sure need help or if they want me to call SafeRides. I don’t like it when they go out late by themselves. If they drive here, I’ll watch them until they get back to their car. If they’re back in a practice room, I’ll tell them, “You’re the only one up here, so give me a yell before you leave so I know you’re OK.” We have a great campus police force and from time to time they’ll stop by and ask if we’ve seen anything out of order.

Is that something they ask you to do in training? Yes. They told us we are the eyes and the ears of the university. We see what nobody else sees at night, so

What’s your life like in the daylight hours? My favorite activity is spending time with my son, Isaiah, who is 11 years old. Right now he’s in track and he plays football and basketball. I try to go to all of his games. I also like spending time in my yard and I like squeezing in some chess when I get the time. I really love that game. The job schedule works well with my family schedule. I have a wife, Nancy, and we moved here from Chicago about seven years ago. We wanted a small community and a small school for him to grow up in. The area is pretty diverse, which I like, just like the university.

Do you play any instruments or have a musical background? No. My favorite instrument is the piano. I’ve never really had a musical background but my son plays the saxophone. I’ve talked to some students about giving them lessons. That’s one of my projects this summer.

— Interview by Mike Helenthal, assistant editor

Student videos look at a world without humanities and the arts

By Dusty Rhodes

Arts and Humanities Seminar

I just as the fall semester was winding down, Winona Jackson and Andrew McDonald got an email from a friend, alerting him to a video contest. The challenge: Make a short film showing what the world might be like devoid of humanities and the arts. “When I first saw it, I thought, ‘Wow, I never really thought about that.’ ” McDaf- ded said. “Then I found out that it was kind of a pressing issue.”

During the holiday break, he and his friends came up with a plot, then returned to campus and shot a 3½-minute video titled “Losing the Human Condition.” It recently was named the winning entry in the state’s Humanities and Arts Teaching in Multiple Disciplines Program this summer.

The submission already had made a 14-minute film together, which was broadcast on UI-TV last fall. “It was kind of goofy, just something fun,” McDaf- ded said. But making that film had shown the four friends that they enjoyed working together.

“I felt like we had had such a powerhouse of talent, with my friend with Rowan Goodlad, said one reason she was impressed by “Losing the Human Condition.” The videos were judged on originality, persuasion and impact. Lauren Goodlad, the director of the Unit for Criticism and Interpretive Theory, said one reason she was impressed by “Losing the Human Condition” was the collaborative effort among students with such diverse majors.

“We could not ask for a better statement of the continuing need to integrate high-level humanities and arts teaching in multiple ways in the undergraduate education offered at the University of Illinois,” she said.

Honorable mention went to Ilana Strauss, a junior majoring in media studies, for “Dircles in the Dark,” an animated video using the Don McClean song “American Pie.” The videos can be seen on YouTube.

Singing the humanities: A video contest challenges students to explore a world without humanities. The video “Losing the Human Condition” won first place.

In the story, the human condition was very grim: Maria Luna, a very young girl, is sold into slavery and just as the fall semester was winding down, Winona Jackson and Andrew McDonald, a junior majoring in media studies, for “Dircles in the Dark,” an animated video using the Don McClean song “American Pie.” The videos can be seen on YouTube.

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Singing the humanities: A video contest challenges students to explore a world without humanities. The video “Losing the Human Condition” won first place.
Six honored with distinguished staff award

Six civil service staff employees were honored with the Chancellor’s Distinguished Staff Award at a banquet April 18. The award recognizes exceptional performance.

Each recipient receives $2,000 and a plaque. Recipients’ names also are engraved on a plaque displayed in the Staff Human Resources Office. Past winners are online.

Permanent staff employees with at least two years of service or retired employees in status appointments during the calendar year may be nominated for the award. A committee recommends finalists who are then approved by the chancellor.

As a police sergeant for University Police, Matthew J. Ballinger provides leadership to the officers under his supervision. He works the evening shift — 4 p.m. to 2 a.m. — and routinely supervises four to 14 officers on overlapping shift coverage and special detail assignment. He also responds to calls, patrols the campus district, monitors traffic, secures crime scenes, apprehends suspects and makes criminal arrests.

“I have worked with and supervised Matt Ballinger since his hire in 2004,” said Lt. V.G. “Skip” Frost, patrol bureau commander, University Police. “Since that time, he has shown tireless dedication to his patrol duties. He is driven, conscientious and focused on safety and security of the campus community and students.”

Letters of support also commended Ballinger’s role as a trainer: “His role as a trainer, whether as a field training officer, command tactics instructor or team leader on the METRO (SWAT) team, is clearly his best effort to improve himself as well as others in the law enforcement profession,” Frost said.

Urbana fire chief Mike Dilley commended Ballinger for his heroic actions last May when Ballinger was first on the scene of a house fire and entered the burning house to try to get the residents out safely. “There is no doubt that it had not been for the quick and heroic actions of Office Ballinger that day, that there would have been seven additional lives lost in that fire,” Dilley said.

“Matthew doesn’t engage in police work for glory or public recognition,” said Lt. Todd Short, Office of Campus Emergency Planning. “He is driven, conscientious and focused on safety and security of the campus community and students.”

Donna L. Bosch is an office administrator, Human Resources Office, College of Agricultural, Consumer and Environmental Sciences. “Her primary responsibilities are demanding, and the services she provides impact every unit in the college, including the network of UI Extension offices around the state,” said Alison B. Schmulbach, executive assistant dean for academic affairs and also for serving as the college’s primary COAR user (performing academic and electronic work related to building maintenance and theatrical activity at the center).

“Joe carries the title of electrician, but this does little to describe the incredible skills, knowledge, attitude and positive energy he brings to his work every day,” said Rebecca McBride, senior associate director of Krannert Center. “While his knowledge of all things electrical is outstanding, his deep commitment to helping the center achieve its goals — despite challenges that would stop others from proceeding — combined with his calm and positive manner is what sets Joe apart.”

“Donna has handled more than 550 applications in this process and remained positive as she dealt with stressed staff members. The emotional energy and caring attitude she exhibited during this past year has been remarkable.”

Donna L. Bosch, office administrator, Human Resources Office, College of Agricultural, Consumer and Environmental Sciences

Donna L. Bosch

Matthew J. Ballinger, police sergeant, University Police

Joseph M. Butsch, electrician, Krannert Center for the Performing Arts

Sherry L. Polson, office manager, College of Applied Health Sciences

Barbara Jo Vanderwater, office administrator, department of food science and human nutrition, College of Agricultural, Consumer and Environmental Sciences

Marita E. Rowise, administrative assistant I, School of Literatures, Cultures and Linguistics

Photography by L. Brian Stauffer

Her expertise has proved invaluable in many situations, especially now as funding challenges have forced a 30 percent reduction in total staff for UI Extension.

“All existing academic professionals had to re-apply for positions in the restructured organization,” said Marilyn Brengle, assistant to the director for extension field operations. “Donna has handled more than 550 applications in this process and remained positive as she dealt with stressed staff members. The emotional energy and caring attitude she exhibited during this past year has been remarkable.”

“Joe helped secure funding for this program and also participated in the installation to ensure the project was completed within budget,” said Mike Ross, the director of Krannert Center. “The result has been aesthetically pleasing lighting that produces remarkable energy savings for the campus.”

“Donna also was commended for his high level of initiative and creativity when addressing unexpected problems. One example was when the second floor was flooded with water in 2009. ‘Joe came in at 2 a.m. and worked tirelessly throughout the night and day to solve the underlying problem and to avert more damage to the building,” said Cynthia Howard, the director of business operations at Krannert Center.

“Joe takes time to ask questions and to view the problem from many perspectives in order to fully understand every situation,” McBride said. “And he consistently delivers solutions that are creative, functional and better than anyone could have imagined.”

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Self-cooling observed in graphene electronics

By Liz Ahlberg
Physical Sciences Editor

With the first observation of thermoelectric effects at graphene contacts, UI researchers found that graphene transistors have a nanoscale cooling effect that reduces their temperature. Led by mechanical science and engineering professor William King and electrical and computer engineering professor Eric Pop, the team published its findings in the April 3 advance online edition of the journal Nature Nano-technology.

The speed and size of computer chips are limited by how much heat they can cool. A transistor can cool as heat as a result of the electrons in the current colliding with the device material, a phenomenon called resistive heating. This heating outweighs other smaller thermoelectric effects that can locally cool a device. Computers with silicon chips use fans or flowing water to cool the transistors, a process that consumes much of the energy required to cool the device. Future computer chips made out of graphene carbonsheets 1 atom thick could be faster than silicon chips and operate at lower power. However, a thorough understanding of heat generation and distribution in graphene devices has eluded researchers because of the tiny dimensions involved.

The Illinois team used an atomic force microscope tip as a temperature probe to make the first nanometer-scale temperature measurements of a working graphene transistor. The measurements revealed surprising temperature phenomena at the points where the graphene transistor touches the metal connections. They found that thermoelectric cooling effects can be stronger at graphene contacts than resistive heating, actually lowering the temperature of graphene.

"In silicon and most materials, the electronic heating is much larger than the self-cooling," King said. "However, we found that in these graphene transistors, there are regions where the thermoelectric cooling can be larger than the resistive heating, which allows these devices to cool themselves. This self-cooling has not previously been seen for any material.

This self-cooling effect means that graphene-based electronics could require little or no cooling, begetting an increasing graphene's attractiveness as a silicon replacement. "Graphene electronics are still in their infancy; however, our measurements and simulations project that thermoelectric effects will become enhanced as graphene transistor technology and contacts improve," said Pop, who also is affiliated with the Beckman Institute for Advanced Science and Technology, and Micro and Nanotechnology Laboratory at the UI.

Next, the researchers plan to use the AFM temperature probe to study heating and cooling in carbon nanotubes and other nanomaterials. They also are affiliated with the department of materials science and engineering, the Frederick Seitz Materi-als Research Laboratory, the Beckman Institute, and the Micro and Nano-technology Laboratory.

The Air Force Office of Scientific Research and the Office of Naval Re-search supported this work. Co-authors of the paper included graduate student Kyle Grosse, undergraduate Ferien Lien and postdoctoral researcher Myung-Ho Bae.

CORDS. CONTINUED FROM PAGE 4

records, including grade changes, credit and course changes, dean's list determination and the college's convocation coordinator and supports the college's Educational Policy Comm-i-tee.

"Sherry handles it all with a gracious-ness, generosity of spirit and a level of com-mitment that cannot be overstated," said Tanya M. Gallagher, the dean of the college.

"She often comments that convocation is one of the most important days for the stu-dents and their families and she wants it to be as positive an experience as possible. She quietly gets the job done and the outcome is always extremely professional and well-organized."

"Sherry devotes significant attention to administrative support of the college's aca-demic affairs staff," said Remenga Kerch, assi-stant dean for academic affairs in the col-lege. "Sherry holds together our academic affairs team through her institutional knowl-edge and commitment to the highest quality of work... She is as invested in helping us help students reach their goals as the advis-ing staff is."

"Sherry is truly an amazing woman," Gallagher said. "Sherry is kind, generous, organized and extremely committed. She goes above and beyond what is expected and serves as a warm and welcoming pres-ence for students, staff, alumni, faculty and guests. She is constantly growing in her role and continually assessing the processes she uses to determine if there are more efficient ways to get the job done."

Marita E. Romine, an administrative assistant I in the School of Literatures, Cul-tures and Linguistics, has worked at the UI since 1987 and opened the School's Foreign Languages Building. She serves as assistant to the director of the school, a unit of the College of Liberal Arts and Sciences that includes 15 academic programs. Her duties include managing day-to-day operations of the administrative office; hiring and supervising civil service staff mem-bers; determining areas of responsibility and distribution of workloads; and facilitating training, development and staff performance evaluations.

Among some of her many accomplish-ments cited in letters of support, she coordi-nated the development of online tools to streamline the application and review pro- cess for those seeking funds for colloquia and conferences as well as graduate fellow-ships. She helped resurrect the Intensive For-eign Language Intersession Program, which was on the verge of being eliminated, and suggested that a January session be added to the program.

Douglas Kibbee, the first director of the School of Literatures, Cultures and Linguis-tics, recalls a request by the LAS dean in 2005: "I was asked to create a new admin-is-trative entity, that would become the School of Literatures, Cultures and Linguistics." Kibbee said. "This would combine the staffs from 11 academic units, reduce the staff by almost half, with the expectation of provid-ing enhanced services."

Marita took on the challenge of reorgan-izing staff duties, finding the right jobs for the right people and clarifying everyone's responsibilities. "The impossible had been accomplished: A dra-stically cut staff was providing better service than ever before." Romine is credited with the success of the school's shared service model, which has been used as a model by other campus units. "In essence, initiative and innovation are the hallmarks of Marita's work," said Elab-ralos Reclamation, the director of the school. "She has a knack for identifying the talents of her staff and matching those talents to revised job descriptions, with an eye on the big picture."

Barbara Jo Vandeventer is an office administrator in the department of food sci-ence and human nutrition in the College of Agricultural, Consumer and Environmental Sciences. She has worked in the college for more than 16 years.

"Barb oversees and carries out innumerable activities, projects and tasks each day that allow the department to function ef-fectively and efficiently and that promote excellence in our instructional research and service missions," said Shelby J. Schmidt, a professor of food science and human nutrition.

Vandeventer also has been asked to serve on several campus committees and focus groups. She was a member of the Graduate College Administrative Advisory Group for three years and a member of three campus-level focus groups campus-level focus groups – departmental schedules, enhancement of advising and final exam schedulers.

Several of her ideas to streamline office operations have been implemented. Exam-ples include automating the course wait list process, creating numerous electronic forms and databases to move to a paperless office, development of an internal online supplemental grade report form and use of new graduate application software.

According to department head Faye M. Dong, Vandeventer’s list of duties is lengthy and varied, but she handles all the tasks with "efficiency, professionalism and the highest of standards."

"For example, Barb expertly takes care of all aspects of the curriculum, such as the scheduling of all of our courses (undergrad-uate and graduate) and managing enroll-ments, room assignments, changes in course requirements and individual needs of stu-dents. She treats everyone the same with full respect, sincerity, the utmost courtesy and a brilliant smile, even under time constraints and during stressful moments." Thimo-tary A. Garrow, a professor and as-sociate head for graduate programs, said: "Barb is definitely the student’s advocate when they are dealing with university bu-reaucracy. She is the hub of the (depart- ment’s) graduate education wheel."

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IGPA forum: Uncertainty to persist for Illinois pensions

By Mike Helenthal
Assistant Editor

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1 staff members looking for any
good news about the troubled

system left a panel discussion on
the topic April 11 still looking.

The panel discussion at the Alice Camp-
bell Alumni Center ballroom on the Urbana
campus was hosted by the Institute of Gov-
ernment and Public Affairs, which hosted
similar discussions at UIC and UIS.

Largely as a result of past state un-
derfunding, and exacerbated by a stagn-
nant economy, staggering state debt and
a shrinking tax base, ‘uncertainty will persist
for the foreseeable future for Illinois pen-
sion systems, panelists said.

Panelists said Illinois has been either
able or unwilling in the past to ade-
quately fund pensions on an annual basis,
resulting in the state’s current $79 billion in
unfunded pension liability for the five state-
wide systems.

“There’s not going to be an ‘end of his-
tory’ moment when all issues are resolved,”
said panelist J. Fred Giertz, a professor of
conomics and in the Institute of Govern-
ment and Public Affairs who also is a mem-
er of the SURS board of trustees.

“It may never be fully funded,” he said.

Giertz said SURS insolvency is “very,
very unlikely” because of continued em-
ployee contributions and the fact the state is
still paying money into the system – though
well below required levels.

He said a “defined benefit” to a “defined contribu-
tion” proposal to switch state employees from
employee contributions and the fact the state is

states that does not have
a progressive tax code,
wherein higher wage-earn-
ers pay a higher tax per-
centage. The CTBA also
recommends expanding Il-
linois sales tax to services
instead of goods only and
axing “some” retirement
income.

Even with the recent
corporate tax increase, cor-
tax rates in Illinois are
still among the lowest in the Midwest and
generate the least revenue.

Martire said it was laughable, following
the corporate tax increase, that neighboring
states tried to lure companies from Illinois
across the border – because Illinois has always
had and continues to have a lower rate.
Before the recent tax increases, Illinois
ranked 44th nationally in taxation.

“Who’s gonna move?” he said “They
have higher taxes and have for decades. It’s
malarky.”

Not having those fair regulating struc-
tures in place allows politicians to continue
to use “goofy numbers” and “the political
manipulations of these numbers” he said.

Likewise, he said Illinois is well behind
comparable state counterparts in number of
college employees, and that forcing them to

take the brunt of cuts will be economically
counterproductive. He said every $1 spent
by the state on employees actually generates
$1.36 in private sector activity.

“If you cut wages to workers, they spend
less,” he said “You are literally taking their
money out of the dry cleaners and the
grocery stores.”

He said Illinois already had weathered
the loss of 400,000 jobs during the down-
turn. “I’m thinking losing another 100,000
is not a good idea.”

Budget-cutters targeting Medicaid costs
are in a similar negative zero-sum situation,
wherein every dollar cut at the state level
loses matching federal money and causes the
loss of $2 in services.

“It’s not a real net savings,” he said.

SEE PENSION: MARTIRE, PAGE 7

Speaker assesses Illinois’ underfunded pension systems

By Mike Helenthal
Assistant Editor

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embers of an April 11 panel
discussion sponsored by the UI
Institute of Government and
Public Affairs, which released a
comprehensive report on
the state’s pension problems.

According to the IGPA report, in 2011, Illinois
has contributed only $3.7 billion of the
anticipated $11.9 billion in pension obliga-
tions.

The problem, said Lubotsky, is that none of those solutions – including a legislative
proposal to switch state employees from
a “defined benefit” to a “defined contribu-
tion” pension plan – would reduce current

ON THE WEB
■ Campus Faculty Association: www.cfailinois.org
■ Center for Tax and Budget Accountability: www.ctbaonline.org
■ “The Illinois Budget Crisis in Three Minutes” www.youtube.com/watch?v=eNq0T-c50X8
■ Illinois Retirement Security Initiative (a project of CTBA): www.liretirementsecurity.org

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There also is the risk that deep state cuts have affected all future pension benefits. "It would have literally changed your relationship, the benefits of which shall not be diminished or impaired," she said, and wording seems to offer a guarantee of sorts for pension-holders: "Membership in any pension or retirement system of the state … shall be an enforceable contractual guarantor." She said there also is a chance the state's deficit position could lead to a "reality check colliding with legal theory. We have no way of knowing how the Illinois Supreme Court will come down on this." Regardless of legislative or legal outcomes, the hope of retaining all pension terms and benefits seems unlikely at this point, she said, calling that scenario "the wishful thinking view."

Martire said the biggest mistake of all would be for the state to substantially cut education, especially considering Illinois already ranks 49th nationally in the amount of money it spends on secondary education. Between 2000-2007, property tax revenue grew by 23 percent while median income in Illinois fell by more than 5 percent. The gap between what Illinois spends per pupil and the national average has grown from $100 to $2,000 with the proposed cuts in education. And minority schools in Illinois have an estimated $1,100 less to spend per student than the average elsewhere in the state, he said, mostly as a result of school district funding that is based on property taxes. He said that gap is in direct correlation to minority-to-white wage growth. Between 1980-2007 the gap for Hispanics increased by 40 percent compared to white counterparts, and for African Americans the gap grew by 126 percent.

"Not only do they not want to cut the gap," he said, "they want to further it. And here’s the kicker: Education matters more than ever." Martire said the information in his presentation, "Who’s Got Your Back?" was prepared as a non-partisan response to the state’s budget crisis. "My organization is bipartisan, which means my board doesn’t like or trust each other," he said. ◆
Faculty mentoring groups share collective wisdom

By Mike Helenthal
Assistant Editor

Faculty mentoring groups are taking that phrase to heart. The idea for a campuswide faculty mentoring program came through the UI Teaching Academies, and background research was provided by teaching academies in the colleges of Agricultural, Consumer and Environmental Sciences; Applied Health Sciences; and Liberal Arts and Sciences.

The colleges sort of banded together and have done actual research on mentoring,” Winkelmes said. “They’ve been looking into this and it’s a need that’s getting national attention. When you see it in action, it makes perfect sense.”

She said the multi-mentor approach is what makes the program work — and there are hopes it will expand quickly because of the variety of advisement opportunities.

“As a mentor, you should be moving from one group to another group,” she said. “Your needs are evolving as you move. The groups are fluid and they’ll grow according to need.”

Santos said the founding members have quickly become excited about the process. “We’ve been lucky to find people who have been very open and willing,” she said. “The next step is probably to pull together the mentors to better streamline some of the efforts. It’s really about being a mentor for people all of the time. We count on that volunteer time here — that’s how the university works.”

While there are at-large issues that do affect all faculty members, the joy of the multi-group setting means groups can be formed to address more specific issues as well.

For example, the newest mentoring groups are for faculty members looking for feedback on work they are preparing for publication — and its members come from the university’s array of academic disciplines.

“Needless to say, the University of Illinois is a pretty complex place,” said Craig Koslofsky, a history professor for 13 years and mentor leader of a new writing group.

He said his experience as a young staffer working with his department’s mentoring program was invaluable — and that he still goes to his mentor for advice.

“I feel like my department does it right,” he said. “There’s a lot for an assistant professor to navigate. You just don’t want to reinvent the wheel as you go along. There’s so much that’s unwritten or in flux.”

He said the newness becomes more complicated when a faculty member is on an interdisciplinary tenured track.

He said the time investment is minimal and that the return for himself, the faculty member seeking help and ultimately the university, are huge.

“A mentor is buying into the success of the mentor,” he said. “You get the satisfaction of knowing people are getting the right information and the university is functioning the way it’s supposed to.”

Working with the writing group has given him another level of satisfaction.

“It’s been very interesting because you’re working with people who are at the top of their game and the best in the world at what they do,” he said. “You get to see the latest and most interesting stuff. You’re talking with people as a project is developing and you are able to give a little nudge that could lead to something very big.”

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Study: Teachers unaware of growing gender gaps in class

By Phil Ciciora
News Editor

A gap in reading and math scores still exists in lower grades, with boys continuing to outpace girls in math, and girls ahead of boys in reading, two UI education professors say.

Using national longitudinal data to perform their analysis, Joseph P. Robinson and Sarah Lubienski investigated male and female achievement in math and reading, looking for when gender gaps first appeared and where in the distribution the gaps were most prevalent.

Except for kindergartners in the 99th percentile, boys and girls generally start out on equal footing in math competency. In elementary school, girls throughout the distribution lose ground to boys in math achievement before eventually regaining some ground in middle school, according to research published by the professors in the American Educational Research Journal.

“If you just look at the average gap, there is no gap in math between boys and girls when they start kindergarten,” Robinson said. “But when you start to break it down throughout the distribution, taking a look at the low- and high-achieving girls and boys, that’s where we see that there’s a gap favoring boys at the upper-most extreme of the distribution. The 99th percentile of boys is outscoring the 99th percentile of girls.”

Over time, as students progress through elementary school, the gap “begins to widen, favoring boys in the lower part of the distribution,” Robinson said. “By third grade, you can see it throughout the whole range of kids.”

Robinson and Lubienski also compared teachers’ assessments of boys and girls. They discovered that teachers seem to over-estimate girls’ mathematics achievement relative to boys, rating girls higher than boys in both subjects, even when cognitive assessments suggest that boys have a math advantage.

“Our results suggest that there is still a gender gap, not only with achievement, but with teachers’ perceptions,” Lubienski said. Based in part on other research, the professors suspect that teachers might be mistaking girls’ compliance in the classroom for comprehension, a topic that the researchers are exploring in a forthcoming study.

“We found that even when boys are outscoring girls, the teachers think the girls are outscoring the boys,” Lubienski said. “This might be because girls tend to be perceived as ‘good girls’ in the classroom, and then teachers assume that they understand the material because they complete their work and don’t cause trouble.”

The researchers say that there’s also a gap in reading that favors boys. Although the gap favoring girls generally narrows over time, it also eventually widens among low-achieving girls and boys, who struggle to keep up with their classmates.

“Clearly, the boys start out behind the girls in reading achievement,” Lubienski said. “In general, the mid-achieving boys eventually catch up, but the lowest-achieving boys don’t. In other words, if you’re a boy and you’re really struggling to read, you most likely won’t catch up with your peers. It’s those boys at the bottom that teachers should be most concerned about when it comes to reading.”

The issue of gender gaps in math and reading in U.S. schools has been an ongoing one in education circles, with some researchers arguing that a gender gap doesn’t exist in math anymore, something that was concluded from looking at test results from several states.

“There have been debates about whether there really is a gender gap in math,” Lubienski said.

“But our research looked at national data, and they show that there is indeed still a gender gap in math. It’s small, but it’s there, and it grows between kindergarten and fifth grade.”

As a country, the U.S. seems to have more of a gender gap in early elementary education than in most countries, the researchers say. One hypothesis to explain the gap could be that the U.S. has first- and second-grade female teachers who are “math-anxious.”

“I’ve seen a surprising number of teachers who want to teach in the lower grades because they’re scared of math,” Lubienski said.

Instead of having one teacher for all of the subjects, Robinson and Lubienski believe that having math specialists teaching in the elementary grades, and not just generalists who teach every subject, could help to close the achievement gap.

“There’s some debate about whether kids need to stay with one teacher because it nurtures them. But from a math education standpoint, having dedicated math specialists is certainly worth exploring,” Lubienski said.

For education policymakers, the professors say their research suggests that teachers need to intervene earlier when students struggle.

“So we need to pay attention not only to the low-achieving boys who are struggling with reading, but also to the girls – both the high-achievers as well as the low-achievers – as they learn math in the early grades,” Lubienski said.
Ryan plan would fundamentally change Medicare

UI expert: Ryan plan would fundamentally change Medicare

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InsideIllinois
April 21, 2011

Full-text search capability not without problems

While there may be nothing new under the sun when it comes to improving Medicare, the perception often is, "If you have full-text search capability, you have everything you need to know." However, recent surveys of librarians and health care professionals have shown that this perception is not always accurate.

"While full-text resources have become ubiquitous in the last 20 years, the ability to search full-text sources is not the magical tool some librarians would have us believe," said two UI experts in information science. "The perception that plaguing a few key words in Google will yield a universe of relevant information is somewhat mistaken, according to the scholars, because people cannot just search for the words in a story that they are looking for in those collections." Tilley said. "For example, descriptive metadata for Google books is harvested from many different sources, and thus reflects various inconsistencies both from original sources and from the process of aggregation," LaBarre said. "This can make it difficult to find specific things in an easily searchable way." Some of these difficulties stem from relying on a primarily computational approach to creating full metadata for digital resources, LaBarre said. "There are advantages to having a human involved in such a process, although people certainly can’t do everything," she said. "I know Google is hard at work to address this issue, but as long as the system is fuzzy, it’s not always accurate to search for the words in a story that they are looking for in those collections." Tilley said. "In folktales, the classic example is where you seldom get any acknowledgment of the geographic distribution of the tales. You might think that there’s a trickster story associated with a certain region, but you have no way of knowing without an extra layer of classification. So our goal is to make things more findable in ways that people want to be able to find it." According to the scholars, understanding the users’ information-seeking goals and tasks can strengthen the design of search and discovery systems and enhance access for these resources.

"For the practitioners, the storytellers and librarians, it’s important to know that there’s not just search for the words in a story that might appear, but they would also be able to judge whether a certain text is appropriate to use with 5-year-olds," Tilley said. "They would be able to tell whether a certain story would be useful if they were putting together a program about, for example, compassion. If not, they would be able to find it."
New structure makes batteries charge quickly, retain capacity

By Liz Ahlberg

The batteries in Illinois professor Paul Braun’s lab look like any others, but they pack a surprise inside.

Braun’s group developed a three-dimensional nanostructure for battery cathodes that allows for dramatically faster charging and discharging without sacrificing energy storage capacity. The researchers’ findings were published in the March 20 advance online edition of the journal Nature Nanotechnology.

Aside from quick-charge consumer electronics, batteries that can store a lot of energy, release it fast and recharge quickly are desirable for electric vehicles, medical devices, lasers and military applications.

“This system that we have gives you capacitor-like power with battery-like energy,” said Braun, a professor of materials science and engineering. “Most capacitors store very little energy. They can release it very fast, but they can’t hold much. Most batteries store a reasonably large amount of energy, but they can’t provide or receive energy rapidly. This does both.”

The performance of typical lithium-ion (Li-ion) or nickel metal hydride (NiMH) rechargeable batteries degrades significantly when they are rapidly charged or discharged.

Making the active material in the battery a thin film allows for very fast charging and discharging, but reduces the capacity to nearly zero because the active material lacks volume to store energy.

Braun’s group wraps a thin film into a three-dimensional structure, achieving both high active volume (high capacity) and large current. They have demonstrated battery electrodes that can charge or discharge in a few seconds, 10 to 100 times faster than equivalent bulk electrodes, yet can perform normally in existing devices.

This kind of performance could lead to phones that charge in seconds or laptops that charge in minutes, as well as high-power lasers and defibrillators that don’t need time to power up before or between pulses.

Braun is particularly optimistic for the batteries’ potential in electric vehicles. Battery life and recharging time are major limitations of electric vehicles. Long-distance road trips can be their own form of start-and-stop driving if the battery only lasts for 100 miles and then requires an hour to recharge.

“If you had the ability to charge rapidly, instead of taking hours to charge the vehicle you could potentially have vehicles that would charge in similar times as needed to refuel a car with gasoline,” Braun said. “If you had five-minute charge capability, you would think of this the same way you do an internal combustion engine. You would just pull up to a charging station and fill up.”

All of the processes the group used are also used at large scales in industry so the technique could be scaled up for manufacturing.

The key to the group’s novel 3-D structure is self-assembly. They begin by coating a surface with tiny spheres, packing them tightly together to form a lattice. Then the researchers fill the space between and around the spheres with metal. The spheres are melted or dissolved, leaving a porous 3-D metal scaffold, like a sponge. Then a process called electropolishing uniformly etches away the surface of the scaffold to enlarge the pores and make an open framework. Finally, the researchers coat the frame with a thin film of the active material.

The result is a bicontinuous electrode structure with small interconnects, so the lithium ions can move rapidly; a thin-film active material, so the diffusion kinetics are rapid; and a metal framework with good electrical conductivity.

The group demonstrated both NiMH and Li-ion batteries, but the structure is general, so any battery material that can be deposited on the metal frame could be used.

“We like that it’s very universal,” Braun said, “so if someone comes up with a better battery chemistry, this concept applies,” said Braun, who is also affiliated with the Materials Research Laboratory and the Beckman Institute for Advanced Science and Technology at Illinois.

“This is not linked to one very specific kind of battery, but rather it’s a new paradigm in thinking about a battery in three dimensions for enhancing properties.”

The U.S. Army Research Laboratory and the Department of Energy supported this work. Visiting scholar Huigang Zhang and former graduate student Xindi Yu were co-authors of the paper.

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By Mike Holenthal
Assistant Editor

BoB Douglas resembles neither Lewis nor Clark, but he’s a trailblazer nonetheless.

Douglas, an inventory specialist at Campus Information Technologies and the two starting volunteers, was one of about a dozen volunteers last fall who helped explore and develop a system of walker-friendly trails on campus.

“It sounded simple enough – to find reasonable paths to walk, but they really wanted a lot of information,” Douglas said last month, moments before participating in a lunch-hour walk sponsored by the UI Wellness Center covering one of the paths he evaluated.

Douglas enlisted the help of friend Bob McGrath, a software programmer with the National Center for Supercomputing Applications – and the two started scouting acceptable routes near the Bardeen Quad.

In the meantime, they had advantages Lewis and Clark never did – like mowed grass and wide sidewalks, not to mention a specialized trail-analysis kit developed by the Centers for Disease Control and Prevention and adapted for the Urbana campus.

“The kit had a pedometer and a variety of tools to help identify the best paths,” Douglas said. “We looked at lighting, whether there were trash cans or benches along the route, accessibility and a lot of other issues.”

Other walking-path checklist items include aesthetics, pedestrian dangers and availability of shade. The idea was to produce a route that any walker of any skill level could navigate.

“‘It’s kind of a low-tech, organic process,’ Michele Guerra, the director of the Wellness Center, said of the trail-identification and ranking process. “We are using this process in large part because it involves the people who know the campus best – employees and students who live, work and study in the areas they are auditing.”

The Wellness Center is sponsoring the Weekly Wellness Walks at several locations Monday through Wednesday during the lunch hour. Guerra said identifying the pathways is the starting point for a more-vigorous, strategically planned “lifestyle physical activity” initiative.

To complete the path-identifying audits, the campus was divided into 12 quadrants, and volunteers were asked to identify the most welcoming portions of the paths. Each path received a score based on the CDC criteria.

“This is to help employees find a way to fit physical activity into their days,” Guerra said. “A lot of people encounter barriers that make finding time to exercise difficult – really, that’s the majority of people.”

The new courses are of “moderate intensity” and reflect a walking rate of about 15 to 20 minutes per mile. Each Weekly Wellness Walk will have a Wellness Center staff member along for assistance.

“We’re trying to accommodate people who walk a little faster and those who walk a little slower,” she said. “We want everyone to walk at the pace that works for them.”

Taylor Rafool, a Wellness Center intern, said the number of walkers has been rising with the temperatures.

“People have been showing up right on the dot,” he said. “We’ve had pretty good weather conditions and it seems like they’re really eager.”

Guerra said there are plans to re-assess the paths over time, using the additional information to expand the walker program and to create online maps.

“We’re in the process of mapping that now,” Guerra said. There also are plans for an online toolkit, which will include maps and features of the audited paths (such as how long it will take and how many steps are taken), as well as weekly walking tips. Information also will include instructions on how to use a pedometer, stretching techniques, calculating a comfortable pace and how to chart your own progress.

“It’s a long-term process,” Guerra said. “We’re committed to keep it going and to keep doing it. We’re using walking as the first, ground floor.”

WELL WEEKLY WALKS:

www.campusrec.illinois.edu/wellnesscenter/wellnesswalks/ 12:10:12:50 p.m. (free; registration required)
To register: call 217-265-9355 or email ui-wellness@illinois.edu
■ Mondays: Meet at Bevier Hall
■ Tuesdays: Meet at Kronert Art Museum
■ Wednesdays: Meet at Mechanical Engineering Lab (Bardeen Quad entrance)

For information on the CDC’s “worksite walkability” programs:
www.cdc.gov/nccdphp/dnpa/lmi/toolkits/walkability/
new study louses up a popular theory of animal evolution and suggests that the first -- animal hosts of lice. 

The study, by Kevin Johnson, an ornithologist with the Illinois Natural History Survey, at the University of Illinois, and a principal investigator on the study. "If the lice were around, we know their hosts were probably around."

Scientists still are trying to understand the factors that led to the diversity of today's birds and mammals. One theory is that the extinction of the dinosaurs fostered the earliest stages of bird and mammal diversification and expansion (a process called "radiation") by opening vast new territories and types of habitats to them. "Ducks are different from owls, for example, have elongated bodies that allow them to insert themselves between the barbs in a feather and thus evade preening. Gopher lice have grooves in the tops of their heads that clasp onto a single shaft of hair. This specialization makes it hard for lice to shift to other hosts. As a result, their evolutionary history coincides very closely with that of their hosts."

Johnson and his colleagues, including co-principal investigator Vincent Smith (a former postdoctoral researcher in Johnson's lab who now is at the Natural History Museum in London) built a partial family tree of lice by comparing the DNA sequences of genes from 69 present-day louse lineages. Changes in gene sequence are a reliable measure of relatedness among different species in the same group (organisms in the same order, family or genus, for example). And because these changes accumulate over time, they also can be used to create a rough timeline of the evolution of related groups of organisms.

"Lice are like living fossils," Smith said. "The record of our past is written in these parasites, and by reconstructing their evolutionary history we can use lice as markers to investigate the evolutionary history of their hosts."

The researchers used louse, bird and mammal fossils to anchor precise time points in the tree. These fossils are dated according to the age of the geologic formations in which they were found. This gives only a minimum age for the animal found embedded in the fossil. "If the oldest dove fossil is 20 million years old, we know our lice are at least 16 million years old," Johnson said.

The study, in Biology Letters, uses fossils and molecular data to track the evolution of lice and their hosts. It offers strong evidence, the researchers said, that the ancestors of lice that today feed on birds and mammals began to diversify before a mass extinction event killed off the dinosaurs about 65 million years ago.

"This study lends support to the idea that after the dinosaurs went extinct that's when these birds or mammals diversified into these different niches."

"But based on the evidence from lice, the radiation of birds and mammals was already under way before the dinosaurs went extinct," he said.

Illinois a leader in providing early learning programs

I linois leads other states in the U.S. in ensuring that at-risk young children are provided with early childhood education, according to a new study by a researcher in the School of Social Work at the University of Illinois at Chicago.

The study, led by Theodore P. Cross, a research professor in the Children and Family Research Center, was based on data from the Illinois Study of Child and Adolescent Well-Being, which is part of a national study that comprises information from child welfare investigations conducted between March 2008 and January 2009. The Illinois data set included 818 substantiated maltreatment cases investigated by the Illinois Department of Children and Family Services. Substantiated cases also were extracted from the national study, which spanned more than 5,000 substantiated and unsubstantiated cases across 36 states.

Cross found that in Illinois, 69.7 percent of the 3- to 5-year-olds in intact families involved in child welfare cases -- versus 53.5 percent of children in intact families across the U.S. -- were enrolled in early childhood education programs or kindergarten. Accordingly, 79.7 percent of the same aged-children in out-of-home placements in Illinois were enrolled in pre-kindergarten or kindergarten programs versus 62.3 percent of children in other states.

When the data were broken down by age, Cross found that only about one-third of the 3-year-olds still residing with their families were participating in early childhood education programs versus more than 70 percent of 3-year-olds in out-of-home placements.

However, the percentage of 4-year-olds in early learning programs was 70 percent or better for children residing in their homes as well as for children in out-of-home placements.

Whether with their families or in out-of-home care, all of the 5-year-olds studied were in either kindergarten or pre-kindergarten programs.

The statistics demonstrate the efficacy of a DCFS policy, implemented in 2006 under then-director Bryan Samuels, that requires education to begin at age 3 for state wards, Cross said. "There's been some real success with this policy, and there are better outcomes for Illinois than the rest of the country."

"The policy change was part of Samuels' Lifetime Approach, which recognized that early childhood education is critical to the long-term success of children in state care," said DCFS spokesman Kendall Marlowe. "Erwin McEwen, current director of DCFS, hired early education specialists to create our School Readiness Team, which helps caseworkers link children with quality programs and ensures that the policy is effectively implemented. We know the importance of an early start to education for our kids, and we're proud of the progress we've made."

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Two students recognized with Goldwaters

Justin Kopinsky, a junior at the UI, has been awarded a Barry M. Goldwater scholarship for the 2011–12 academic year. Peter Fiflis, also a junior at Illinois, won honorable mention. Kopinsky, of Buffalo Grove, Ill., is a Chancellors Scholar and is majoring in math and computer science. He began pursuing graduate-level math courses at Illinois as a second-semester freshman. He takes part in mathematics contests and in computer science competitions. As a member of a U.S. regional team in 2010, he competed at the finals of the ACM International Collegiate Programming Contest in Harbin, China. He is conducting research with a parallel architecture research group led by Illinois computer science professor Sarita Adve. He intends to pursue a doctorate in computer science and eventually work at a corporate lab. One of his goals is to discover ways to create affordable many-core processors for personal computers.

Fiflis, of Indian Head Park, Ill., is majoring in nuclear engineering with a concentration in plasma and fusion science and engineering. Also a Chancellors Scholar, Fiflis is in his third semester as a teaching assistant in the department of nuclear, plasma and radiological engineering. He has been conducting research since October 2008 at the Center for Plasma Material Interactions at Illinois. Under professor David Ruzic, the director of the center, Fiflis is investigating the feasibility and proper design of an electrostatic lithium injector for fusion devices. He also has spent two summers at Argonne National Lab conducting research on the remote detection of radiation by millimeter waves. Fiflis intends to enter a doctoral program in nuclear engineering and continue a career in fusion research and reactor design.

The Barry M. Goldwater Scholarship and Excellence in Education Program was established by Congress in 1986 to honor Sen. Barry M. Goldwater, who served in the U.S. Senate for 30 years. The program provides a continuing source of highly qualified scientists, mathematicians, and engineers by awarding scholarships to sophomores and juniors from the United States who intend to pursue careers in these fields.

The 275 Goldwater Scholars for 2011-12 were selected on the basis of academic merit from a field of 1,095 mathematicians, science, and engineering students who were nominated by the faculties of colleges and universities nationwide. The Goldwater Scholarship is the premier undergraduate award of its type in these fields. The one- and two-year scholarships cover the cost of tuition, fees, books, and room and board up to a maximum of $7,500 per year.

EARLY EDUCATION. CONTINUED FROM PAGE 13

Learning problems, poor grades, having to repeat grades and involvement with special education are more common among maltreated children than among their peers. However, studies have indicated that at-risk children who participate in quality early childhood programs are more successful academically when they enter school, have better high school completion rates, and are less likely to commit violent crimes than peers who don’t participate in pre-school programs.

“Studies that focused intensively on early childhood education have followed kids over years — even into young adulthood — and have shown that the advantages of preschool education extend into adolescence and young adulthood in terms of life success,” Cross said. “I believe that there are even benefits in terms of employment later on.”

Some economists have said that every dollar spent on early childhood education programs for at-risk children generates an estimated $7-9 in future savings because of greater labor force participation and higher earnings, reduced welfare dependency and reductions in criminal justice expenditures.

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“This is a critical issue because kids involved in substantiated investigations have a double whammy — they experience abuse or neglect, and many, if not most, of them experience a range of risk factors from their family and environment, such as domestic violence, poverty and parental substance abuse,” Cross said. “So doing something for them to aid their development and assist their transition to school makes a great deal of sense. Both the short-term and long-term educational outcomes and the cost-benefit from them are tremendous in terms of preventing later difficulties with kids.”

Most of the caregivers for the 3- and 4-year-olds not enrolled in pre-kindergarten programs said that the children were not participating because they were “too young for school.” Cross said: “More work needs to be done to determine if 3-year-olds would benefit from participation in early childhood education programs too.”

Cross added.

LIFE. CONTINUED FROM PAGE 13

years old, we know that doves must have been around at that time,” Johnson said, “so we know that the split that occurred between doves and the closest relative of doves must have occurred before 20 million years ago.”

The oldest fossils found so far that resemble modern bird and mammal groups are less than 65 million years old, Johnson said. “This led to the hypothesis that major bird and mammal lineages appeared only after the dinosaurs went extinct. But more recent studies of the genetic changes in major groups of birds and mammals suggest that many of them were around before the dinosaurs disappeared.”

The new study supports this idea, Johnson said.

“Our analysis suggests that both bird and mammal lice began to diversify before the mass extinction of dinosaurs,” Johnson said. “And given how widespread lice are on birds, in particular, and also to some extent on mammals, they probably existed on a wide variety of hosts in the past, possibly including dinosaurs.”

Many scientists believe that birds are the descendants of feathered dinosaurs, Johnson said. “So maybe birds just inherited their lice from dinosaurs.”

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One year after the Deepwater Horizon tragedy

A Minute With ...™ UI expert John W. Kindt

Editor’s note: One year after the most devastating offshore oil spill in U.S. history, are we any safer? In an interview with News Bureau Business and Law editor Phil Ciciora, UI business and legal policy professor John W. Kindt, an expert on environmental and maritime law, examines the legacy of the Deepwater Horizon oil spill.

What are the chances of another oil spill on the scale of the Deepwater Horizon accident happening again? I think the chances of another accident happening have significantly decreased. The industry has gotten the message. However, I’m not sure the Department of Interior has gotten the message, since Ken Salazar is asking for another $133 million to expand what he should already be doing – regulating what’s going on in the Gulf. Instead of doing a better job of regulating the industry, the only solution the Interior Secretary seems to have is, ‘We want more money.’ In today’s economy, for them to ask for more financing for what they should already be doing is distressing.

The people they have at Interior already have the expertise to do the job, but it’s a bedrock principle of government to pass the buck, and then spend it. So Interior needs a big in-house cleaning, a finding that has been supported by the President’s commission on the BP oil spill. The commission also said that the regulators ought to be politically autonomous. Well, you would think they would need to be politically autonomous already. So there needs to be a lot more Congressional and internal scrutiny on Interior, which obviously hasn’t taken enough political heat on this. It’s been reported that federal prosecutors are mulling whether they should pursue involuntary manslaughter or seaman’s manslaughter charges against some of BP’s managers. Do you foresee that happening?

The parallel that comes to mind are the Ford Pinto cases, where some of the managers faced criminal prosecution but were ultimately acquitted. To successfully prosecute anyone from BP, there would need to be a case with overwhelming evidence of criminal negligence. It certainly would be a case with overwhelming evidence of what’s really important, which is fixing the regulatory structure. So it would likely just be a waste of taxpayer time and money. BP has asked U.S. regulators to allow them to resume drilling on 10 existing Gulf wells. Should we allow them to proceed?

I think BP is very cognizant of safety measures and will be focused to ensure that absolutely nothing goes wrong. They are going to err on the side of safety, no doubt about it. Although there’s always the possibility that some internal mechanism will fail, I think they’re going to be extremely sensitive to safety measures. They’re not going to be cavalier about anything after what happened simply because BP cannot afford that some internal mechanism will fail. They’re going to be extremely sensitive to safety measures. They’re not going to be cavalier about anything after what happened simply because BP cannot afford – from both a public relations and a monetary standpoint – another problem.

deaths

Herbert Goldthor, 94, died March 29 at his home in Seattle. He was a professor emeritus of library and information science. He was a faculty member in the Graduate School of Library and Information Science at the UI from 1946-1951. He returned to the UI and directed the school from 1962-1975. From 1975 until his retirement in 1987, Goldthor also served as head of the Library Research Center (now called the Center for Informatics Research in Science and Scholarship). Memorials: Herbert Goldthor Memorial Fund in the Graduate School of Library and Information Science, www.lis.illinois.edu/giving or to the American Friends Services Committee, afsc.org.

Marion S. Holshouser, 89, died April 2 at her home in Cape Elizabeth, Maine. She was an assistant to the director of the Institute of Labor and Industrial Relations (now the Institute of Labor and Employment Relations), retiring in 1982.

Doris J. Nussear, 81, died April 8 at the Champaign-Urbana Regional Rehab Center, Savoy. She worked at the UI for 22 years, retiring in 1998 as a clerk III from the Office of Admissions and Records. Memorials: First Presbyterian Church, 915 E. Orange St., Hoopeston, IL 60942.

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provide free eye exams for service animals, including dogs. The American College of Veterinary Ophthalmology, which represents a culmination of the development of linguistic systems and vocabularies, serves the public as a representative of the public as a representative of the public.

Film about Pakistan’s Bhutto featured

The story of former Pakistani Prime Minister Benazir Bhutto is one of Shakespearean dimensions. The first Muslim woman elected to lead an Islamic nation, she evolved from a pampered princess to a polarizing politician in one of the most dangerous nations.

Children can sign up for one to four weeks of camp, which will focus on gardening fun. While working in the school’s gardens, children will learn to solve problems and apply academic and social skills. Each day will be spent in whole group and individual literacy instruction as well as time to cool off from the heat with inside learning choices. Lunch will be brought from home with additional items picked from the garden.

Camp will cost $125 for one week, $235 for two weeks, $345 for three weeks and $455 for four weeks. For more information and to register, go to www.ed.uic.edu/ups/.

Staff Advisory Council

Nominations sought for SAC

The Staff Advisory Council is seeking nominations for one representative each from the Clerical/Secretarial Group (EEO 04) and the Technical/Paraprofessional Group (EEO 05) to serve a four-year term beginning July 1.

The council acts in an advisory role and meets regularly with the associate provost for human resources on the Urbana campus. To be considered for the positions, prospective candidates may download petitions from the Staff Advisory Council website www.shr.illinois.edu/sac/election.html beginning April 29. Petitions also may be picked up at the Staff Human Resources Office. Deadline for returning petitions is May 6. Voting will be conducted electronically from May 16-20. Winners will be announced May 21. For more information, contact Jane Dowler, 217-333-3105 or email dowlerj@illinois.edu.

Krafterrn Art Museum

The exhibition runs through May 1. For more information, visit http://galleries.art.illinois.edu/mfa2011.

Community Cinema

A tiny nest made of fingernail clippings. A necklace made of sugar. A molded polyethylene baby crib designed to help prevent Sudden Infant Death Syndrome. These are some of the works of art that are on display at the Master of Fine Arts Exhibition at Kranzler Art Museum. The exhibition of the works of 15 UI students graduating with MFA degrees in studio art or graphic or industrial design presents each artist’s “tangible study” – their chance to use their work to spark dialogue, prompt questions and pose an argument, according to Comal Bakker, the director of graduate studies in the School of Art and Design.

“The careful crafting of these arguments and the explicit mastery of materials evidenced in these creative works reveal the intense commitment that these artists and designers have made to their chosen fields of study,” Bakker said.

The artists: Jung Eun Chang, Qi Chen, Michael Elwell, Karri Anne Fischer, Motoke Furashiki, Anna Gutsch, Katie Latorina, Huang Li, Yi Liao, Kerianne Quick, Moonki Song, Shuo Yang and Anne Youngquist.

Bakker said that this exhibition should not be considered as a “taste test” of the students’ work but rather as a celebration of “the transition from the classroom and the studio into the world.”

Bhutto is featured in the documentary “Bhutto,” which chronicles the tumultuous life and death of the charismatic leader. Her two terms in office, dominated by corruption and scandal, were debated for years.

This year’s conference, “Cultural Heritage Issues in Chinese Heritage Sites; Ethnic Tourism; National Interests in Chinese Heritage Sites,” will include American and Chinese scholars from the UI and other universities. Among the topics: the 19th-century Yunnan famine; cultures on the Yunnan-Sichuan border; Chinese nationalism architecture; contested identities and territory in the Manchus’ Manchuria; local and national interests in Chinese heritage sites; ethnic tourism; spatial reconfigurations and culture branding in Southwest China; and China’s underwater cultural heritage.

All events are open to the public. For more information about the hospital, visit http://champ.uic.edu/.

Veterinary Teaching Hospital

Free eye exams for service animals

Many companion animals perform vital roles in society as service animals, assisting people with disabilities, aiding search and rescue, or contributing to therapy.

To show appreciation for service animals, veterinary ophthalmologists at the UI Veterinary Teaching Hospital will participate in the third annual ACOVO/Mezral National Service Dog Eye Exam. The American College of Veterinary Ophthalmologists, a specialty organization that certifies veterinarians who demonstrate excellence as specialists in veterinary ophthalmology, coordinates this event to provide free eye exams for service animals, including dogs and horses. Board certified veterinary ophthalmologists throughout the U.S. and Canada will donate their services.

To qualify for a free exam during the month of May, service animal owners must register by April 29 at www.ACOV O/nexexam.org. After registering and approval are complete, call Shari Poruba, 217-333-5374 for an appointment.

For more information about the hospital, visit http://vetmed.uic.edu/vth/.

Summer camp, art show announced

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The story of former Pakistani Prime Minister Benazir Bhutto is one of Shakespearean dimensions. The first Muslim woman elected to lead an Islamic nation, she evolved from a pampered princess to a polarizing politician in one of the most dangerous nations.

Illinois Public Media will host a screening and panel discussion at 6:30 p.m. April 26 of the “Independent Lens” documentary “Bhutto,” which chronicles the tumultuous life and death of the charismatic leader. Her two terms in office, dominated by corruption and scandal, were debated for years.

The exhibition runs through May 1. For more information, visit http://galleries.art.illinois.edu/mfa2011.

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‘Freedom Riders’ to be screened April 28

In 1961, a courageous band of more than 400 civil rights activists risked their lives by deliberately violating Jim Crow laws. Traveling together on buses as they journeyed through the Deep South, they were greeted by mob violence and bitter racism, enduring savage beatings and even imprisonment. They called themselves the Freedom Riders.

Illinois Public Media will present a screening event for the new “American Experience” film “Freedom Riders,” including presentation of the film followed by a discussion; sounds of the freedom rides, presented by Hip-Hop Express Productions.

The free event takes place from 7-9 p.m. April 28, in the auditorium of the National Center for Supercomputing Applications. Parking is available in the parking deck at the corner of Goodwin and University avenues.

Panelists will be Sundiata Cha-Jua, a UI professor of African-American studies; Carol Ammons, co-founder of C-U Citizens for Peace and Justice; and ChrisAdrian, Champaign Jefferson Middle School teacher. Will Patter- son, associate director of special projects of the UI Office for Inclusion and Intercultural Relations, will moderate.

“My goal for the discussion is to explore the experience of the Freedom Riders so young people of this generation gain a stronger sensitivity to the times,” Patterson said. He said the discussion will center on what motivated the Free- dom Riders to participate, the effect on their lives, how the Freedom Rides affected America, and what people would ride for today.

“Freedom Riders” will be broadcast on WILL-TV at 8 p.m. May 16. It will include a special segment featuring Central Illinois residents, some of whom will be recorded at the screening, talking about what sacrifices they were willing to make today and for what issues.

Five undergraduate artists to show work

For the first time, undergraduate artists will take over Figure One – the downtown Champaign exhibition space for the UI School of Art and Design – with work that exam- ines the Internet’s effect on real life.

Titled “Everything is Anything Else,” the exhibition fea- tures work from five graduating seniors, all women, who have lived together since their freshman year. They won the opportunity to show their art at Figure One by answering a call for proposals with a written plan to “engage the com- munity in a critical discourse . . . with those ideas central to the Internet – dissemination of knowledge, shared experi- ence and public space.”

Lindsey Snell, who is in the crafts program, focusing on metals, said the exhibition, which opened April 8, began with a traditional display of current work. The content will continually evolve during the five weeks that she and her roommates occupy Figure One.

“We’re really trying to use the space for what it was in- tended,” she said, referring to the work-in-progress ethos that sets Figure One apart from most art galleries. “It’s sup- posed to be a laboratory. I think we’re really interested in how our work is going to change in the space.”

Ria Roberts, one of two new-media artists in the group, said the public will be invited to participate through a series of events that will involve exchanging objects or informa- tion. At one event, participants will share and swap draw- ings; at another, they will share and swap USB drives. The artists also plan to host a “PowerPoint Night” – similar to an open-mic night for musicians, only with high-tech pre- sentations.

“We’re thinking metaphorically about exchanges we have on the Internet, and then making them very tangible iterations,” she said.

Each Thursday, they will present a guest artist sharing a lecture or performance by way of Skype. All events will be digitally documented and archived through a blog and database.

The five artists – Roberts, Snell, Tara Jaggers (new me- dia), Aleia Murawski (painting) and Jillian Rahn (graphic design) – will be working at Figure One noon to 5 p.m. Sun- days and Thursdays, and 5 to 9 p.m. Fridays and Saturdays, through May 13.

Figure One is at 116 N. Walnut St. For more information, visit www.seefigureone.org.

Florian Znanieki Lecture

Sociologist to speak May 5

The department of sociology is hosting its annual Flo- rian Znanieki Lecture at 2 p.m. May 5. The lecture, “When Existing Assemblages of Territory, Authority and Rights Become Unstable,” will be delivered by Saskia Sassen, the Robert S. Lynd Professor of Sociology at Columbia Uni- versity and the Centennial Visiting Professor at the London School of Economics. She also will appear on “Focus” on WILL-AM (580) at 10 a.m. May 5.

Sassen’s research and writing focuses on globalization (including social, economic and political dimensions), in- ternational human migration, global cities (including cit- ies and terrorism), the new networked technologies, and changes within the liberal state that result from current transnational conditions. Her research has focused on the unexpected and the counterintuitive as a way to cut through established “truths.”


Established in 2007, the lecture is in memory of Znaniecki (1908-1958), one of the most influential 20th century soci- ologists. He was a UI professor of sociology for 18 years. See BRIEFS, PAGE 23.
Spring concert is April 30

Jazz fans in the Champaign-Urbana area are accustomed to hearing UI musicians performing around town in small ensembles virtually every night of the week. It’s rare, though, for audiences to hear all the top players perform together in the same venue.

Fans will get that chance April 30 when the UI Concert Jazz Band presents its annual spring concert at Krannert Center for the Performing Arts.

Chip McNellis, professor of jazz studies, said the group will play compositions and arrangements written by the band’s own members, including selections from the band’s latest CD, “Freeplay.” Several of these tunes have garnered attention from the Downbeat Student Awards, ASCAP and the Jazz Education Network.

The band also will perform original arrangements written for jazz vocal major Olivia Flanigan, who will be featured in the concert.

The Concert Jazz Band is the university’s premiere jazz ensemble and features graduate and undergraduate students who are jazz majors in the jazz division of the School of Music.

The concert will begin at 7:30 p.m. in the Studio Theatre of Krannert Center. For ticket information, go to krannertcenter.com or call 217-333-9714.

Infection Biology Symposium

Symposium showcases research

From NIH training grants to research that affects human medicine and public health, in many ways, the UI hosts a rich array of biomedical research activity.

On April 29, a day-long Infection Biology Symposium on this campus and the campus training programs that support it. Speakers from the University of Chicago and from the Urbana campus will give presentations on topics ranging from Pseudomonas and West Nile virus. Program directors will provide insight into infection biology training opportunities and highlight the integrative efforts in infection biology research at Illinois.

The symposium is free, but advance registration is required. It will be held in the Large Animal Clinic Auditorium on the Veterinary Medicine campus. For more information, go to http://vemd.illinois.edu/ope/infectbio.

Krafft Uncorked

Musicians wanted for 2011-12 season

Krafft Uncorked celebrates the diverse musical talents of our region in twice-monthly, lobby performances all season.

Musicians interested in taking the stage between September 2011 and August 2012 should send their name, phone number, email address, a description of the musical group, and a CD with at least three songs by 5 p.m. Aug. 5 to the address below. Acts should be acoustic or low tech; artists will be compensated with a small stipend.

Send information to Tammy Kika, Krannert Center, 500 S. Goodwin Ave., Urbana, IL 61801. Call 217-333-6700 with questions.

FRUIT FLIES, CONTINUED FROM PAGE 1

Tabolism in a manner that mirrors changes that occur in rapidly growing cancer cells. Most types of cancer rely primarily on the rapid breakdown of glucose in a process called glycolysis, which does not require oxygen even when oxygen is available. In contrast, healthy cells tend to use oxidative respiration, a slower and more efficient energy-generating process that occurs in the presence of oxygen. This aberration in energy metabolism observed in cancer cells is called the Warburg effect.

“The discovery of the molecular underpinnings of the meth syndrome in Drosophila — based on a systems biology approach validated by mutant analysis — has the potential to be used in advancing our knowledge about malignant cell proliferation by understanding the connections behind the Warburg effect and cell death,” Seuflitt said.

Since glycolysis uses glucose to produce energy, the researchers tested the hypothesis that sugar metabolism is involved in the “toxic syndrome” spurred by meth. They found that meth-exposed fruit flies lived longer if they consumed trehalose, a major blood sugar in insects that also is an antioxidant.

Human meth users are known to crave sugary drinks, said lead author Lijie Sun. “And now we have evidence that increased sugar intake has a direct impact on reducing the toxicity of meth, at least in flies.”

The researchers found that changes that may cause differences in the critical balance of calcium and iron in cells, and they were the first to identify numerous genes that appear to be involved in the meth-induced dysfunction of sperm formation.

“All in all, this study shows that Drosophila melanogaster is an excellent model organism in which to study the toxic effect of methamphetamine at the molecular level,” said Illinois postdoctoral researcher Kent Walters, an author on the study. The study team also included researchers from the University of Nebraska (Jit Adamec); Purdue University (William Muir, Eric Barker, Jun Xie, Yen Margam, Amber Jannasch, Naomi Diaz and Catherine Riley); Chung Hwa College of Medical Technology, Taiwan (Yueh-Feng Li); Carnegie Mellon University (Jing Wu); Indiana University (Jake Chen and Fan Zhang); and others at the University of Illinois (Hongmei Li and Weizin Sun). Jitje Sun, who graduated from the University of Nebraska (Jit Adamec), completed the research as a graduate student at the University of Illinois. She is currently working as a postdoctoral fellow at Purdue University. She has received the NIH Ruth L. Kirschstein fellowship and the ACS Graduate Research Grant for her research on the toxic effects of methamphetamine.

The team was directed by Jennifer Harrell, an assistant professor of physiology and biophysics at the University of Illinois at Chicago.

The project was supported by the National Institute of Drug Abuse, the National Institute of Diabetes and Digestive and Kidney Diseases, and the National Institute of Mental Health, the National Cancer Institute, the National Heart, Lung, and Blood Institute, the National Institute of Environmental Health Sciences, and the National Institute on Drug Abuse.

UIucrLs

Brian C. Freeman, a professor of cell and developmental biology in the School of Molecular and Cellular Biology, has been awarded the Friedrich Wilhelm Bessel Research Award from the Alexander von Humboldt Foundation.

Recipients are honored for their outstanding research record and invited to spend up to one year cooperating on a long-term research project with colleagues at a research institution in Germany. The foundation grants up to 25 of these awards annually.

Eli Michael Samat, a postdoctoral research associate in the department of entomology, has been named a Rubenstein Fellow by the Entomological Society of America.

The prize was established in 1990 to recognize scientists who work on the Urbana campus who have been awarded the Distinguished Employee Leadership and Team Award. This award is designed to recognize individual employees and teams for their exceptional accomplishments, service and dedication to the university.

The prizes are regarded as a significant recognition of a researcher’s contributions to the university and to their respective fields.

The Ho-Am Prizes are regarded as some of the most prestigious awards in Korea, and are considered to be among the most prestigious in the world.

The prizes are awarded to scientists who have made significant contributions to the fields of science, technology, and the arts.

The Ho-Am Prize in Science is awarded for outstanding contributions to the field of science, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Arts is awarded for outstanding contributions to the field of the arts, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Economics is awarded for outstanding contributions to the field of economics, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Medicine is awarded for outstanding contributions to the field of medicine, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Law is awarded for outstanding contributions to the field of law, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Journalism is awarded for outstanding contributions to the field of journalism, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Education is awarded for outstanding contributions to the field of education, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Sports is awarded for outstanding contributions to the field of sports, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Culture is awarded for outstanding contributions to the field of culture, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Technology is awarded for outstanding contributions to the field of technology, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Environment is awarded for outstanding contributions to the field of environment, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in International Cooperation is awarded for outstanding contributions to the field of international cooperation, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Social Sciences is awarded for outstanding contributions to the field of social sciences, and is considered to be one of the highest honors in Korea.

The Ho-Am Prize in Humanities is awarded for outstanding contributions to the field of humanities, and is considered to be one of the highest honors in Korea.

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The Ho-Am Prize in Humanities is awarded for outstanding contributions to the field of humanities, and is considered to be one of the highest honors in Korea.
Treating newborn horses: A unique form of pediatrics

By Diana Yates

Life Sciences Editor

ike any other newborn, the neonatal horse can be a challenging patient. Its immune system is still under construction, its blood chemistry can vary wildly, and – like most infants – it wants to stay close to mom.

These factors are magnified in the critically ill foal, said Pamela Wilkins, a professor of equine internal medicine and emergency/critical care at the UI and the author of a new paper on equine neonatal intensive care. The paper, in Clinical Laboratory Medicine, offers guidance to the large-animal veterinarian and demonstrates the very real challenges of the job.

Sickness can play havoc with a foal’s blood chemistry, Wilkins said. Teasing out the causes of these changes requires that the veterinarian first understand what is normal in a newborn horse, and then how it can go wrong. To help address current gaps in knowledge, Wilkins regularly conducts blood tests or other tests, such as X-rays and CT scans, on healthy foals to determine how their body chemistry or physiology differ from that of an adult horse – or from that of a sick foal.

“Roughly 3 to 7 percent of newborn foals are going to have some kind of significant health issue in the first month of life,” Wilkins said. “And because our patients can’t talk to us, we have to figure out what’s wrong with them based on physical examination and testing and histories given by their owners,” said Pamela Wilkins, a professor of equine internal medicine and emergency/critical care at the UI and author of a new paper on equine neonatal intensive care.

Baby care

Because our patients can’t talk to us, we have to figure out what’s wrong with them based on physical examination and testing and histories given by their owners,” said Pamela Wilkins, a professor of equine internal medicine and emergency/critical care at the UI and author of a new paper on equine neonatal intensive care.

The paper also offers guidance in the use of portable “point of care” devices to measure and monitor a sick foal’s changing health status. Such tools can offer immediate results in the field and cut costs associated with care. But the practitioner needs to know how to use each device and interpret the results, Wilkins said.

“For example, foals with severe infections can have a very, very low or a very high glucose level,” she said. Low blood glucose could be the result of the foal not taking in enough nutrients from its mother. Or the animal may not be able to make use of the glucose that is already stored as glycogen in its body. It’s the practitioner’s job to find out what’s going on, she said.

To do that, veterinarians must understand the normal fluctuations in levels of glucose and other “biomarkers” of health or disease, Wilkins said.

“Blood glucose levels are going to be different between the normal, healthy adult horse and the healthy foal,” she said. “And they’re going to be different at different stages of the foal’s life.” Hormones, immune cells, red blood cells, protein levels, enzymes and electrolytes all vary between the adult and the infant horse, Wilkins said. And many of these markers change as the foal matures and grows.

The challenges of treating sick foals don’t end there, she said. A horse, even a foal, is a big, precious animal.

“Horses are prey species, so they have to be able to get on their feet and run pretty quickly after birth,” she said. “The older and slower I get, the harder it is to approach them. You spend a lot of time on your knees dealing with them, and they can kick. I get bruises all over my body during foaling season and I have no idea where they’re from because I’m focused on what I’m doing.”

Add a very protective mother to the equation, and the task gets even trickier. “The mom needs to be there,” Wilkins said. “She gets really upset if she’s not.”

So when a foal comes into the hospital for critical care, the mother comes too. And like any mother with a sick baby, she hovers.

“Figuring out a way to keep mom from pulling the IV lines out and getting upset when you’re between her and the baby, that takes some doing,” Wilkins said. “The mothers don’t sleep; they don’t lie down; they don’t rest. They’re on their feet with their heads hanging over their babies most of the time. So it’s tough for them.”

If a foal needs surgery, the medical staff will keep the mom until the foal is back at her side.

Wilkins’ patients may be the progeny of racehorses or performance horses, but many also are just people’s pets, she said. The cost of care can be high, so owners with a strong economic or emotional incentive are most likely to bring a critically ill foal to the hospital.

Despite the many challenges, Wilkins loves the work.

“Foals are just wonderful, wonderful creatures,” she said. “I can’t imagine working with anything else in my life.”