Master gardeners help others learn to grow

By Sharita Forrest
Assistant Editor

S

helley Siuts said she always has loved gar-
dening, but for some unknown reason all her
houseplants seemed to with-
er away. At the urging of some
friends, Siuts joined the UI Mas-
ter Gardeners program. Siuts, an
information technology specialist
in the College of Liberal Arts
and Sciences, began the online train-
ing course in January and soon
resolved the mystery about why her
houseplants were withering: the
water softer-salt she was using was
Toxic to them and she needed
water-softener salt in her tap water.

Begun in 1972, the Illinois Master
Gardener program now has more than 3,473 active mas-
ter gardeners around the state, and
more than 600 people go through the training annually.

To achieve the designation
master gardener, participants un-
dergo 60 hours of training by UI Extension staff or university fac-
culty and staff members, a non-
credit course that covers all facets of horticulture – such as
hobbies, soils, diseases and landscape de-
sign. The training is offered Janu-
ary – May each year and rotates
to sites around the state. The online program, begun in 2002, covers
the same material, but enables stud-
ents to complete the course from home. The Junior Master Garden-
er program offers horticulture and
environmental science education activi-
ties for youth as well. Both programs require that the garden-
ers share their expertise through community service activities.

Monica David, Illinois master
gardener coordinator and an Ex-
tension specialist in the depart-
ment of natural resources and en-
vironmental sciences, administers
the state program by overseeing 78 local program coordinators,
teaches the online curriculum and
assists with plant pathology edu-
cation.

“The real importance of the program is what the master
gardeners give back to the com-
munity,” David said. “A common misconception is that they’re just
people who know a lot about a gar-
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New contrast agents may be on horizon for better medical imaging

By Melissa Mitchell
News Bureau Staff Writer

Research by scientists based at
the UI may lead to the develop-
ment of a new breed of “multi-
modal” contrast agents that could
work within a host of medical im-
aging platforms – from ultrasound
and computed tomography (CT) to
magnetic resonance imaging
and molecular imaging.

Use of these new agents may,
in turn, significantly improve the
diagnostic ability of cancer
scanners, according to Kenneth Watkin, a
professor in the department of
speech and hearing science and the
Beckman Institute’s Advanced Science
and Technology.

Watkin’s findings, the result of
work with former graduate student
Michael McDonald, who is now
completing a postdoctoral fellow-
ship at Stanford University, were
published recently in the journal
Academic Radiology.

“The goal of this work for me
was to be able to make the same
treatments – “meaning that they work
better within a magnetic resonance
imaging machine."

Watkin’s transport system of
choice are nanoparticles of gado-
linium oxide. The best way to visualize
these nanoparticles, Watkin said, is to
think of them as “exceptionally
tiny pouches.” Or better yet, “like
the trailer on a semi-truck. The
the carrier is the targeting body and
the trailer is the little shell that
contains the material.”

To put things in perspective:
The width of a single human hair
measures about 80,000 nanopar-
ticles. In their work with gadolin-
ium oxide nanoparticles, Watkin
and McDonald started by break-
ing nanoparticles down into even
smaller particles. Next, they suc-
cessfully coated the particles with
dextran, a naturally occurring car-
bopol.

The chemical coating – which
Watkin compares to the thin, outer
shell of an M&M candy – func-
tions as a spacer, preventing the
nanoparticle from undergoing
together again. The SMART
system uses this clever trick to
aim at strategic targets. The
therapeutic agent is then
brought to the targeted area. This
allows for greater flexibility in
the delivery of a range of
therapeutic agents.

The nanoparticles diffuse
quietly and gently within the body,
where they remain for far longer
than other forms of targeted ther-
y. This allows for greater
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of therapeutic agents.

In applications as diverse as
cancer treatment, their use in
curing a range of diseases
is expected to provide a
range of treatments with
higher specificity and
efficiency.

Better imaging
Research by Kenneth Watkin, a professor in the department of
speech and hearing science and the Beckman Institute for
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By Sharita Forrest
Assistant Editor

UI President B. Joseph White predicted that FY07, which begins July 1, would be a challenging year for the university in terms of marshaling the $100 million in resources needed to help the UI meet its most urgent needs and objectives. He made his com-
mencement address prior to the budget hearing and during a meeting to approve a budget during a teleconference meeting of the UI Board of Trustees on June 5.

A preliminary budget for fiscal year 2007 was an increase of 5.9 percent over the current fiscal year and was based upon estimated increases of $65 million or 4.5 percent in unrestricted funds and a 6.9 percent increase in restricted funds. Re-
stricted funds – which include revenue from grants and contracts, federal appropriations and private gifts – are designated for spec-
cific uses by the donor, grantor, contractor or state statute. Unrestricted funds can be allocated at the discretion of the university.

White projected a good year in terms of striving toward his five-year/$500 million plan, which will be in place over the next five years. However, “a diffic-
ult but necessary 2.5 percent reallocation” – a more than $20 million decrease, will be made by all “budget holders” next fiscal year, White said. State appropriations are expected to total $2.1 billion, which is $52 million less than the new Academic Facilities Maintenance Fund Assessment – a fee that new students will begin paying this fall to help address the backlog of deferred maintenance projects – will generate $45.6 million. The projected added $10.5 million increase in income from investments, which White called a con-
servative estimate.

Trustee Robert Sperling voiced concerns about the board’s approving the preliminary budget without meeting with faculty and students, who suggested that such items be addressed at regu-
lar meetings in the future. “Out of courtesy to these issues, concerns have a pretty significant issue when you’re approving a budget … and I believe we owe it to every-
one to get a discussion of these matters at a board meeting,” Sperling said.

Chairman Lawrence Epstein responded that the proposal was only a preliminary budget and that the board would review the final budget proposal at its regular September meeting.

The trustees approved a list of 19 retired employees who were proposed for rehire between June 5 and July 13. White said after careful review that he and the chancel-
lores supported the retirees because of “value and urgency.” White said that a policy on re-
tirement would be presented at the board’s July meeting, and added: “The goal is to prevent abuses, to utilize wisely a valuable talent pool for the benefit of our students, our research enterprise and the en-
tire university, and to ensure that the board is in proper control of the situation.”

By Michael Evans
Assistant Editor

The funded ratio of the state’s retirement systems for state workers, schoolteachers, university employees and judges is currently below 100 percent, which is the level needed to help the UI meet its most urgent needs. The state currently faces a $38 billion dollar shortfall in pension funding and unfunded liabilities to 2007 and unfunded liabilities to future benefits to be earned by the employees.

UI President B. Joseph White urged the trustees to review the rehire program, which has spared the lives of her students, our research enterprise and the entire university, and to ensure that the board is in proper control of the situation.

By Mark Reutter
News Bureau Staff/White

The board approved rules requiring state governments to disclose health-care and other non-pension retiree costs will re-

By Craig Chamberlain, communications, education, social work

Inside Illinois

Editor

Or the root of the state's retiree benefits problem has been the diversion of revenues from pension funds to other state programs. Underfunding of pensions can be traced to the publication of OPEB costs may serve to strengthen the state's credit rating, according to economist J. Fred Giertz. “That cannot happen in the case of pensions short of a constitutional amendment. The Illinois school said that while seri-

Lynanne Neufeldt, a professor of educational psychology in the College of Education, as interim dean of the col-
lege from June 16 through July 31 until Mary Kalantzis begins as dean Aug. 1. C. Renee Romano as vice chancellor for student affairs beginning July 1 and Elyne Cole, currently director of em-
ployment services in academic human resources, as associate provost, effective June 16.

Trustee Kenneth Schmidt expressed concern about Romans' $200,000 sal-
ary, a figure that he and Michelle Thomp-
son, board secretary, said often elicits questions. Chairman Richard Herman said that he believed the proposed salary was “the right number” and offered to share the analysis used to derive it.

UI expert: Post-employment costs will darken Illinois retiree system outlook

Bret Durian
Assistant Editor

A dollar short

By sticking to the state’s 1995 law (as modified in 2003) and making full an-
ual contributions, the state could reverse the current pattern and begin to replenish the retirement funds. This in turn could strengthen the state’s credit rating, accord-
ing to Giertz.

The state’s five funds retiree systems for employees and retirees: State Employees Retirement System (SERS), Teachers’ Retirement System (TRS), State Universities Retirement System (SURS), Judges’ Retirement System (RS) and Gen-
eral Assembly Retirement System (GARS). The enrollment in the five systems tailed 666,952, according to the 2007 Illi-

The enrollment in the five systems tailed 666,952, according to the 2007 Illinois State Budget.

Inside Illinois is an employee publication of the Urbana-Champaign campus of the University of Illinois. It is published weekly and free of charge on Thursday of each week by the News Bureau of the campus Office of Public Affairs, administered by the university’s chancellor for public relations. Distribution is by campus mail.

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June 15, 2006

On the Job Rose Julius

At work and at home Rose Julius enjoys helping people. Julius, who is closing in on her 30-year anniversary at the UI, began working in the department of accountancy in the College of Commerce and Business Administration, now the College of Business, in September 1976 after she graduated from Villa Grove High School. Julius also worked for nine years at La Casa Cultural Latina before she moved to her current position in 1990 as a staff secretary in the Office of Minority Student Affairs.

Tell me what you do.

I’m the office manager, so I try to make sure that the main office runs smoothly. In January we moved our tutoring services, OMSE East, to a new location on Gregory Street. They have a large staff of student employees who tutor students in many different subjects. I assist them as needed with financial transactions, I do the payroll, the financial transactions, oversee the student workers and do the Banner transactions for our office here.

Our department coordinates the Campus Student Retention Services for the President’s Award Program, the Educational Opportunity Program and other programs. We coordinate several major events each year, including the Minority Student and Parent Orientation Program, the Mom’s Day Awards Program, two career fairs, and the Mid-Year Congratulatory. We have three federal grant programs, and I work directly with two of them – the Ronald E. McNair Scholars Program and the Student Support Services Program – and assist with the third program, Upward Bound.

What are the Student Support Services and McNair Scholars programs?

The Student Support Services Program assists minority and underrepresented students with their academics and adjusting to the campus, so we have counselors that arrange tutors and other services. The McNair program pairs students with faculty mentors for the summer to do research. We have about 42 students this summer, they’re from all over the world, but mostly from the south. I deal with the financial aspects of the program: I help get their stipend checks and work with their faculty mentors to get their expenses paid.

Each year our staff members organize a national McNair conference in November. We work on it steadily – getting students registered from all across the country, getting the funds in – from about August through mid-November. I deal with the registration and help design the conference booklet and materials.

Even though it’s a whole lot of work, it’s fun to do. When you see the students from universities all over the country presenting their work, it’s worth it.

There are several national McNair conferences, but ours is the oldest and largest. This will be our 13th conference this year. We limit it to about 600 participants, which includes faculty and staff members, undergraduates and recruiters from graduate schools across the country. We hold it at Lake Lawn Resort, Delavan, Wis. It is co-sponsored by the MidAmerica Association of Educational Opportunity Program Personnel, and we originally decided to hold our conference there so that the McNair directors could stay and attend the MAEOPP conference afterward. The MAEOPP conference left, but we stayed because the attendees enjoy the site.

What do you like to do when you’re not working?

And from the beginning I liked being at the university because I knew there were a lot of job opportunities available within the system.

What do you like to do when you’re not working?

I enjoy watching Illinois basketball and am looking forward to another great season. I also try to help out a couple of elderly neighbors with errands and things like that.

-- Interview by Sharita Forrest
Assistant editor

Colorful, rare-patterned male guppies have survival advantage

By Jim Barlow
News Editor, "Staff Writer"

Any owner of a freshwater aquarium likely has had guppies (Poecilia reticulata), those small brightly colored fish with a propensity for breeding. Now guppy populations manipulated in natural habitats in Trinidad have taught researchers an evolutionary lesson on the survival of a rare genetic trait. Reporting in the June 1 issue of the journal Nature, scientists from six institutions around the world have shown that male guppies with the most colorful–least common–patterns are more likely than their more commonly colored counterparts to survive in the wild.

"This study provides very solid support for frequency-dependent survival," said principal investigator Kimberly A. Hughes, a UI animal biologist. "We found that rare color patterns of these guppies had a highly significant survival advantage."

In evolutionary terms, frequency-dependent survival means that individuals with rare gene variants have a survival advantage relative to common variants, simply as a function of being rare. This process is predicted because it leads to the maintenance of many different variants (polymorphism) in the same population.

In field experiments, researchers conducted 34 separate manipulations across 19 replicate pools in three streams over four years. They collected guppies from two tributaries of the Quare River, in Trinidad. Their work allowed them to determine which theory is at work.

"We had two different color patterns at a particular site," Hughes said. "Our methods allowed us to determine that it was rarity itself, and not any specific aspect of the color pattern that had the biggest effect on survival. No matter which pattern was rare or common, the rare type had higher survival."

After 15 or 17 days, depending on location, the researchers again sought and captured all adult-sized guppies. The rare mating type had higher survival at all three sites. Overall, 84 percent of the rare-type males survived, while only 69 percent of the common-type males survived.

"No matter which pattern was rare or common, the rare type had higher survival."

—Kimberly A. Hughes

"It’s possible that guppy predators, which appear to be visually, may be more focused on common color patterns."

"Predators can form ‘search images’ of the most common prey types, and can be less efficient at locating and capturing prey that look different from the norm," she said. "These predators have limited attention. Perhaps this generates a frequency-dependent predation pattern that by its very operation acts to maintain polymorphism."

An alternative theory is that male guppies alter their own behavior in response to the manipulated changes in their common vs. rare numbers, and that the changed behaviors affected predation, the authors wrote. They suggest new at all three sites, study behaviors in both predators and prey to determine which theory is at work.

In earlier studies, Hughes and colleagues had shown that female guppies prefer male guppies with much more pattern than females. They could be, the authors surmised in the Nature paper, that females might prefer the rare males because mating with them lowers their own risk to predation.

The six co-authors with Hughes were Robert Olenstorf, a postdoctoral researcher in the School of Integrative Biology at Illinois; F. Helen Rodd and David Punzalan, department of zoology at the University of Toronto, Anne E. Houde, department of biology at Lake Forest College in Illinois; Carl H. Hurt of the Smithsonian Tropical Research Institute, Naos Marine Laboratory, Panama City, Panama; and David N. Reznick, department of biology, University of California at Riverside.

The work was supported by grants from the Natural Science Foundation to Hughes, Houde and Reznick, and by a grant from the Natural Sciences and Engineering Research Council of Canada to Rodd. During 1996, Hughes also was supported by a National Research Service Fellowship from the National Institutes of Health, and Rodd by a grant from the Center for Population Biology at the University of California at Davis.
Study elicits child’s view of methamphetamine abuse, effects

By Craig Chamberlain
News Bureau Staff Writer

The children’s stories are distressing. They had been left alone and hungry for days, were physically abused, forced to lie to steal from loved ones and to lie to authorities, and had seen their parents “hyper” and delusional. They had been traumatized, many of them, but they had also been resourceful and resilient. All had been taken from their rural hometowns and placed in foster care, with some struggling to adapt and just some doing remarkably well.

They are the children of methamphetamine users, and they were the subject of a study, apparently the first, to get a child’s-eye view of what happens in these families and how it affects the children.

The study will be published in the journal Children and Youth Services Review (CYSR) and is available online at www.phillipscollection.org/html/when-were-young.html (click on Article in Press). The study was to gather information that could help these children and others like them in the often-difficult adjustment to foster care. It was the first major American exhibition of children’s art focusing on the study of the psychological study of art.

“The aim of this study is to help foster parents understand more about what the children have gone through,” said study co-author Teresa Ostler, a social work professor at Illinois who specializes in clinical psychology. “A lot of it involves experiences of trauma, where the child needs huge help in putting things together and in making sense, in knowing that their feelings have reasons.”

The study involved 18 children, ages 7-14, from 12 families. All were involved with the child-welfare system because of their parents’ methamphetamine abuse. At the time of their interviews, they had been in foster care anywhere from five to 39 months, with 15.6 months the average.

The central focus of the study were semi-structured interviews with each child, conducted by a psychiatrist or child clinical psychologist, which lasted about 30 minutes each. All were transcribed and coded by other researchers to produce specific data.

Methamphetamine can have profound effects on the user, Haight said, including extreme irritability, paranoia and heightened sexual arousal. Users can go on days-long highs, followed by days of sleep. These are alternating in very unpredictable, dangerous ways, and the child is there for a lot of it.”

In most of these families, parents also were making the drug, sometimes involving their children in criminal activity, said, and exposing some to toxic fumes and the danger of explosions or fires. “Meth has such a rapid effect that you see parenting just break down literally,” Ostler said. “Families change rapidly in that time, and I think that’s very terrifying for children,” she said.

Yet despite those conditions, the researchers found that when the children were asked about “sad or scary times,” they talked “first most often about the experience of losing their parents, even months later, Haight said. “Most do not even know that their parents and family are involved in methamphetamine.”

The children often also carry a sense of losing their parents, and some carry a strong distrust of authority figures, wanting desperately to be with their parents, even when their parents were under the influence. One child asked who first watched over her mother when she was “sick,” Haight said. They also experience emotional harm from the stigma of being the children of methamphetamine users, many of whom face years in prison.

The children often also carry a strong distrust of authority figures, passed on from their parents as a result of the criminal activity involved, sometimes reinforced by a meth-induced paranoia. Some have been actively socialized into a rural drug culture. “It becomes a huge blockage” to intervention in some cases, Ostler said.

For children raised from an early age with their parents using methamphetamine, even routine aspects of family life, like regular meal and bedtime times, may represent “culture shock,” the authors say.

The researchers are using what SITE METH ABUSE, Page 5

Exhibition on child art inaugurates UI, Phillips collaboration

By Melissa Mitchell
News Bureau Staff Writer

A new partnership between the UI and The Phillips Collection in Washington, D.C., begins this month with a book and exhibition that examine children’s creativity, art and “childhood.”

“When We Were Young: New Perspectives on the Art of the Child” opens June 17 at the Phillips, a sister museum to the Study of Modern Art. The exhibition will travel to the UI’s Krannert Art Museum in the fall.

The exhibition will serve as “a study of modern art called ‘Illinois at The Phillips Collection,’” said study co-author Elizabeth Hutton Turner, senior curator of the UI’s Urbana campus, said the institutional partnership will give students from Illinois and elsewhere direct exposure to resources otherwise unavailable outside a large, metropolitan area. “This is a perfect program for anyone considering a career in museums or in the arts,” Fineberg said. “The academic program’s structure is flexible to accommodate students from many backgrounds and at various stages in their academic careers.” It is also geared toward continuing-education students, including professionals, she said.

The curriculum will emphasize scholarship and critical inquiry, Fineberg said, and students will have the option of participating in internships linking them with staff members from various museum departments.

The “When We Were Young” exhibition will serve as a focus exhibition in conjunction with the June 17 opening of the larger “Klee in America” exhibition at the museum. The Klee show is the first major American exhibition of the artist’s work in two decades.

Fineberg, who is curating the UI’s Urbana campus, said the exhibition will function as “a study of children’s drawings that will focus on issues of authenticity and talent, driven by aesthetics, and the mind of the gifted child.”

The show will spotlight the creative roots of two of the modern period’s most recognizable artists: Klee and Picasso.

The exhibition will be accompanied by a book-length catalog, published by the University of California Press, that will include an introduction and essay by Fineberg and essays by Turner and Ruth Arnheim, a founding figure in the psychological study of art.

Creative partnership

Jonathan Fineberg, the Gutgsell Professor of Art History at the UI, is the founding director of Illinois at The Phillips Collection and co-curator of “When We Were Young: New Perspectives on the Art of the Child.”

By Jonathan Fineberg

The exhibition on child art inaugurates a collaboration between the UI and The Phillips Collection in Washington, D.C., beginning this month with a book and exhibition that examine children’s creativity, art and ‘childhood.’

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Researchers build an ultrasound version of the laser

By James E. Kloeppel
News Bureau Staff Writer

Researchers at the UI and at the University of Missouri at Rolla have built an ultrasound analogue of the laser.

Called a uaser (pronounced WAY-zer) – for ultrasound amplification by stimulated emission of radiation, the instrument produces ultrasonic waves that are coherent and of one frequency, and could be used to study laser dynamics and detect subtle changes, such as phase changes, in modern materials.

“We have demonstrated that the essential nature of a laser can be mimicked by classical mechanics – not quantum mechanics – in sound instead of light,” said Richard Weaver, a professor of theoretical and applied mechanics at Illinois.

To make a uaser, Weaver, Illinois research associate Oleg Lobkis and UMR physics professor Alexey Yamlov begin by mounting a number of piezoelectric transducers on a block of aluminum, which serves as an elastic, acoustic body. When an external acoustic source is applied to the body, the oscillators synchronize to its tone. Like fireflies trapped in a bottle, the oscillators synchronize to the frequency of the source.

In the absence of an external source, the tiny ultrasonic transducers become locked to one another by virtue of their mutual access to the same acoustic system.

“They phases must be correct also,” Weaver said. “By carefully designing the transducers, we can assure the correct phase and produce stimulated emission. As a result, the power output scales with the square of the number of oscillators.”

The uaser more closely resembles a “random laser” than it does a conventional, highly directional laser, Weaver said. “In principle, however, there is no reason why we shouldn’t be able to design a uaser to generate a narrow, highly directional beam.”

Optical lasers are useful because of their coherent emission, high intensity and rapid switching. These features are of little value in acoustics, where coherence is the rule and not the exception, intensity is limited by available power, and maximum switching speeds are limited by moderate frequencies.

Nevertheless, users may be useful. With their longer wavelengths and more convenient frequencies, users could prove useful for modeling and studying laser dynamics. They could also serve as highly sensitive scientific tools for measuring the elastic properties and phase changes of modern materials, such as thin films or high-temperature superconductors.

“Uasers can produce an ultrasonic version of acoustical feedback – an ultrasonic howl similar to the squeal created when a microphone is placed too close to a speaker,” Weaver said. “By slowly changing the temperature while monitoring the ultrasonic feedback frequency, we could precisely measure the phase change in various materials.”

Weaver described the uaser and presented his team’s latest experiments at the annual meeting of the Acoustical Society of America, held at the Rhode Island Convention Center in Providence, June 5-9.

The work was funded in part by the National Science Foundation.
Summer jazz concerts, festival announced

Jazz takes center stage in June and July at the Krannert Center for the Performing Arts and at Allerton Park's new Music Barn, with the School of Music's Summer Jazz Festival 2006, June 29-July 14 on the UI campus. The UI Concert Jazz Band and Studio Orchestra, directed by University High School students interviewed Younger children in the community of about 2,000 is large enough to be diverse, yet small enough so that all Jews who make the effort can get to know one another. Students in the Uni High class of 2009 conducted the interviews with local community and with UI students who serve as their "conversation partners," talk about the future, and exchange ideas. To enroll, contact Joan Fiesta, 333-1216, or jfiniesta@uiuc.edu. More information is available online at www.dps.uiuc.edu or www.radkids.org.

Iowa Summers in the City, Chicago gallery of the UI's Urbana-Champaign campus. This is the second time NCSA has helped bridge the television and radio capabilities in the city and across the campus. The NCSA building is the only campus site for the educational, physiological, and pathological conditions."

Peter Garlick, a professor of animal sciences at the UI, said, "We can obtain very accurate information about how protein synthesis rates alter in response to different nutritional, physiological, and pathological conditions." To learn more about the research and the facility, contact Garlick at 244-2870.

Smithsonian Institution Web series to focus on museum studies

Emerging developments in elite museum studies are now only a click away for UI faculty and students and community members.

The work and world of the museum, as seen through the lens of one expert at a time, is now available to anyone at Smithsonian Institution's new online lecture series. The institute also runs a Conversation Partners Program to keep abreast of emerging developments in education pertaining to many aspects of their work, from exhibit design to outreach in schools.

For more information about the lecture series, contact Bruce C. Craig, Smithsonian Center for Education and Museum Studies at 202-357-3148 or bcraig@si.edu.

Visiting Japanese college students

Summer host families sought

Total immersion in American English is the goal one Illinois summer program sets for its visiting Japanese college students.

Summer immersion involves more than classroom instruction, says Van Horn, a lecturer in the Intensive English Institute at the UI who is coordinating the institute's summer language program. To promote fluency, the program arranges home stays for students who serve as "conversation partners," talk with them and exposing them to the community and to work experiences.

The Homestay Program application is available online at http://www.azhomestay.com/hostfamapp.htm. To promote fluency, the program offers home stays for students who serve as "conversation partners," talk with them and exposing them to the community and to work experiences.

For more information, contact Bruce C. Craig, Smithsonian Center for Education and Museum Studies at 202-357-3148 or bcraig@si.edu.

The festival finale, July 1 at Allerton Park, will feature performances by the UI School of Music's Summer Jazz Festival band and members, with guest trombonist Slide Hampton. A $25 ticket includes the concert and one-night of camping, with reservations, call 333-3287 or 762-7011. Booking the festival are concerts by the music school’s Summer Jazz Festival band and members, with guest trombonist Slide Hampton. A $25 ticket includes the concert and one-night of camping, with reservations, call 333-3287 or 762-7011. Booking the festival are concerts by the music school’s Summer Jazz Festival band and members, with guest trombonist Slide Hampton. A $25 ticket includes the concert and one-night of camping, with reservations, call 333-3287 or 762-7011.
entries for the calendar should be sent 15 days before the desired publication date to Inside Illinois Calendar, News Bureau, 601 S. Wright St., Suite 520 East, Champaign, IL 61824, or to insideil@uiuc.edu. The online UIUC Events Calendar is at www.uiuc.edu/academic.

Note: $ indicates Admission Charge

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IMAGING, CONTINUED FROM PAGE 1

the neutrons and emit alpha and gamma rays, and that energy – sent out from an accelerator – is what can be used to kill cancer cells.

“Those little gadolinium particles capture neutrons at four times a greater rate than boron, (boron is currently used). This means it (gadolinium oxide) is potentially a multimodal agent” … in other words, “a contrast agent that would work with a number of different medical imaging techniques.”

Among the most promising applications for using gadolinium oxide nanoparticles as a neutron capture therapy agent is in the treatment of brain tumors.

“Treating brain tumors – typically called glioblastomas – is very difficult,” Watkin said. “Irradiating them is really difficult because you alter all kinds of tissues in the brain. And getting little bubbles like this or other kinds of contrast agents into the brain is difficult because the holes that allow plasma and other substances to flow through the brain are very small – about 25 nanometers. With such a small opening, ‘you’ve got to have something pretty tiny to get in there. So these little gadolinium oxide particles can be really useful.”

Watkin noted another reason researchers initially chose to investigate the effects of adding a dextran coating was because it makes it possible to “target” the nanoparticle. “By that, we mean we put a ligand – an organic substance, such as a monoclonal antibody – on the outside that searches out the bloodstream. Antibodies seek their antigens. So we target something to seek out a substance that’s expressed by cells – cancer cells, in my work. Cancer cells express particular antigens to which an antibody attaches itself. So, if we put the appropriate glioblastoma antibody on the end of a particle, as it passes through the bloodstream it will attach to the tumor cell.”

It could be years before the research results in diagnostic or treatment methods used in clinical practices. “We have a lot of potential research directions ahead of us,” he said. “I think one of the directions this is going to take is exploring its use at the molecular level with various types of other high-resolution imaging systems. And if it’s of interest for use within humans in the end, all of the pharmacological attributes of this will have to be explored.”

“That is … where do the nanoparticles go? What are its effects? How long does it last?”

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**CALENDAR, FROM PAGE 7**

**Italian Table**
Italian conversation Mondays at noon, Intermezzo Cafe, KCFA.

**Lifetime Fitness Program**
6-8.50 a.m. Monday-Friday. Kinesiology, 244-3983.

**Normal Person’s Book Discussion Group**

**PC User Group**
For schedule, call 244-1289 or 244-1843.

**Scandinavian Coffee Hour**
4-6 p.m. Wednesday. The Bread Company, 706 S. Goodwin Ave., Urbana.

**Women’s Club**
11:45 a.m.-1 p.m. third Wednesday monthly. Illini Union. More info: 333-1374, xmdavis@uiuc.edu or www.uiuc.edu/secretariat.

**The Deutsche Konversationsgruppe**
1-3 p.m. Wednesday, The Bread Company, 706 S. Goodwin Ave., Urbana.

**Lifeguards**
Voice.

**Poetry and fiction reading**
7:45 p.m. Thursday of each month. The Bread Company, 706 S. Goodwin Ave., Urbana.

**Scandinavian Coffee Hour**
244-1843.

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**For schedules**: The Academic Human Resources website has a current list of all University events. To see the current calendar of academic and non-academic events, go to www.uiuc.edu/calendar. For more information, contact the Office of Telecommunications.

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**IN MEMORIAM**

Mildred Alice Baker, 87, died June 2 at her home in Arcola. Baker worked at the UI Film Center for 25 years, retiring in 1988 as a data entry operator II. Memorials: Lincoln Hospice of Sarah Bush Lincoln Health System, 1000 Health Center Drive, P.O. Box 372, Mattoon, IL 61938.

Richard Mather Forbes, 90, died June 7 at Meadowbrook Health Care Center, Urbana. Forbes taught in the department of animal sciences for 36 years. He was an associate professor of animal nutrition from 1949 to 1955, a professor of animal nutrition until 1962 and then a professor of nutritional biochemistry until he retired in 1985 as professor emeritus.

C. Dale Greffe, 97, died May 31 at Provena Covenant Medical Center, Urbana. Greffe was a professor of mechanical engineering from 1943 until his retirement in 1975. Memorials: Lions Clubs International Foundation, 300 W. 22nd St., Oakbrook, IL 60523-8842.

N. Frederick Nash, 70, died May 29 at his home in Urbana. Nash was an associate professor of library administration and curator of rare books and head of rare books and special collections. He retired from the UI Library in 1997. Memorials: Chapel of the Good Shepherd Lutheran Church, Champaign, IL 61820.

Ruby A. Mosley, 82, died May 29 at Provena Covenant Medical Center, Urbana. Mosley worked at the UI for 22 years, retiring in 1989 as a telephone operator I with the Office of Telecommunications. Memorials: Good Shepherd Lutheran Church, Champaign, IL 61820.

Fay M. Sims, 89, died June 6 at Clark-Lindsey Village, Urbana. Fay was professor of farm management at the UI’s College of Agriculture from 1957 to 1986. He was trust relations associate at the UI Foundation from 1987 to 1996. He retired in 1996.

Memorials: FarmHouse Foundation, 11020 NW Ambassador Drive, Suite 330, Kansas City, MO 64153.

James William Westwater, 86, died March 31 at Meadowbrook Health Care Center, Urbana. Westwater was a professor of chemical engineering at the UI for many years. He was the head of the chemical engineering department from 1962 to 1980 and retired in 1988. Memorials: American Stroke Association, Greater Midwest Affiliate, 3816 Poysehre Circle, Chicago, IL 60674.

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