

Mizzou Weekly

Pet Impacts
Conference focuses on human-animal interactions.
Page 3



Lasting Damage
Research probes workings of a coke addict's brain.
Page 7

Show-Me Solutions
Getting a grip on the greenhouse gas debate.
Page 2

Oct. 1, 2009
University of Missouri

In his element

CARING & COMMITTED

Chemistry Professor John Adams is a master teacher

(Editor's note: Quotations in italics are statements from Prof. Adams' student evaluations.)

It's 6:15 p.m., and after a 13-hour day, chemistry Professor John Adams will soon preside for two hours at a study table in Memorial Union's Bengal Lair.

He needs time to prepare a presentation for next week's national chemistry conference, but instead, Adams selects a table by the entrance and, coffee cup in hand, waits for his students to arrive.

Adams offers extra help every Wednesday to students of Physical Chemistry II, a tough course in basic quantum chemistry that explains in greater depth the concepts students learn in freshman chemistry classes.

On the border between physics and chemistry, quantum chemistry provides the mathematics to describe the fundamental behavior of matter at the molecular level. There's no dancing around it; this basic knowledge is required for advanced study in chemistry.

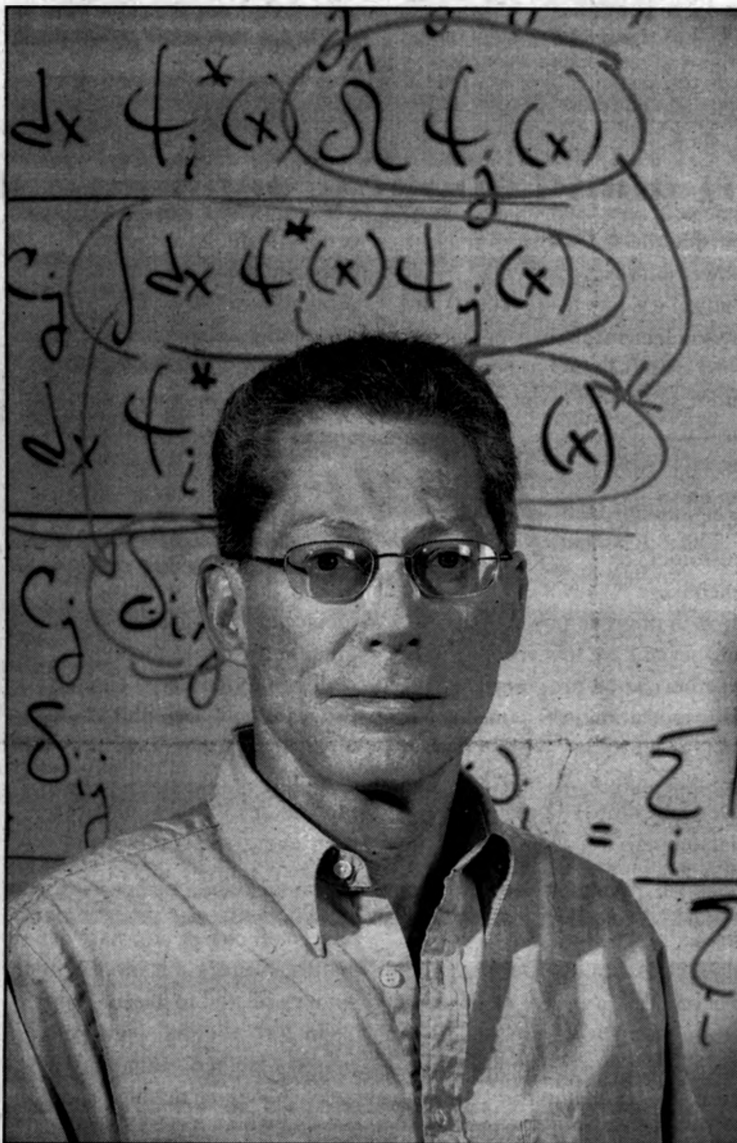
"He loves his job, and it flows through his teaching"

Study groups were becoming popular when Adams was a college student in the era of disco dancing. He joined one for a few sessions, then realized he was spending most of his time explaining concepts to the group, which, of course, he's still doing.

Although the hum of subdued voices fills the room, it's quiet at the chemistry table as three students mathematically investigate the small-scale world of atoms and molecules. Seniors Drew Backer, Collin Mayhan and Amie Norton write formulas on paper or enter numbers on electronic calculators.

While the students work, a biology major and former student of Adams walks near the group and overhears conversation on atomic units, spin states, vectors, electrons, quadratic equations and nanometers. He pauses to give Adams and group a friendly greeting: "Wow. This is brutal. I want nothing to do with it."

The quantum chemistry students stay on task, barely glancing from their assigned class problems. They study the numbers, shake their heads,



Rob Hill photo
Students regularly give highest-level evaluations to chemistry Professor John Adams for his teaching, but few realize the extent of his dedication. This year he received the University of Missouri President's Award for Teaching Excellence.

erase or delete and try again. This is the class that makes students realize they should have been more serious about learning calculus, Adams says.

Adams' expertise is molecular dynamics. His research — computer simulations of how atoms and molecules interact — complements information obtained through bench experiments and helps predict results. He is known for encouraging undergraduate students, including freshmen, to join the research and then guiding them through publishable results in their first year.

"Great lectures; they keep me awake at 8 a.m., so they must be good"

Adams teaches hard material with helpful analogies, a technique he has used for years. At the study table, he resurrects his knowledge of ballroom dancing to draw a diagram and explain the movements of electrons.

Alumnus Nicholas Materer, BS '90, now a chemistry associate professor at Oklahoma State University in Stillwater, remembers similar examples of Adams' clear and patient explanations of abstract concepts in quantum chemistry and spectroscopy. In Materer's

SEE Adams on Page 5

MU-Cerner partnership is university's largest corporate capital investment

After more than a decade of collaborating on some of the nation's first efforts to develop electronic patient medical records, the University of Missouri and Cerner, a leading supplier of healthcare information technology, announced plans Sept. 28 to expand their collaboration by creating the Tiger Institute for Health Innovation that will pursue revenue-generating and cost-saving initiatives.

"We intend to leverage the collective capabilities and resources of Cerner and Mizzou to create a national model for excellent patient care, reduced health care costs, and leadership in next-generation health sciences

and technology sector jobs," said Gary Forsee, president of the University of Missouri System.

"This enhanced collaboration will help us achieve significant hospital funding requirements while positioning us among the top health systems in the country for advanced patient-centered health care information technology." Forsee said the new institute is a wholly owned university entity.

"The Tiger Institute is expected to have an estimated \$100 million positive impact to MU through Cerner's investment, savings and future expected revenue through innovations created in this institute over 10 years," he said.

"This is the largest capital

investment from a corporation in this university's history." Forsee added that "it will be transformative because it will create one of the nation's most digitized health systems and in a few years begin to achieve up to \$1 billion in annual economic benefit to the state."

Neal Patterson, chairman, CEO and co-founder of Cerner, said: "Cerner and the University of Missouri have a successful history as partners in innovation. The Tiger Institute is possible because of the close alignment between two Missouri organizations that want to see the latest technological innovations put into practice, that want the health care system to be more efficient and effective,

and that want to contribute to the economic prosperity of our home state. This partnership will be held up as a model for the modernization of our current health care system."

Early Tiger Institute initiatives will include Cerner's capital investment in new software, services and personnel to support these inter-related areas:

- Activities required to achieve stimulus funding for federal government-mandated IT compliance requirements for electronic medical records;
- Expansion of research and development collaboration between Cerner and MU that already has produced the supportive software and processes for the "Medical Home"

model of care, an innovative solution for the treatment of chronically ill patients;

• Advanced analytics will support quality outcome initiatives throughout the health system;

• Digital infrastructure that connects all of the University of Missouri Health Care hospitals, clinics and pharmacies — and then extends to health care providers in the Columbia area and across the state of Missouri. When this statewide automated IT health care information network is in place, Missourians could save up to \$1 billion a year in health care costs.

The creation of the Tiger Institute is a testament to the

SEE Cerner on Page 8

Deaton will hold staff town-hall meeting

Chancellor Brady Deaton will hold a town hall meeting with MU staff members and the Staff Advisory Council from noon-1 p.m. Oct. 6 in the Bond Life Sciences Center's Monsanto Auditorium. Deaton will provide staff with a campus update. During an open question-and-answer session, staff will have the opportunity to voice concerns or questions to the chancellor.

Members of MU's Staff Advisory Council, which is sponsoring the meeting, stress that it is a time for staff to ask face-to-face questions of the

administration. The council hopes to have a live-streaming video of the meeting available for those who cannot attend. Staff members who are not comfortable speaking at the meeting can bring their questions and concerns to council members who will speak on their behalf. For more information, e-mail the Staff Council office at staffadvisorycouncil@missouri.edu or call 882-4269.

Training benefits staff

Human Resource Services will hold its annual training conference for staff from Oct. 6-8 at Memorial Union. The event has been a great success in past years, organizers say, and more than 50 sessions and workshops on topics beneficial to all employees are scheduled. Learn more about supervision, management, leadership, conflict management, general office skills, career advancement and personal development. All the sessions are free, and registration is required. A course schedule and registration information is online at hrs.missouri.edu.

A chestnut celebration

The Missouri Chestnut Roast — to be held this year on Saturday, Oct. 17 at MU's Center for Agroforestry near New Franklin, Mo. — is a harvest festival, a family day out, a Missouri specialty-product showcase, an agroforestry field day and a history lesson.

It will also be an occasion to dedicate the fully rehabilitated Thomas Hickman House, built in 1819 at what is now the agroforestry center. Tours of the home, which is one of the state's oldest intact brick houses, will take place throughout the day.

The star attraction is a little smaller: the chestnut. The Center for Agroforestry supports the nation's most comprehensive research program for developing the Chinese chestnut and black walnut as nut crops. The event will include samples of fire-roasted, Missouri-grown chestnuts, farm tours to see chestnuts growing, sales of chestnut trees and a demonstration of cooking with chestnuts.

Activities begin at 10 a.m. and continue until 4 p.m. with live bluegrass music, food concessions, chestnut cooking displays and local vendors

What is Missouri doing about greenhouse gases?

By Jan Weaver, director of MU's environmental studies initiative and research assistant professor of biological sciences. (Reprinted with permission from the October issue of MU Environmental Network News.)

What is Missouri doing about greenhouse gases? In 2008 Missouri produced around 137 million tons of carbon dioxide equivalents — about 23 tons per person (5.9 million people) and .0006 tons per dollar of Gross Domestic Product (\$238 billion). This puts us pretty much in the middle of greenhouse gas production nationally. Regionally we produce more greenhouse gases than Iowa, Kansas, Tennessee, Oklahoma, Arkansas and Nebraska, but less than Illinois and Kentucky. Between 50 percent and 60 percent of our greenhouse gases come from coal-fired plants which produce electricity, principally for residential use. A little more than half of that energy comes from coal plants inside the state. The remainder comes from coal-fired plants

outside the state or from nuclear power (almost 6 percent), natural gas (about 3 percent) and hydroelectric (about 1 percent). Less than 0.2 percent comes from biomass, solar or wind. Fourteen utilities offer green pricing on clean energy to their customers to encourage growth of green power sources and seven have low-income weatherization programs. Transportation is responsible for 30 percent of our greenhouse gas production. Missourians use 559 gallons of gasoline per person per year, 17 percent more than the U.S. average and more than is used in any neighboring state, though Iowa comes pretty close at 557 gallons per person per year. We are 11th in ethanol production and have 62 ethanol and 33 biodiesel stations in the state. The remaining 15 percent to 20 percent of our greenhouse gases come from industry, agriculture, home heating and commercial sources.

In 2002 the Missouri Department of Natural Resources

or DNR (the state agency responsible for environmental protection in Missouri) completed a state climate change action plan. On the EPA Web site, it shows we joined the Greenhouse Gas Registry, but set no greenhouse gas target or cap, and had no activity on electricity disclosure or greenhouse gas reporting.

The DNR Energy Center (www.dnr.mo.gov/energy/index.html) has reports on our greenhouse gas production, biomass feedstock availability, solar energy resources, wind energy resources, incentives for green energy, residential energy efficiency, alternative fuel station locators and several other sources related to green energy.

In 2007 the state legislature passed a law requiring electric utilities to offer net metering for systems up to 100 kilowatts that generated electricity using wind, solar, thermal or hydroelectric energy. The same year it also passed legislation allowing municipal landfills to become

bioreactors (adding water and oxygen to the waste to generate methane) so they could use the methane from decomposition of organic matter for electricity generation instead of using fossil fuels.

In 2008, 1.77 million citizens of Missouri upped the ante and passed Proposition C, the Missouri Clean Energy Initiative, which required investor owned utilities to derive 2 percent of their energy from renewable sources such as solar, wind, biomass and hydropower by 2011, and 15 percent of their electricity from clean sources by 2021. The initiative passed with a 66 percent majority.

Twenty Missouri cities and towns (out of 973 nationally) have signed the Mayor's Climate Protection Agreement agreeing to: 1) meet or beat the Kyoto Protocol targets (7 percent reduction from 1990 levels by 2012); 2) urge their states and the federal government to enact policies and programs to meet or beat the targets; and 3) urge the US Congress to pass bipartisan greenhouse gas reduction that would establish a national

emission trading system. The cities are Clayton, Columbia, Creve Coeur, Florissant, Gladstone, Houston Lake, Kansas City, Kirkwood, Lake St. Louis, Liberty, Maplewood, Overland, Parkville, Pleasant Valley, Raytown, Riverside, St. Louis, St. Peters, Sunset Hills and University City. Kansas City appears to have gone the furthest in meeting these obligations (www.kcmo.org/manager.nsf/web/cpp), but nine of the other cities, including Columbia, have taken at least a few steps towards compliance. For comparison, Illinois (41 cities) and Iowa (35 cities) are ahead of us, Kansas (12 cities), Tennessee (6 cities), Kentucky (6 cities), Arkansas (4 cities), Nebraska (3 cities) and Oklahoma (3 cities) are behind. Ten Missouri universities and colleges (out of 650 nationally) have signed the College and University President's Climate Commitment. The commitment requires them to: 1) initiate a plan to achieve climate neutrality by setting up the necessary institutional structures; 2) complete a comprehensive inventory of greenhouse gases (a "carbon footprint"); and 3) develop an institutional plan to become carbon neutral. The

SEE Forum on Page 7

forum

Chancellor's Town Hall meeting with Staff

Sponsored by MU Staff Advisory Council

- Tuesday, Oct. 6, 2009
- Monsanto Auditorium in the Christopher S. Bond Life Sciences Center
- Noon - 1 (no food or drinks allowed in auditorium)
- If unable to attend and would like questions presented, please email the Council office at staffadvisorycouncil@missouri.edu or contact a member of the Staff Advisory Council

The Town Hall may be viewed live via the internet. Visit the SAC website (staffcouncil.missouri.edu) for details.

MizzouWeekly

Volume 31 No. 6

A publication for the faculty and staff of the University of Missouri, published every Thursday during the academic year and twice a month during the summer by Publications and Alumni Communication, a department of University Affairs, 407 Reynolds Alumni Center, 882-7357. News deadline is noon Thursday the week before publication. Annual subscriptions are available for \$30.

Editor John Beahler

Advertising Marina Shifrin, Scott Reeter

Photographers Rachel Coward, Nicholas Benner, Rob Hill

Designer/writer Sue Richardson

offering specialty agricultural products Children will have plenty to keep them busy with an edible-insect exhibit, a fact hunt and a straw bale maze. for Missouri and Midwest landowners. Guided bus and walking tours of the research center will be available for those interested in learning more about growing chestnuts and other agroforestry practices.

Prepping for the 'Huskers

The Nebraska Cornhuskers will roll into town Thursday, Oct. 8, for an 8 p.m. game at Faurot Field to be broadcast on ESPN, and campus officials have

prepared a detailed plan to deal with the traffic congestion and a severe parking crunch. Thousands of students and employees who park in lots near the stadium and University Hospital will relocate to other parking lots and garages closer to the heart of campus no later than 4 p.m. Oct. 8.

In addition to the normal campus hubbub, tens of thousands of fans, television crews and hordes of media will be added to the mix on game day. One way to avoid that congestion would be for departments to work with their staff to adjust schedules or use vacation or

personal days to take off a few hours early. "We strongly encourage people to try to vacate the campus by 3 p.m. on Oct. 8," says Karen Touzeau, assistant vice chancellor for human resources.

"The campus is not closing, and we are not cancelling classes. We are encouraging departments to consider operating with minimal staffing levels on that afternoon to allow employees to get out of the area and avoid the potential traffic congestion," Touzeau says. An update on game-day guidelines, parking and tailgating is available online at www.mizzougameday.com.

Jack Watring, chief of the MU Police Department, says that his officers and officers from city, county and state law enforcement agencies will be working hard on game day to ensure everything goes as smoothly as possible. "Our first priority is safety," he says. "We want to get everyone into the stadium safely. We want them to stay safe at the game, and we want to get them home safely. It's a complicated job sometimes but we have been doing it for a long time."

A matter of degree

Chancellor Brady Deaton received an honorary degree

from the Prince of Songkla University in Hat Yai, Thailand earlier this month. Founded in 1967 by the king of Thailand, it is considered one of the top universities in Thailand and Asia. It has a student body of more than 24,000 students.

Deaton, who speaks Thai fluently, spent two years teaching vocational agricultural in Nan, Thailand in the early 1960s as a Peace Corp volunteer. During his most recent visit to Thailand, Deaton gave a speech to the College of Education on "Transforming Leadership in a Multicultural Society."

Human-animal insights

INTERACTIONS

Pets have an impact on people and their health

Today, researchers find that man's best friend could foster not only a sense of companionship, but also an improvement in health. The effects of human-animal interaction have been well studied and are now the theme of an upcoming conference hosted in part by MU. The two-part conference, titled "Human-Animal Interaction: Impacting Multiple Species," will take place Oct. 20-25 at the Westin Crown Center Hotel in Kansas City, Mis.

There hasn't been a conference of this kind in several years, says Rebecca Johnson, MU professor and director of the conference. This year, she decided, would be different. The conference is open to anyone hoping to gain insight on the human-animal interaction (HAI) field. "Human-animal interaction has wide appeal to people in all professions and in all fields," she says.

Even after years of researching the topic, Johnson is excited to witness the assimilation of scientists in the human-animal interaction field "with people who are working with animals to make people's lives better," she says. According to Johnson, human-animal interaction is a "science, not just an art," and that scientific evidence is showing that this type of interaction may decrease obesity over the span of a lifetime, and offers the opportunity for humans to better understand psychological principles like cooperation and fairness.

A number of national researchers will present on topics ranging from what humans can learn from playing with animals, to the impact of human-animal interaction on obesity. The conference will

include a special presentation by Marty Becker, a veterinarian often featured on ABC's "Good Morning America," and one of the authors of *Chicken Soup for the Pet Lover's Soul*. But what would a conference on human-animal interaction be without animals? Thankfully, MU's Mule Team will make an appearance on Friday.

MU, the International Society for Anthrozoology (ISAZ), and the Research Center for Human-Animal Interaction (ReCHAI) are co-sponsoring the event. More information is available online at rechai.missouri.edu/isaz_hai09htm.

— Claire Hanan

Bipolar disorder could be age-related

GROWTH FACTOR

Manic depression might not be lifelong disorder

Bipolar disorder, or manic-depression, causes severe and unusual shifts in mood and energy, affecting a person's ability to perform everyday tasks. With symptoms often starting in early adulthood, bipolar disorder has been thought of traditionally as a lifelong disorder. Now, MU researchers have found evidence that nearly half of those diagnosed between the ages of 18 and 25 may outgrow the disorder by the time they reach 30.

"Using two large nationally representative studies, we found that there was a strikingly high peak prevalence of bipolar disorders in emerging adulthood," says David

Cicero, a doctoral student in psychological sciences. "During the third decade of life, the prevalence of the disorder appears to resolve substantially, suggesting patients become less symptomatic and may have a greater chance of recovery."

MU researchers found an "age gradient" in the prevalence of bipolar disorder, with part of the population appearing to outgrow the disorder. In the survey results, 5.5 to 6.2 percent of people between the ages of 18 and 24 suffer from bipolar disorder, but only about 3 percent of people older than 29 suffer from bipolar disorder.

"Young adults between the ages of 18 and 24 are going through significant life changes and social strain, which could influence both the onset and course of the disorder," says Ken

Sher, professor of psychological sciences and co-author of the study. Researchers predict the prevalence of the disorder also could be affected by brain development, particularly the prefrontal cortex, which is thought to control perception, senses, personality intelligence and reactions to social situations.

"The maturing of the prefrontal cortex of the brain around 25 years of age could biologically explain the developmentally limited aspect of bipolar disorder," Cicero says. "Other researchers have found a similar pattern in young adults with alcohol or substance abuse disorders."

The study was co-written by Cicero, Sher and Amee Epler, a doctoral student in psychological sciences.

CAMPUS FACILITIES
Sustainability Office
sustainability.cf.missouri.edu

School of Medicine

Jeff Belden, Jane McElroy, Dan Vinson, Shannon Canfield
MU sustainability champions

When this team of researchers isn't studying the best ways to improve care for patients with chronic illnesses, they are improving their own health and the environment while biking to work.

Every little bit helps. Thanks for doing your part!

calendar



Concerts & Plays

Friday, October 1

STUDENT ENSEMBLE: The Symphonic Wind Ensemble will perform at 8 p.m. in the Missouri Theatre. Suggested donation: \$5.

Sunday, October 4

MUSIC FESTIVAL OPENING: The Department of Music's "Haydn and Mendelssohn: Bicentenary Musings" festival opens at 7 p.m. today in the Reynolds Alumni Center with a concert and a lecture, "Mr. Outside and Mr. Inside," by music Professor Michael Budds. For ticket information, call 882-2606 or e-mail waltonrm@missouri.edu.

Monday, October 5

FACULTY RECITALS: The Faculty Chamber Concert will perform at 8 p.m. in Whitmore Recital Hall. Suggested donation: \$5. They also will present noontime concerts in the Lee Hills Hall lobby today and tomorrow, in the Ellis Library main floor reading room Oct. 7 and in the University Hospital main lobby Oct. 9.

Wednesday, October 7

STUDENT ENSEMBLE: The University Philharmonic will perform works by Haydn and Mendelssohn at 8 p.m. at the Missouri Theatre. Suggested donation: \$5.

UNIVERSITY THEATER SERIES: *The Grass Harp*, a musical based on a Truman Capote novel and directed by James Miller, will be presented at 8 p.m. today and Oct. 8-10, and at 2 p.m. Oct. 11 in

Rhynsburger Theatre. For ticket information, call 882-PLAY.

Friday, October 9

FACULTY RECITALS: The Faculty Chamber Concert will perform Haydn chamber works and Mendelssohn piano and chamber works at 8 p.m. in Whitmore Recital Hall. Suggested donation: \$5.

Conferences

Tuesday, October 6

2009 TRAINING CONFERENCE: Human Resource Services annual training conference for MU staff features nearly 50 presentations and topics of interest to staff in the Memorial Union from 1-5 p.m. today, 8:30 a.m.-5 p.m. Oct. 7, and 8:30 a.m.-noon Oct. 7.

Friday, October 9

NURSING CONFERENCE: The Sinclair School of Nursing hosts a two-day Perioperative Clinical Update conference at the Peachtree Banquet Center in Columbia. More information is available online at nursingoutreach.missouri.edu or by calling 882-0216.

Courses & Workshops

Friday, October 9

ET@MO WORKSHOP: "Teaching Feedback With MoCAT and MyCourse" will be offered from noon-1 p.m. in 226 Heinkel Building.

Exhibits

BINGHAM GALLERY: "(Muse) ings: Art of Artist Teachers" features works in many media by graduate and undergraduate students in MU's art education program from Oct. 5-15. An artists' reception will be held from 5-7 p.m. Oct. 15. The museum, located in A125 Fine Arts Building, is open from 8 a.m.-5 p.m. weekdays.

MUSEUM OF ART & ARCHAEOLOGY

- "The Fine Art of Living: Luxury Objects From the East and West"
- "The Faces of Warhol," featuring "working" photographs by artist Andy Warhol, is on display through summer 2010.
- "The Sacred Feminine: Prehistory to Post-Modernity" is on display through December 24.

The museum, located in Pickard Hall, is open from 9 a.m.-4 p.m. Tuesday-Friday and from noon-4 p.m. Saturday and Sunday.

STATE HISTORICAL SOCIETY

- "Twentieth-Century Missouri Portraits: From Famous to Familiar" showcases portraits of and by Missourians in an exhibit that runs through March 2010.
- "Wall Street and Main Street" features editorial cartoons by Robert Fitzpatrick on the economic crisis of the 1930s that were published in the *St. Louis Post-Dispatch*. The exhibit runs through Oct. 3. Gallery hours are 9 a.m.-4:30 p.m. Tuesday to Friday and 9 a.m.-3:15 p.m. Saturday.

Lectures & Seminars

Thursday, October 1

INTERNATIONAL AFFAIRS SEMINAR: Jim Scott, director of MU's International Center, will present "After the Bubble Burst: Ireland in Economic Crisis" at noon in S304 Memorial Union.

NUTRITION & EXERCISE

SEMINAR: Brian Finck from the Washington University School of Medicine will present "Lipin Proteins Control Hepatic Fat Metabolism Through Thick and Thin" at 4 p.m. in Acuff Auditorium, MA217 Medical Sciences Building.

Saturday, October 3

SATURDAY MORNING SCIENCE: Deb Anderson, assistant professor of veterinary pathobiology, will present "An Injection of Plague" from 10:30-11:30 a.m. in the Life Sciences Center's Monsanto Auditorium.

Tuesday, October 6

MUSIC LECTURE: As part of the music department's Haydn/Mendelssohn Festival, Annett Richter, visiting assistant professor of music, will present "The Visual Imagination of a Romantic Seascape: Mendelssohn's Hebrides Overture Revisited" at 3 p.m. in Whitmore Recital Hall.

ARCHAEOLOGY LECTURE:

Sarah Parcak, assistant professor of anthropology at the University of Alabama-Birmingham, will present "The End of Egypt's Pyramid Age from Space" at 5:30 p.m. in 106 Pickard Hall.

Wednesday, October 7

ECOLOGY & EVOLUTION

SEMINAR: Graduate student Patrick Guerra will present "All for One and One for All: Cooperative Synchronous Chorus in Male *Neoconocephalus katydid*s" from 4-5 p.m. in 106 Lefevre Hall.

HEALTH POLICY LECTURE:

Karen Edison, professor and chair of dermatology and director of MU's Center for Health Policy, will join other health policy experts to present "What Ails Us: Understanding Health Care

Reform" from noon-1 p.m. in Bryant Auditorium, M105 School of Medicine.

Thursday, October 8

MUSIC LECTURE: As part of the music department's Haydn/Mendelssohn Festival, Neil Minturn, associate professor of music, will present "Play in the Fugue of Haydn's String Quartet, Op.20, No.2" at 3 p.m. in Whitmore Recital Hall.

Friday, October 9

MARKETING LECTURE: Amar Cheema, associate professor of commerce at the University of Virginia, will present "Influence of Warm Versus Cool Temperatures on Cognitive Performance and Financial Risk-Taking" from 11 a.m.-12:30 p.m. in 206 Cornell Hall.

Saturday, October 10

SATURDAY MORNING SCIENCE: André Ariew, professor of philosophy, will present "Would Darwin Recognize Modern Darwinism?" from 10:30-11:30 a.m. in the Life Sciences Center's Monsanto Auditorium.

Films

Friday, October 2

MUSEUM FILM SERIES: Annie Hall will be shown at 7 p.m. in 106 Pickard Hall. Wednesday, October 7

PEACE STUDIES: *Seoul Train* will be shown at 8 p.m. in Allen Auditorium.

A Scholarship Benefit

The MU School of Music, UMSL Department of Music and UMKC Conservatory of Music and Dance, in partnership with "We Always Swing" Jazz Series, present:

The Jim Widner Big Band

with Special Guest Bobby Watson

Friday, October 16 • 8:00 p.m.

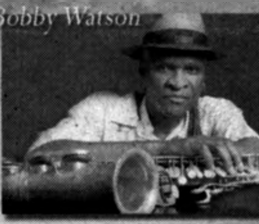
Missouri Theatre Center for the Arts

203 S. 9th Street • Columbia, MO

TICKETS: \$18-\$32 available through the Jazz Series Box Office and Ticketmaster. Student & Group Discounts available.

\$100* Special VIP patron seating (available ONLY through the Jazz Series box office) includes post-concert champagne and dessert reception with the artists.

All net proceeds go toward music scholarships for students attending MU, UMKC, and UMSL. *Tax-deductible to the extent the law permits.



Local food demand grows

MARKET ORIENTED

Locally produced foods have health benefits

Food industry experts estimate that U.S. consumer demand for locally grown foods could reach \$7 billion by 2012.

"Increasingly, consumers want to have more connection to their food. They want to know where it came from, how it was grown and who grew it," says Bill McKelvey, a local food systems expert with MU Extension's Healthy Lifestyle Initiative. Access to fresh local foods is one goal in this community-based project.

The health benefits are significant, McKelvey says. "If you're purchasing food locally, you're probably purchasing more fruits and vegetables, and leaner meats."

For now, the local-foods market relies primarily on direct-to-customer sales through farmers markets and community-supported agriculture.

"The challenge is scaling up to reach a larger market,"

McKelvey says. "If you want to get (local produce) into a grocery store, a school or some other institution, it becomes very challenging because you run into scale issues. You need more volume to serve those places." The small to medium-sized farms that represent the majority of enterprises engaged in local food production also need infrastructure to process, store and distribute their goods.

Cooperatives are one example of how to address issues of volume and infrastructure, McKelvey says. He believes help to expand local and regional foods systems could be on its way through USDA's Know Your Farmer, Know Your Food campaign, which makes infrastructure a priority.

"The local-food movement is really starting to grow. This initiative is going to provide some much-needed financial and technical assistance to move a lot of projects forward," McKelvey says.

Adams from Page 1

words, Adams never showed a "hint of annoyance for having to repeat the answer using different analogies until I finally understood the underlying concepts."

Watching that light turn on is what Adams loves, and he has illuminated a lot of brain cells during 27 years of teaching 25 different courses. The astonishing variety of those course subjects ranges from basic chemistry to the deep knowledge of quantum chemistry and chemical kinetics. Chemistry department Chair Jerry Atwood says most contemporaries of Adams probably have taught a maximum of 10 different courses.

For two decades, Adams has directed undergraduate studies. He has developed teaching innovations and online advising materials, shaped new classes and directed a major revision of the undergraduate chemistry curriculum — important work for a department that serves 8,000 students each year.

Adams' colleagues consider him a master teacher, an opinion corroborated by distinguished honors that include the 2009 President's Award for Teaching Excellence — a \$15,000 prize for the four-campus University of Missouri System. His previous honors are a \$10,000 William T. Kemper Fellowship for Excellence in Teaching and, in 1987, an AMOCO Foundation Undergraduate Teaching Award — the only occasion the award was presented to an assistant professor.

Atwood nominated Adams for the President's Award after years of witnessing Adams' commitment to students and to the cause of improving teaching.

Adams touches students' lives and enriches their college experience by pushing them to levels of achievement they may not have thought possible, Atwood says.

Alicia Webb of Edwardsville, Ill., a freshman on Adams' research team, says she was "blown away" by how good he was at explaining the material. "He took the time to make sure I understood what he was talking about instead of just throwing new concepts and vocabulary at me without realizing that I am still an undergraduate." Webb uses computer software to model and analyze interactions between a host molecule — pyrogallol[4]arene (PGA4) — and various guest molecules.

Still, it's not just multiple awards that reflect a professor's reputation for teaching. Adams regularly receives outstanding student evaluations. Every student in last year's quantum chemistry class ranked him at the highest level for lecture quality, enthusiasm for the subject and ability to stimulate interest.

Atwood tells the story of a teaching intern who was assigned to observe Adams' class and report on his teaching style. After completing the assignment, the intern had to explain why there were gaps in his notes — he had simply become caught up in the class material Adams was presenting.

"Many office hours devoted to students"

When he's in, the door to Adams' office remains open as an invitation for students to enter. "Faculty sometimes think they can separate the classroom academics from the whole experience,

which includes advising and knowing what it takes to get a degree, but you can't," Adams says. "Students don't; they know they're all linked."

Working in a room with an open door guarantees that Adams will experience few days with three or more hours of uninterrupted time. Those who enter his office encounter a welcoming bowl of chocolate candy and a non-judgmental adviser who will stop what he's doing to listen to concerns about course work and credit hours.

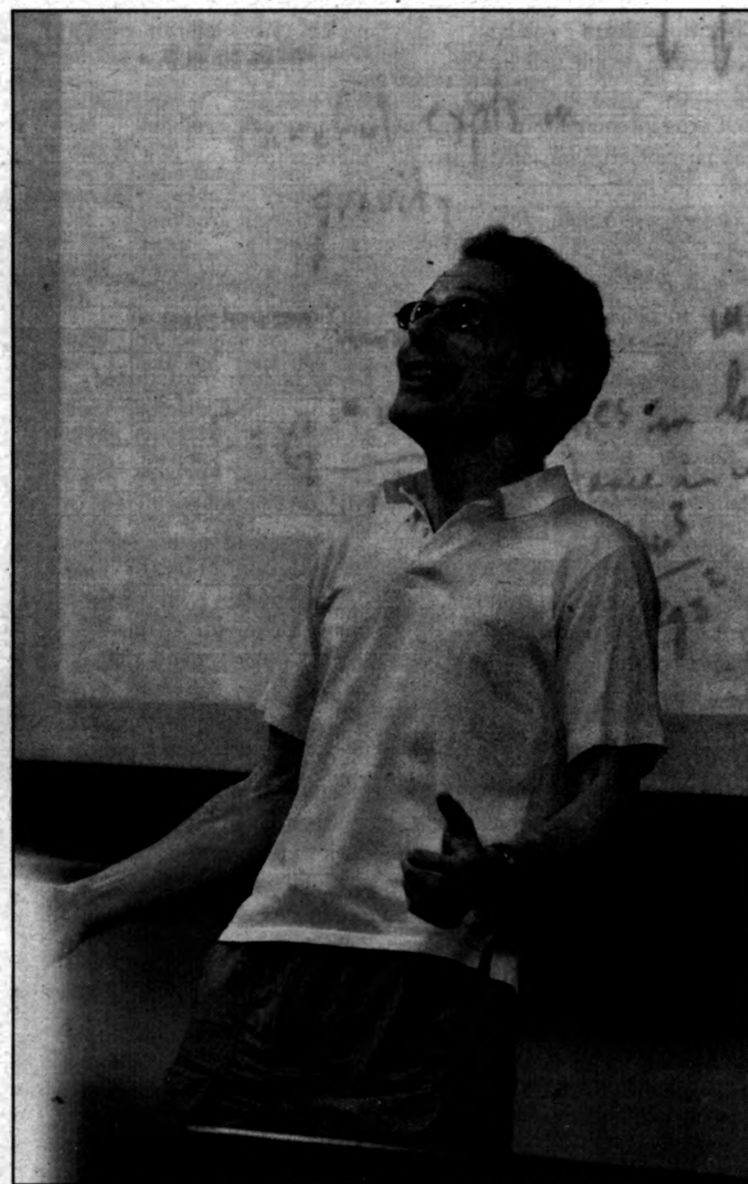
Just as often, he hears about problems on subjects of health, family, money, roommates and dating.

"Students will tell you things they wouldn't admit to anybody else," he says. "Sometimes they just need to talk to an adult. There have been a few times that it's pretty clear I can't do anything, but in those cases they don't expect you to solve the problem; they just want you to listen."

Adams didn't pick up advising techniques from psychology courses or learn the complexities of curriculum navigation from his college professors. Without children of his own, he hasn't personally experienced the daily traumas of rearing young adults. He has learned by doing and through serving on the College of Arts and Science Committee on Curriculum, Instruction and Advising since 1993.

The A&S student government honored Adams twice with Blue Chalk Advising Awards, most recently in 2009; and the Missouri Academic Advising Association named him an Outstanding Faculty Academic Advisor.

It's no mystery why plaques



Rob Hill photo

Adams get pumped about chemistry concepts while delivering a guest lecture for the Honors College course Warm Little Planet.

and certificates for advising decorate the walls of Adams' office or why he's asked to instruct other faculty members on the intricacies of MU degree programs. Adams pushes himself to learn as he pushes his students, and he goes out of his way to help them. Literally. He once delivered a form in St. Louis for a student who couldn't make the trip.

If a student comes by to drop a class, he asks if there was something about the course he could have changed to prevent the withdrawal.

He has met on weekends with students who don't realize professors have regular lives that include ballroom dancing or cooking club.

Few students, after all, would expect a chemistry professor to work on mastering dance steps, but Adams and his wife, chemistry Professor Carol Deakyn, enjoy leisure dancing, particularly swing. The couple danced some of their first steps together as husband and wife on tabletops at their wedding reception. Eighteen

Continued on Page 6

More terrific teachers

MU recipients of the University of Missouri President's Award for Outstanding Teaching:

- 2009, John Adams, chemistry
- 2006, Meera Chandrasekhar, physics
- 2004, Mark R. Ryan, wildlife conservation
- 2001, Ira J. Papick, mathematics
- 2000, William B. Bondeson, philosophy
- 1999, Loren Nikolai, accounting
- 1998, James Carrel, biological sciences
- 1996, Thomas Freeman, geological sciences

(This article by Nancy Moen is reprinted with permission from the Fall 2009 MIZZOU alumnus magazine.)

Professor John Adams answers questions about quantum chemistry during an informal study session in Memorial Union's Bengal Lair with seniors Amie Norton and Drew Backer.

Rob Hill photo



Continued from Page 5

years later, people still stop to watch their foxtrot or tango.

In the kitchen, however, any culinary experiments are mostly solo with Adams performing a close approximation of bench chemistry by adapting recipes as he cooks. His best effort? Bourbon pecan torte, Deakyne says, and she cleverly makes no move toward learning the process.

"Went to great lengths to be available for help"

"John is the best teacher we have. That's the bottom line. Not only is he really good in the classroom, he's versatile. That's pretty unusual," says Associate Professor Steve Keller.

About 10 years ago, Adams became a mentor to Keller, a junior faculty member newly appointed to teach general chemistry to 300 students. Adams attended Keller's lectures and coached him on all aspects of his stressful new job, from lecture pacing and visual aids to crafting exams and setting

up laboratory equipment.

"It was tremendously important for me at the time, and it remains valuable because there are still things to learn from others," Keller says. The mentor-colleague line has blurred into a friendship now.

But Adams' mentoring isn't restricted to chemistry faculty. For four years he and Deakyne have participated in Colleague Circles, a social group for first-time faculty members or professors new to Mizzou. In groups of eight or more, they meet monthly at restaurants or in faculty homes.

Helpfulness is an innate characteristic for Adams, whose list of service activities, single-spaced, covers nearly four full pages — proof that buying lifetime memberships in service groups can be a dangerous step.

Most faculty members give back to their professions through professional organizations or with student groups. Adams logs multiple hours, year after year, as an officer for numerous organizations, including the



Rob Hill photo

Adams works in his office with chemistry majors Matt Breite and Alicia Webb, who joined his research team as freshmen.

American Chemical Society, where he is prominent. Sandwiched somehow into his schedule are guest lectures, manuscript refereeing for professional journals and science textbooks, and proposal reviewing for agencies such as the National Science Foundation.

That's a full dance card. "I'm well over-committed," Adams says

of the collection of commitments. "I just got used to doing it."

"He made chemistry easy to understand"

Work at the study table has concluded, and the students are gathering their papers and books. Before leaving, Collin, who plans to be a research professor, asks

Adams why he spends so much extra time helping students.

Without missing a beat, Adams replies: "What fun is it if you don't learn the subject? Besides, I'm going to retire someday. You're supposed to replace me."

Finally, at 8:15, he heads home to dinner and that unfinished conference presentation.

DEADLINE:
WEDNESDAY
OCTOBER 7

TAILGATE:
THURSDAY
OCTOBER 22
5-7 PM



UNLEASH YOUR PRIDE

Nominate Your Favorite Campus Department

Your University Bookstore is accepting nominations for faculty and staff to join us for a VIP tailgate party and shopping event Oct. 22 from 5-7 pm. Just tell us how your department lets their Tiger spirit roar and you could all receive tickets to this exclusive event, including a tailgate party catered by DoMundo's, a private 25% off shopping event and a chance for prizes! Nominate your department today at mubookstore.com.

Serving pulled pork on dollar rolls, smoked turkey, coleslaw, baked beans and banana bread. Preview the new catering menu from DoMundo's and pick up a special offer for your next event!



University Bookstore
— Since 1899 —

Hitt & Rollins | (573) 882-7611 | mubookstore.com

Nominations must be received by Oct. 7. Winners (up to 150 people) will be notified by Oct. 14. 25% off shopping experience applies to Mizzou apparel and gifts only.

Researchers report: This is your brain on cocaine

LASTING DAMAGE

Research probes fundamental workings of an addict's brain

Nearly two million Americans currently use cocaine for its temporary feeling of euphoria, which have contributed to making it one of the most dangerous and addictive drugs in the country. Cocaine addiction, which can cause severe biological and behavioral problems, is very difficult to overcome.

Now, Ashwin Mohan and Sandeep Pendyam, MU electrical and computer engineering doctoral students, are using computational models to study how the brain's chemicals and synaptic mechanisms — or connections between

neurons — react to cocaine addiction and what this could mean for future therapies.

“With cocaine addiction, addicts don't feel an urge to revolt because there is a strong connection in the brain from the decision-making center to the pleasure center, which overwhelms other normal rewards and is why they keep seeking it,” Pendyam says. “By using computational models, we're targeting the

connection in the brain that latches onto the pleasure center and the parameters that maintain that process.”

Glutamate is the major chemical released in the synaptic connections in the brain. Having the right amount present determines the activity of those connections. Using the computational model, MU researchers found that in an addict's brain excessive glutamate produced in the pleasure center

makes the brain's mechanisms unable to regulate themselves and creates permanent damage, making cocaine addiction a disease that is more than just a behavioral change.

“Our model showed that the glutamate transporters, a protein present around these connections that remove glutamate, are almost 40 percent less functional after chronic cocaine usage,” Mohan says “This damage is long lasting, and there is no way for the brain

to regulate itself. Thus, the brain structure in this context actually changes in cocaine addicts.”

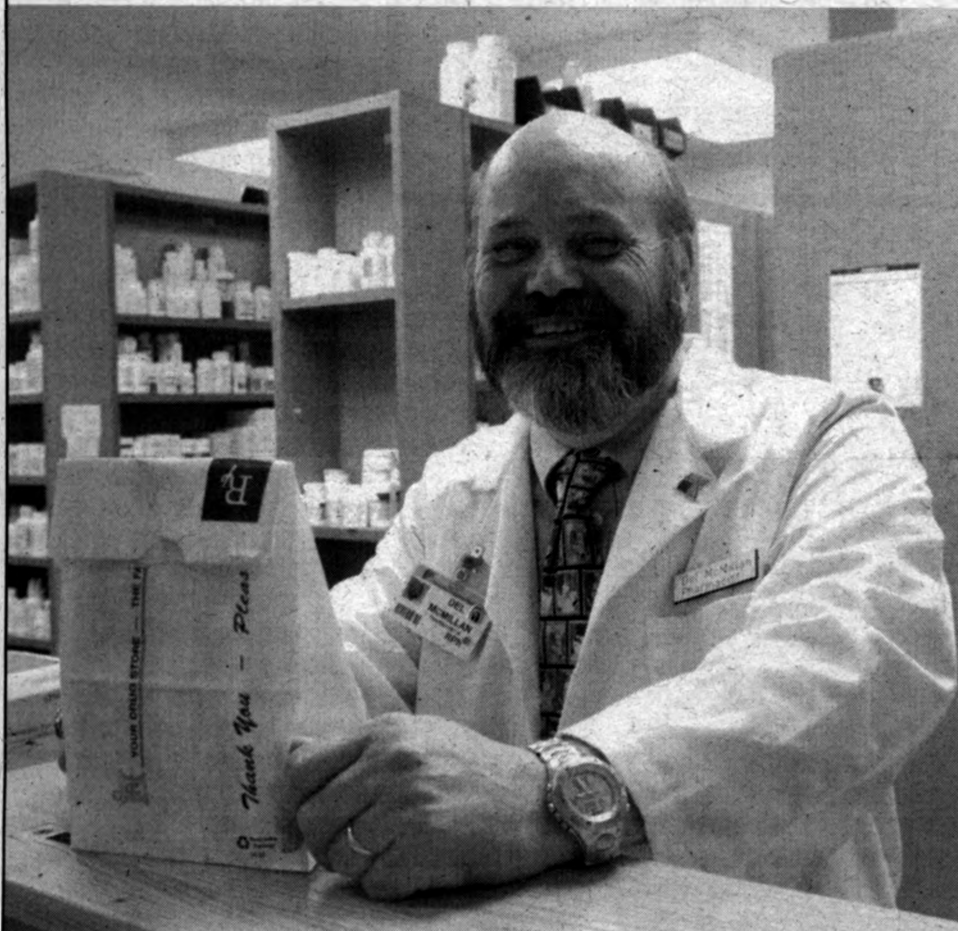
The long-term objective of their research is to find out how some rehabilitative drugs work by devising a model of the fundamental workings of an addict's brain, Mohan says. “Using a systems approach helped us to find key information about the addict's brain that had been missed in the past two decades of cocaine addiction research.”

FORUM from Page 2

institutions are Drury University (Springfield), Missouri University of Science and Technology (Rolla), Park University (KC area), St. Louis Community College at Florissant Valley, University of Central Missouri (Warrensburg), University of Missouri (Columbia, Kansas City, St. Louis & the System), and Webster University (St. Louis). Eight of the institutions have taken some steps according to their Web sites. Mizzou is currently working on its inventory of greenhouse gas emissions. This and other efforts should be available at the MU Office of Sustainability website (sustainability.cf.missouri.edu.)

For Missouri's energy profile visit http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=MO. The Web site e Redux tracks and compares energy profiles for states and cities. Missouri's site is www.dnr.mo.gov/energy/index.html. For a list of city and college and university Web sites addressing climate change, go to web.missouri.edu/~umcsnresi/www/news/Oct2009news.html

The good things in life



Family, friends and Del McMillan. Del has been your neighborhood pharmacist for more than 10 years. Every day his goal is to provide you with the best service, the best information and the best care possible. Del knows that something as simple as talking to your pharmacist can go a long way in protecting your health.

So get to know the friendly and knowledgeable staff, like Del, at a University pharmacy. You just might find one of the good things in life.

 **Health Care**
University of Missouri Health System

To fill a prescription or for details about MU's 90-day prescription plan, please call or stop by a University pharmacy:

University Hospital Pharmacy
One Hospital Drive
(573) 882-8600

University Physicians Medical Building Pharmacy
1101 Hospital Drive
(573) 882-8300

Green Meadows Pharmacy
3217 S. Providence Road
(573) 882-3151

Fairview Pharmacy
101 S. Fairview Road
(573) 884-1100

Regional Medical Pharmacy (drive-through)
404 Keene St.
(573) 499-6022

Smiley Lane Pharmacy (drive-through)
2325 Smiley Lane
(573) 817-3555

Ellis Fischel Cancer Center Pharmacy
115 Business Loop 70, West
(573) 882-8890

For hours and maps, please visit
www.muhealth.org/pharmacy

Care to share your thoughts?

Mizzou Weekly welcomes submissions from members of the university community of opinion essays or letters to the editor about subjects of general interest to MU faculty and staff. Submissions should be in the range of 500 to 600 words and will be edited for style and clarity. For more information and writing guidelines, e-mail beahlerj@missouri.edu or call 882-5918.

Don't Miss Our Incredible Loan Offers

For a limited time only!

- Home Equity Lines of Credit as low as **4.49% APR** fixed for three years—and receive \$250 in cash*
- Refinance your new or used car loan as low as **4.79% APR** for 60 months—and receive \$100 cash**
- Mortgage loans as low as **5% APR** fixed for 30 years†

Apply online at tigerscu.org.



TIGERS
CREDIT UNION

N17 Memorial Student Union, Lower Level
Columbia, MO 65211 • tigerscu.org
573.443.8462 or 888.673.2844

APR—Annual Percentage Rate. APRs listed are based on your credit history and can vary. Rates as of 7/29/09 and subject to change. Limited time offers.
*Special rate offer is available only on new home equity lines of credit secured by your primary single family residence with a maximum combined loan-to-value (including prior mortgages or liens) of 84% and a maximum combined loan-to-value of \$416,000 for all combined mortgage balances on the property, including the new line. After introductory period, rates adjust annually to the Prime rate as published in The Wall Street Journal, but will not exceed 18% APR. See tax advisor for tax deductibility. Refinancing options available from other institutions only. Cash deposited in account three days after closing due to rescission period. Minimum credit line \$25,000 for \$250. **Other rates and terms are available up to 84 months. Rate shown is 60-month and includes 1/2% discount for automatic payments. Offer available only on auto loan refinances from other institutions with a \$10,000 loan minimum required. Cash given at closing. \$1 million in funds available at this rate. 85% maximum loan to value. Call for details. APR excludes closing costs and other fees. Maximum loan amount: \$300,000.



Cerner from Page 1
achievements of the university IT staff, many of whom have worked with Cerner since the mid-90's to create electronic medical records, said Harold Williamson Jr., vice chancellor of the University of Missouri Health System. Under memorandum of understanding announced earlier this week, all of these employees will either work with the Tiger Institute or with the university.

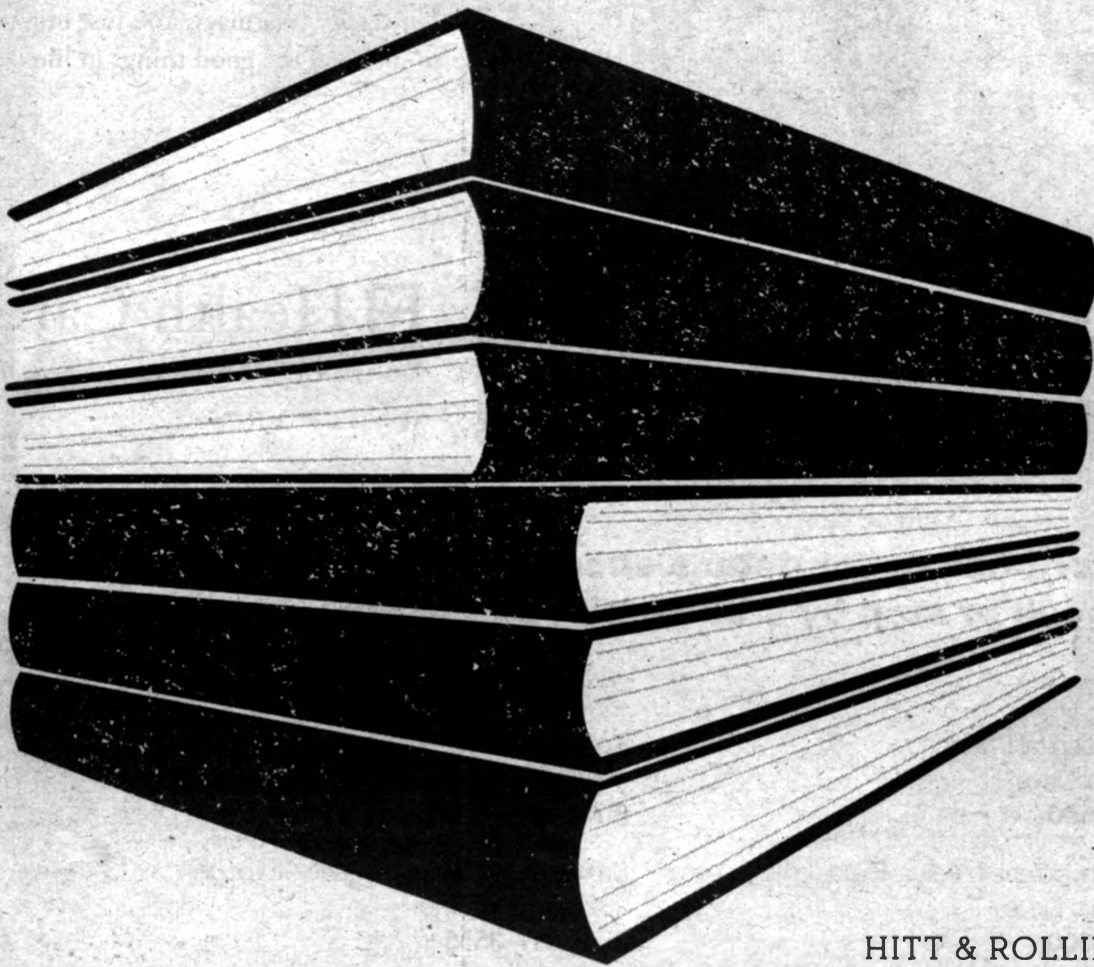
“Health care has not yet fully seen the benefits of information technology enjoyed by other sectors of the economy,” Williamson said. “Information technology will play an increasing role in the practice of medicine in the future, allowing better value through improved quality and efficiency. Creating this collaborative platform to promote the creativity of our medical, nursing and health professions faculty will be invaluable. The

institute will allow us to maximize our own use of information technology and to test new ideas – the appropriate role of an academic health center.”

Underscoring the institute's goals, MU Chancellor Brady Deaton said, “The very essence of a great research university is staying at the frontier of new knowledge and giving those we serve the benefit of that knowledge. The MU partnership with Cerner is a perfect example of our continuing mission: develop cutting-edge ideas and apply them to provide the finest care and service in the global health care environment.”

Sherry Browne, former chief information officer of St. Louis-based Ascension Health, the nation's largest Catholic, nonprofit health system, will serve as the executive director of the Tiger Institute with an initial term of three years.

The Espresso Book Machine is Here!



**PRINT ON DEMAND.
CUSTOM PUBLISHING.**

Already have a book you'd like to print? You may qualify for a few free copies! Contact Heather Tearney at 882-9547 to find out more.

**University
Bookstore**
— Since 1899 —



HITT & ROLLINS | (573) 882-7611 | MUBOOKSTORE.COM

University Libraries
University of Missouri

Digitization Information Page

Local identifier MizzouWeekly(print)

Source information

Format Newspaper
Content type Text with images
Source ID Duplicate copies University Archives weeded out
Notes

Capture information

Date captured July-December, 2022
Scanner manufacturer Plustek OpticBook
Scanner model A300 Plus
Scanning system software Book Pavilion
Optical resolution 600 dpi
Color settings 8 bit grayscale for majority of pages;
 24 bit color for color illustrations/portraits/photographs
File types tiff
Notes

Derivatives - Access copy

Compression Tiff: LZW compression
Editing software Adobe Photoshop 2022
Resolution 600 dpi
Color same as captured
File types pdf created from tiffs
Notes Images cropped, straightened, and brightened.