Fluids, electrolytes key to good health for firefighters

By Melissa Mitchell
News Bureau Staff Writer

S
ince the Sept. 11 attack on the World Trade Center, images of exhausted firefighters have been imprinted on the national psyche, increasing public awareness of the arduous nature of rescue workers’ jobs.

And while operations in New York City were an extreme example of what firefighters face when responding to an emergency, researchers at the UI’s Fire Service Institute know that even routine rescue operations can pose serious health risks for firefighters. The most significant problems, they say, are caused by heat strain and stresses to the cardiovascular system.

“What kills firefighters most is heart attack,” said UI kinesiology professor Steven J. Petruzzello, who, along with a team of researchers at the Institute, has been measuring and studying various physiological responses among firefighters. Is it part of continuing stress over time that leads to these incidences?

Petruzzello’s not sure, but he says long-term research may eventually prove such a link.

What is known at this time, however, he said, is “that the percentage of firefighters or former firefighters who die of heart attacks is more than the general population.”

When it comes to heat strain, Petruzzello said, it’s long been suspected that firefighting activities result in an imbalance in fluid and electrolytes. To better understand just what was behind safety issues, he decided more presentations were needed to address growing public concern about heat strain and studying various physiological responses among firefighters.

The need for Salyers’ caveat became evident later in the program when an audience member, referring to advice given in a television report, asked if steaming ironing letters would kill anthrax spores and prevent infection.

Wilson responded that ironing one’s mail would not be very effective because the anthrax spores are very resilient and easily withstand heat and cold.

Salyers also cautioned against becoming overly alarmed by urban myths, referring to a rumor that suicide terrorists plan to infect themselves with anthrax and instigate epidemics by attending U.S. rock concerts.

Palinkas presented information about the incubation period for the disease, preventive medication and decontamination guidelines if one suspects exposure. 

“People are very curious about anthrax,” Palinkas said in a phone interview. “It hasn’t been on their radar screens until recently, and they want to know what it is.”

Anthrax is actually two diseases, Wilson explained. The percentage of firefighters or former firefighters who die of heart attacks is more than the general population.”

Petruzzello, also along with a team of researchers at the UI Fire Service Institute, has been measuring and studying various physiological responses among firefighters.

The use of words such as “community” and “firefighter” may be misleading, Wilson said, because much misinformation is being propagated, particularly on the Internet.

Salyers also stressed the importance of obtaining accurate information and learning safety guidelines so one can respond logically and calmly in emergent situations.

Petruzzello advised audience members to be judicious about handling and studying various physiological responses among firefighters.

The purpose of this study was to determine the effects of strenuous live-fire firefighting drills on selected hematological and blood chemistry variables and to document the extent to which these variables recover following 90 minutes of recovery, the researchers wrote.
City Council lowers speed limit for some streets, alleys

By Sharita Forrest
Assistant Editor

Motorists: Slow down in Campustown or that flashing red light in the rearview mirror won’t be Rudolf’s nose.

A reduced speed limit on campus area streets and alleys goes into effect Nov. 20, following passage of an ordinance by the Champaign City Council at its Nov. 6 meeting.

The ordinance establishes 25 mph and 15 mph speed limits, respectively, on streets and alleys within the University District, an area roughly bounded by University Avenue on the north, Windsor Road on the south, Neil Street on the west and Wright Street on the east.

The University District was established by the City Council at its July 17, meeting.

The reduced speed limit, proposed by Champaign City Manager Steven C. Carter, is intended to enhance pedestrian safety in areas with high-volume pedestrian traffic. However, the new speed limit does not apply to First Street, Kirby Avenue, Wright Street, Springfield Avenue or Wright and Fourth streets north of Springfield Avenue.

These peripheral streets were specifically excluded either because they fall outside the high-pedestrian-traffic zone or because they fall under the jurisdiction of the Illinois Department of Transportation rather than the city.

During the first 30 days of the new ordinance, Champaign police will step up traffic enforcement to encourage motorist compliance with the new speed limit, said Champaign Police Chief Jim Luecking in a telephone interview.

UI police likewise will be keeping a watchful eye out for violators when the new speed limit takes effect.

“We expect to be doing a lot of ‘education’ on the new speed limit,” said Capt. Rick Kalmeyer of the UI police department, referring to increased patrols in the area. “It’s going to be a real change for people.”

In other campus-related business, the City Council unanimously approved a resolution tentatively establishing the Campustown Special Service Area, a funding mechanism proposed by city planners to finance streetscape improvements in Campustown. If no objections are filed within the next 60 days, the council will be free to enact legislation officially establishing the Campustown Special Service Area at the Feb. 5, council meeting.

Under the arrangement, additional property taxes would be assessed on private property owners in the Campustown area to cover the $1.1 million in projected costs of decorative streetscaping in Campustown. Enhancements such as decorative signage, planters and benches would not be covered by the city under the Campustown Infrastructure Reconstruction and Streetscape Project slated to begin in March. The city will be funding in its share of the reconstruction project—a maximum of $5.6 million—through rededication of the city’s food and beverage tax.

During discussion, council members raised questions about the duration of the Special Service Area taxation and the potential economic impact of property owner-shipping changing from private to public use while subject to the arrangement. Bruce Knight, Champaign City planning director, said that the planning department would schedule a study session with the City Council in the near future to address these and other questions related to the special service area issue.

**FIREFIGHTERS, FROM PAGE 1**

happening, Petrutzello and colleagues John Reed and Jeffrey A. Woods tested 11 firefighters at the UI training facility, documenting their findings in a report published recently in the Journal of Thermal Biology.

*The purpose of this study was to determine the effects of strenuous live- fire firefighting drills on selected hematological and blood chemistry variables and to document the extent to which these variables return following 90 minutes of recovery,* the researchers write in the report. They also documented firefighters’ perceptual responses to repeated trials of the same firefighting activities.

Besides recommending that firefighters drink plenty of water after completing an operation, the UI researchers stress the importance of drinking six to eight glasses of water daily.

*As a nation, we are underhydrated for the most part,* Petrutzello said. *This study emphasizes not just rehy- dration but prehydration. After rehy- dration, firefighters don’t get back to baseline levels immediately. It’s simi- lar to an athlete going through a long- distance run. You can never drink enough to recoup losses from that activity.*

Another important finding of the study, he said, is that blood glucose and sodium levels decreased dramatically following the firefighters’ 90- minute recovery period. *Given the muscle’s need to resynthesize glycogen, and the fact that firefighters may be called upon to respond to another call, it may be beneficial for firefighters to consume a carbohydrate/electrolyte beverage in addition to aggressive rehy- dration following a strenuous bout of firefighting activity,* the researchers wrote.

**Inside Illinois**

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Visit us at www.news.uiuc.edu, or through the UI online pages: www.aaas.edu

UI researchers elected AAAS fellows

By James E. Klopogel
News Bureau Staff Writer

Four UI researchers – Paul D. Coleman, Richard I. Gumport, Jean-Pierre Leburton and Bruce R. Schatz – are among 288 scientists elected as 2001 fellows of the American Association for the Advancement of Science. Fellowship recognizes “efforts to- ward advancing science or fostering applications that are deemed scientifi- cally or socially distinguished,” ac- cording to the association. With more than 138,000 members, the AAAS is the world’s largest general science organization. Founded in 1848, it publishes the journal Science and has been named a fellow of the AAAS 174 times.

Coleman, professor emeritus of electrical and computer engineering, was chosen for fundamental studies in the detection and detection of far- infrared radiation and for first studies of the magnetic wiggler, carbon-mon- oxide chemical laser, metal-oxide- metal detector, and coherent Cerene- kov radiation with a cone coupler. Gumport, professor and associate head of biochemistry and professor of biochemistry and molecular biology at the University of Illinois College of Medicine, was selected for distinguished contributions to the under- standing of nucleic acid enzymology and to the teaching of biochemis- try. Leburton, a professor of electrical and computer engineering, was recognized for contributions to the field of electronic nano-structures and the first self-consistent simulation of quantum dots, including boundary fluctuations. Schatz, professor of library and information science, was honored for work in supercomputing for informa- tion retrieval, particularly semantic analysis of scientific terminology, and for developing the Telepology system, which inspired Mosaic software.

The new fellows, elected in late September, will be recognized Feb. 16, at the AAAS annual meeting in Boston.
On the job

Emma Jean Mahoney liked her first job so much she has never left it. On Nov. 13, Mahoney, dubbed “The Database Queen” by her co-workers, celebrated her 40-year anniversary with the university and the Institute of Labor and Industrial Relations. Mahoney has spent all 40 years at ILIR and said she has no plans for retiring anytime soon. For at least 30 years of her four decades with the university, Mahoney has made the 80-mile roundtrip commute from Danville each day.

However, Mahoney’s ties with the university extend even further back than her hire date would suggest. As a child, Mahoney attended a program for hearing-impaired children on the UI campus where she underwent speech therapy.

In 1961, Mahoney graduated from Illinois Commercial College, Champaign, with an associate’s degree in general business administration, a former Champaign High School classmate, whose sister worked for ILIR, encouraged her to apply for a job there. Mahoney was hired and began her career processing the mail in the institute’s library. Six months later, she accepted a job in the clerical pool, where she’s been ever since.

Now a secretary III, Mahoney has a variety of responsibilities, including sending out mass mailings and maintaining student and faculty mailboxes at the institute. Mahoney also processes incoming student applications and handles thank-you letters sent to donors. She also provides backup for preparing the institute’s daily news bulletin and posts it on the Web to keep students, alumni and faculty members abreast of events at ILIR.

The Database Queen

However, it was her remarkable mastery of the various databases she maintains that earned her “The Database Queen” moniker. Mahoney manages databases of ILIR faculty and staff members, students, and prospective students and alumni that provide the information for various departmental lists she generates.

Mahoney’s ability to learn new programs as well as the wealth of knowledge she has gained during her 40 years with ILIR have earned her the respect and admiration of her co-workers.

“She’s got so much information in her head,” said Glenda Slack, Mahoney’s supervisor. “Nobody’s ever going to be able to replace that. She figures out how to do all the queries when we want a specific thing from the databases. The remarkable part is she knows how to do all those things.”

Slack characterized Mahoney as “a very special work-mate,” citing her cooperative spirit and flexibility as well as how Mahoney’s willingness to assist others in meeting their deadlines.

Mahoney’s thirst to expand her repertoire of computer skills in addition to her willingness to share her expertise with those around her has endeared Mahoney to her co-workers.

Computer work is her favorite aspect of her job, Mahoney said. However, it also presents her with her greatest challenges when she must figure out how to accomplish a task she has never done before.

Mahoney acquired her first electric typewriter when a co-worker, frustrated with the unfamiliar technology, offered to swap her electric typewriter for Mahoney’s manual typewriter.

Mahoney has taken in stride the many advances in technology she has experienced over the years, mastering each new program and upgrade as it came along.

When asked why she has stayed so long in one job, Mahoney’s answer was matter of fact: “I just started working and jumped in and did it. Everybody’s nice to me,” she said. The benefits were an incentive too, she added.

In honor of her 40-year anniversary at ILIR, Mahoney’s co-workers hosted a luncheon with all her favorites gracing the menu: chicken, potatoes, peas, rolls and apple pie. A number of former ILIR staff members and Mahoney’s sister, Mary Robeck, joined in honoring her.

Family and fun

Off the job, Mahoney enjoys bowling and has a 145 average. In 1986, she and her teammates went to Las Vegas to play in a national women’s tournament.

Mahoney also indulges her sporting spirit by playing bingo and wagering on horse races at the Danville off-track betting parlor.

Mahoney enjoys traveling, especially long, leisurely trips to visit her two nieces and four nephews who are scattered throughout the states. Last summer, Mahoney drove to Albuquerque, N.M., to visit a nephew and his newborn triplets; she has also driven to Florida, Georgia, Indiana, Kentucky and Michigan.

However, nowadays Mahoney said she has little time for bowling or other pursuits because she shares caregiving duties for her 93-year-old mother. Mahoney’s retired sister caring for their mother during the day and Mahoney takes over in the evenings, doing the cooking and the housework.

“Interview by Sharita Forrest

COMMENCEMENT FROM PAGE 1

coursework in a variety of disciplines; seminars built on the writer’s work; performances and symposia; and other events.

Angelou was the recipient of the Langston Hughes Award (1991), a distinguished merit citation from the National Conference of Christians and Jews (1997) and the International Civil and Human Rights Award (1998). She won a Grammy Award for best spoken word album (1998) and was named Essence magazine’s woman of the year (1992).


Alumnus behind gift to unique cross-disciplinary program

By Mark Reutter

News Bureau Staff Writer

Alan M. Hallene learned the hard way how to combine business and engineering as he built the Montgomery Elevator Co. into the largest escalator manufacturer in North America.

“I had to learn accounting principles, how to control inventory and how to handle marketing expense at the same time I was involved in the technical side of engineering, escalators and elevators,” Hallene said.

“It was quite a challenge.”

To give UI students a head start on similar challenges, Hallene recently arranged funding for a major expansion of the pioneering Technology and Management Program at the UI.

The program, believed to be the nation’s first interdisciplinary program for undergraduate students, enables engineering and business students to learn together through joint classes and to work side-by-side on team projects.

The John D. and Catherine T. MacArthur Foundation gave $1 million in Hallene’s name to endow a master’s degree program in technology and management. The gift was made in recognition of Hallene’s long service as a member of the MacArthur Foundation’s board of directors.

Hallene said the UI program serves a vital need in today’s business world. “Even more than when I was young, corporations have a pressing need for managers who understand and communicate effectively in the language of both business and engineering.”

The master’s degree curricula will build on the multidisciplinary approach of the undergraduate program, which is taught by faculty members in the College of Engineering and College of Commerce and Business Administration.

Currently students are admitted to the program in their junior year. Engineering majors study fundamentals of accounting, corporate finance and principles of marketing, while business majors take courses in materials science, mechanics and introduction to electrical and computer engineering.

Following these courses, the students jointly take classes in strategy management of innovation, business process modeling, new product development and undertake a team project.

The master’s program will provide intensive joint training, with students doing projects undertaken by industrial sponsors. Hallene said he expects the master’s program to expose students to “real-world” problems and include workshops and lectures “conducted by industry people who come to campus and teach from their own work experiences.”

Hallene graduated from the university in 1951 with a bachelor of science degree in mechanical engineering. When he started at Montgomery Elevator in 1953, the company had annual sales of $3 million. When he retired as president in 1994, its annual sales were more than $500 million.  

Alumnus behind gift to unique cross-disciplinary program

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one suspects he or she has been exposed to substances containing anthrax. For mail handlers and others in danger of contact with anthrax, Anderson provided guidelines for the safe use and disposal of mail. Palinkas said. Anthrax is not normally transmitted person-to-person. "The main thing people wanted was explanations," Salyers said. "I was really glad to do it. It’s exploring something we don’t normally do." &

UI campus safety and security audit under way

Security assessment According to Van Anderson, associate vice chancellor for administration and human resources, administrators are scrutinizing departmental units, facilities and existing safety policies and procedures to determine whether current measures are adequate or need to be strengthened.

By Sharita Forrest
Assistant Editor
The UI administration has embarked upon a safety and security audit of the Urbana campus in response to terrorist activities. Administrators are scrutinizing departmental units, facilities and existing safety policies and procedures to determine whether current measures are adequate or need to be strengthened.

“Have there are already been things implemented – such as tighter security at athletic events – and there are other things that you won’t be seeing that have been implemented.”

Van Anderson

Anthrax: the facts

During the past 50 years, there have been 236 reported cases of anthrax – most cutaneous in 30 states and the District of Columbia.

Cause: A spore-forming bacterium. The spores are the infective form. The spores are very resilient, resistant to heat and cold and can last for years. Anthrax most commonly occurs in hoofed mammals but also can infect humans if they handle or ingest contaminated meat products, raw wool or animal hides. Direct person-to-person spread is extremely unlikely.

Forms: (1) Cutaneous (skin) anthrax, the most common form, can occur by handling contaminated meat or products from infected animals and spores penetrating a wound on the skin; (2) Intestinal (gut) anthrax, rare in humans, but can occur by ingesting raw or undercooked contaminated meat; (3) Inhalation (lung) anthrax, the most lethal form, is caused by inhaling spores dispersed in a fine powder.

Symptoms: Vary according to the form of infection, but usually occur within seven days of exposure. Cutaneous anthrax begins as a raised bump resembling a spider bite, which becomes red, swollen and ulcerated with a black center. Initial anthrax symptoms resemble a cold. Watch for symptoms such as a fever higher than 100 degrees. B-o-like symptoms (cough, fatigue, muscle aches) nausea, vomiting or diarrhea, or a sore, especially on the face, arms or hands.

Treatment: Early treatment of all forms is important for recovery. Antibiotics such as penicillin are effective treatments for cutaneous and inhalation anthrax if they are administered early.

Sources: Centers for Disease Control and Prevention Web site www.cdc.gov. For guidelines on anthrax and handling suspicious mail, visit the CDC Web site or the McKinley Health Center site at www.mckinley.illinois.edu/updates/anthrax.html.
alumni association
Loren R. Taylor, president and chief executive officer of the UI Alumni Association, was elected to the Board of Directors of the Council of Alumni Associations in Higher Education in June at the 136th annual meeting in Delavan, Wis. The Council of Alumni Associations is a national organization representing the chief executive officers of alumni associations supporting major institutions of higher education. The group advocates and sustains the value of alumni association self-governance by providing its execu-
tives with information and support to enhance alumni association, higher education and professional development.

commence and business administration
Anil Bera, professor of economics, has been appointed to the editorial board of the Journal of Quantitative Economics. The appointment lasts five years. He also re-
cently co-edited a volume on Rao’s Score Test, which was published as a special issue of the Journal of Statistical Planning and Infer-
tence, August 2001.

Michael J. Shaw, professor of business administration and Beckman Institute pro-
fessor, was appointed the Leonard C. and Mary Lou Hoefi Endowed Chair in Com-
merce and Business Administration. He accepted the position during an Oct. 23 ceremony at the Krannert Art Museum and Kin

comunications
Steven Heiple, professor of journalism and of advertising, was presented the 2001 James C. Craven Freedom of the Press Award by the Illinois Press Association on Sept. 29 during the statewide newspaper organization’s 136th annual convention in Springfield. The award, established in 1993 to honor Judge Craven for his dedication to the principles of a free and open press, was presented to an individual who has demonstrated a commit-
tment to the principles of a free and open press through their work as a newspaper employee, as a citizen advocate or as a public official dedicated to the principles of a free press.

projected
Darrell F. Socie, professor of mechanical engineering, has been elected a 2001 Fel-
low of the Society of Advanced Materials and Processes “for outstanding and sus-
tained contributions to the understanding and control of fatigue and failure of engi-
neering materials and systems.” The society established fellowships in 1909 to pro-
vide recognition of members for distin-
guished contributions in the field of mate-
rials science and engineering, and to de-
velop a user-based forum for technical and professional leaders to serve as advis-
ers to the society.

Andrew Webb, professor of electrical and computer engineering, received the 2001 Wolfgang Paul Award from the Alexander von Humboldt Foundation Nov. 5 during a ceremony in Berlin. The award is spon-
sored by the German Federal Ministry of

Education and Research and was estab-
lished by Wolfgang Paul, who won the Nobel Prize in physics in 1959. This award en-
ares a foreign researcher to set up a laboratory in Germany and exchange re-
search personnel and ideas between univer-
sities in Germany and universities abroad. Webb will receive $1.8 million dollars dur-
ing the next three years to set up a magnetic resonance imaging research program at the University of Wuerzburg, home of some of the world’s most advanced magnetic research magnets.

Robert H. Dodds Jr., professor of civil and environmental engineering, was investi-
gated as the first holder of the M.T. Geoffrey Yeh Chair in Civil Engineering at an Oct. 2 ceremony. Yeh, chairman of the Ho Hing Group of Companies in Hong Kong, re-
ceived his B.S. in civil engineering from the UI in 1953.

law
James Pfander, professor of law, was hon-
ored at an investiture ceremony Oct. 19 with a professorship named for Prentice H. Marshall. Marshall was a former United States District Judge, College of Law fac-
ty member and alumnus.

liberal arts and sciences
Daniel Bush, professor of plant biology, assumed the office of president-elect of the American Society of Plant Biologists on Oct. 1. He was elected by a vote of his peers to serve as the society’s president for the upcoming 2002-03 term.

Richard I. Gunport, professor and associ-
ate head of biochemistry, has been elected a Fellow by the American Association for the Advancement of Science Council. He is be-
ing honored for “distinguished contributions to the understanding of nucleic acid- and protein-based processes.”

Benita Katzenellenbogen, professor of Medical Sciences, was elected a Fellow of the Car-
ibbean Academy of Sciences, was elected to the Board of Directors of the Caribbean Academy of Sciences, was elected to the Board of Directors of the Caribbean Academy of Sciences.

nursing
Cheryl Crowley Schraeder, professor of nursing and adjunct faculty member of the College of Medicine, received the 2001 Illinois Wesleyan University Distinguished Alumna Award for Excellence in Nursing by the College of Medicine. She was named to the position by her peers for her contributions to the profession and the practice of nursing.

student affairs
Ilene Harmed, director of the Alcohol and Other Drug Office, submitted an abstract of a practice model that is being cited in “Promising Practices: Campus Alcohol Strategies 2001 Sourcebook.” This practice model was developed by UI’s Policy and Oversight Steering Committee on Alcohol Use, Abuse, and Educational Programming.

Tom Seals, director of the Counseling Center and clinical counselor, presented a summary description of the Alcohol and other drug policies and procedures to be included in an and approx-
tmation conference.

Gordon Baker, professor of veterinary medicine, presented two research papers and two clinical papers as an invited speaker at a meeting of the American Veterinary Society on Veterinary Medicine (AVEF). Val Beasley, veterinarian, presented a keynote address at Tufts University and lectured in a conversation medicine course last spring. She also lectured recently at the University of Connecticut.

Kimberle B. Beckmen, research scient-
ist in veterinary biosciences, was invited to attend an expert workshop of the Arctic Monitoring and Assessment Program in Seattle. She presented research on the po-
tential effects of PCB and DDT exposure on immune function in free-ranging north-
ern fur seal pups in Alaska. The results of the study were to be included in a interna-
tional AMAP assessment report.

Peter D. Constable, professor of vet-
inary clinical medicine, served on the USDA Animal Health and Well-Being grant re-
view panel in Washington, D.C., in May. Roberto Docampo, professor of veterinary pathology, served as chairman of a Special Emphasis Panel of the National Institutes of Health to review proposals concerning tropical medical research cen-
ters. He also served as a peer review panel chair for the Fiscal Year 2002 Intramural Military Infectious Diseases Research Program proposal review. He also gave an invited presentation and participated in a roundtable on pyrophosphatases at the Sec-
ond International Meeting on Inorganic Pyrophosphatases held in Seville, Spain, in May.

David Gross, head of veterinary bio-
sciences, was elected a Fellow of the Car-
diovascular Section of the American Physi-
ological Society.

Wanda Hascheck-Hock, professor of vet-
inary pathology, was inducted as the presi-
dent of the Comparative and Veteri-
ary Speciality of Toxicology at the Society of Toxicology Annual Meeting in San Fran-
cisco in March.

Patricia Heine, professor of veterinary bi-
sciences, was elected to the Board of the Car-
diovascular Section of the American Physi-
ological Society.

Charles Stanley, 83, died Oct. 31 at his Paha-
cagon County Nursing Home. He was a member of the Veterans of Foreign Wars. He served in the Army Air Forces during World War II.

deaths
Cari Cahn, 82, died Oct. 12 at St. Joseph Hospital in Lexington, Ky. He was a research assistant in the Bureau of Economic and Business Research and at the Institute of Labor and Industrial Relations at the UI from 1945-1947. He was an econ-
ometrics professor at the UI from 1957-1958. Memorials: Hospice of the Bluegrass, 2312 Alexandria Road, Lexington, KY 40504.

Willie C. Hornbuckle, 85, died Oct. 31 at Provena Covenant Medical Center, Urbana. She was a snack bar supervisor at the UI and last worked at the Pennsylvania Avenue Residence Hall. She retired in 1981 af-
ler 11 years of service.

Ralph E. McCoy Jr., 89, died Nov. 6 at Provena Covenant Medical Cen-
ter, Urbana. He worked in the UI Division of Operation and Mainte-
nance as a building service worker for 12 years, retiring in 1979.

Willie Ransone, 79, died Sept. 30 at the Champagnie County Nursing Home, Urbana. He worked for the UI Division of Operation and Mainte-
nance for 29 years. He retired in 1982 as a construction laborer. Memo-
rals: Red Cross, Sept. 11 New York Times Needles Fund, Gen-
eral O.P. Box 5193, New York, NY 10087.

Charles Stanley, 83, died Oct. 31 at his Paha-
cagon County Nursing Home. He was a member of the Veterans of Foreign Wars. He served in the Army Air Forces during World War II. He was a research assistant in the Bureau of Economic and Business Research and in 1979-1980 after 11 years of service. Memorials: Covenant Hospice Care Program.
Overdosing on news can be bad for one’s mental health, scholar says

By Andrea Lynn
News Bureau Staff Writer

In these uncertain times, what do authorities on uncertainty management advise? Although it sounds counterintuitive, some suggest that people should back off now and then from information seeking. In some cases, too much information can be hazardous to one’s mental health.

“Sometimes people need to back away from the onslaught of information.” — Dale Brashers

By Jim Barlow
News Bureau Staff Writer and Gary Beaumont

UI Extension Communications Specialist

A computational study on nitrogen inputs to the Mississippi River Basin from the 1950s to the 1990s suggests that better use of the fertilizer—such as not over-applying it—could substantially reduce the amount of nitrates flowing downriver without compromising crop yields.

The study, appearing in the Nov. 8 issue of the journal Nature, concluded that had there been a 12 percent reduction in nitrogen fertilizer use in the last two decades, there could have been a 33 percent reduction in the nitrate flux in the Mississippi River and Gulf of Mexico. In the gulf, excess nitrogen has been suspected as a major contributor of seasonal dead zones where oxygen levels are depleted and marine life is reduced.

“An earlier study estimated that a 24 percent reduction in fertilizer use would be needed to achieve the same level of reduction of nitrate movement to the gulf, but our results indicate that increasing the efficiency of fertilizer use may have a greater impact than previously thought,” said Gregory McIsaac, a professor of environmental sciences at the UI and lead author of the Nature article.

Although the precise cause-and-effect relationship between fertilizer use and the hypoxic zones is still uncertain, McIsaac said, the fact remains that nitrogen going into the Mississippi River Basin increased faster than the amount of nitrogen harvested in crops in the 1960s and 1970s. Nitrogen that is not taken up by plants becomes available to leach into groundwater and rivers.

As the difference between nitrogen inputs and outputs onto the land became larger, so have nitrate concentrations in the lower Mississippi River. But the UI model produced a surprising result.

“As net nitrogen inputs increased in the basin, the percentage that appeared in the river as nitrate also increased,” said study collaborator Mark David, a UI professor of biogeochemistry. “It seems that when the capacity of the land to use or store nitrogen is exceeded, further nitrogen inputs dramatically increase losses to streams.”

“Now our model,” McIsaac said, “also suggests the reverse—that a relatively modest reduction in nitrogen fertilizer use, while maintaining crop yields, could substantially reduce the amount of nitrate found in the Mississippi River.”

Although there has been improvement in efficiency since 1988, he said, data collected as recently as last year show that some Illinois corn growers could still reduce nitrogen use without reducing their crop yields.

“In a survey conducted in 2000, about 30 percent of Illinois farmers indicated that they apply more nitrogen than is recommended for economically optimum crop production. Eliminating that over-application will maintain yields, reduce costs and, according to our analysis, reduce the nitrate in the Mississippi River,” McIsaac said.

The UI model accounts for 95 percent of the annual variation in nitrate-nitrogen delivered to the Gulf of Mexico as measured by the U.S. Geological Survey. It also incorporates the state’s level crop production statistics and estimates of nitrogen input from the atmosphere in rainfall. Most of the data were compiled under the leadership of Donald Goolsby, a scientist with the U.S. Geological Survey, another collaborator.

“We conducted a very comprehensive analysis of how much corn growers were doing to reduce nitrogen inputs over the years,” McIsaac said, acknowledging that it is “perfectly natural” to think that practices such as increased nitrogen inputs have increased too.

“Some Illinois corn growers could still reduce nitrogen use without reducing their crop yields.” — Gregory McIsaac

The UI model also predicted that better fertilizer use could benefit other areas as well. Eliminating that over-application will maintain yields, reduce costs and, according to our analysis, reduce the nitrate in the Mississippi River,” McIsaac said.

The assumption is supported by long-term soil monitoring data from the UI Morrow Plots and the Sanborn Field in Missouri. That data produced a more accurate correlation between net nitrogen inputs to the watershed and river nitrogen, McIsaac said. However, correlation studies do not prove cause and effect, and more studies are needed, the researchers stressed.

“Even with the uncertainty of correlations, it makes sense to continue to improve the efficiency of fertilizer use by following university recommended practices,” David said. Among those, he added, are fertilizing for five-year average corn yields—not maximum yield—and counting all forms of applied nitrogen such as manure and credit from soybeans and other legume crops.

The full effect of reducing nitrogen fertilizer application is expected to benefit local environments too. “We expect that changes in fertilizer use and weather,” McIsaac said.

Funding for the study was provided by the UI and the Illinois Agricultural Experiment Station. Much of the data had been compiled in a previous study funded by the U.S. Geological Survey.
Random noise from within objects reveals their internal structure

By James E. Kloeppe1
News Bureau Staff Writer

By picking up the tiny vibrations of thermal energy that exist naturally in all objects, researchers at the UI have performed ultrasonic measurements without using a source. Potential applications range from seismology to materials science.

As reported in the Sept. 24 issue of Physical Review Letters, UI professor of theoretical and applied mechanics Richard Weaver and research associate Oleg Lobkis measured minuscule sound waves—called phonons—propagating within a block of aluminum at room temperature.

“The sound we were listening to was created by arbitrary thermal fluctuations generated elsewhere in the sample, such as an electron hitting a lattice imperfection or an air molecule striking the surface,” Weaver said. “While no one had really doubted that these tiny fluctuations existed, no one had ever measured them before.”

Weaver and Lobkis not only proved that the vibrations were indeed measurable, they also showed that by correlating what appeared to be random noise, considerable information could be gleaned about an object’s interior. First, they listened to the noise, then they used mathematical operations that looked for patterns and repetitions—a process called autocorrelation. “The waveforms were almost identical,” Weaver said. “When you autocorrelate the ambient noise, you see nearly the same signal as when you pulse the transducer and listen to the echoes.”

This surprising result is something scientists have been overlooking for decades, Weaver said. “We’ve been throwing away this noise—not realizing that it’s full of useful information.”

In principle, the passive technique could work on nearly any object, but would be most helpful in applications where conventional sound sources are scarce. At very low frequencies, for example, seismologists could pick up the random vibrations from distant earthquakes to obtain local stratigraphic information without setting off directed explosives. At extremely high frequencies, the technique could be used to noninvasively probe micron-sized features and material properties in microchips. “The technique also might be useful for monitoring building vibrations to anticipate potential collapse,” Weaver said. “By measuring the natural frequencies of the building as it responds to random vibrations in the neighborhood, even subtle changes in structural rigidity could be detected.”

The National Science Foundation funded the research.

Caseworkers now can find real-world experience online

By Craig Chamberlain
News Bureau Staff Writer

Checklists and formulas don’t work in child welfare. Investigating claims of child abuse and neglect is a very-human, complex business where facts are rarely certain and any remedy carries risks.

To give new caseworkers insight into the complicated situations they will face, before they deal with actual kids and families, researchers at the UI have developed a Web-based learning environment called CARA (for Child Abuse Risk Assessment). It provides on-the-job training without the on-the-job risks, says John Poertner, a professor in the UI School of Social Work and director of its Children and Family Research Center, which sponsored the project.

“What it really does is it condenses what a child welfare worker would get from experiencing their first 10 or 12 cases,” Poertner said.

CARA is built around 10 real-life, less-than-simple cases, with names changed to protect privacy. Through the program, caseworkers can explore each case from any angle and in any order. They can analyze the unique aspects of each, getting a feel for the interaction of personalities, family dynamics and the influence of factors like substance abuse or domestic violence.

Users also can compare similarities between cases—observing, for instance, how mental illness in one family may threaten a child’s safety, and how in another it may not.

What the program doesn’t do is lead the user to conclusions, Poertner said. “It doesn’t say that in this case, at this point, you should say that this child is in danger and remove them from the home.”

CARA was developed by Beena Choksi, a former UI doctoral student in educational psychology. She received her degree last year and has since returned home to India. Aiding in the development was Poertner, along with staff from the Illinois Department of Children and Family Services. Nine of the 10 cases, in fact, came from the DCFS files—just one benefit from a 5-year-old cooperative agreement between the research center and the department.

Choksi based her work on learning theories developed by former UI education professor Rand Spino, now at Michigan State University, which suggest better ways to teach complex, unstructured knowledge—in other words, knowledge that doesn’t lend itself to formulas or linear thinking.

Given the theories that underlie CARA, “I think that it’s a very significant learning tool,” Poertner said. And he sees additional uses for other audiences and other topics in child welfare.

CARA can be found on the Web at http://cfrcwww.social.uiuc.edu/cara, and plans are under way to produce it as a CD-ROM.
Chemical pollution and human sewage could be killing corals

James E. Kloppe
Newbury Star Telegram

You can forget global warming as the sole culprit. A combination of human sewage and shipyard discharge may be responsible for killing off the world’s largest clump of dead black band disease in corals, researchers at the UI say.

The disease, characterized by a ring-shaped bacterial mat that migrates across a coral colony, leaving dead tissue in its wake,” said UI geologist Bruce Fouke.

Black band disease is characterized by a unique group of photosynthetic bacteria that cannot live without light. Cyanobacteria, a unique group of photosynthetic bacteria that cannot live without light, and zinc that are common pollutants from shipyard and other activities.
Inside Illinois

brief notes

Office of Business and Financial Services
Business workshops announced

The Office of Business and Financial Services (OBFS) is offering spring workshops on UI financial and administrative systems. These sessions, which promote continuous improvement of campus financial management, are offered to department heads, as well as departmental business office staff members. Selected refresher training every other year is appropriate and recommended. Workshop locations will vary.

Class descriptions and the most current class workshops are on the OBFS Web site at www.obfs.uiuc.edu/training. Reservations can be made electronically at the OBFS Web site.

UI-Leuven Faculty Exchange Program
Application deadline is Nov. 25

The UI and the Katholieke Universiteit Leuven (KUL) in Belgium have a faculty exchange program that provides funding to UI faculty members to visit KUL for one to two months.

The application deadline is Nov. 26 for spring/summer 2002 appointments and March 25 for fall 2002 appointments. Faculty member applications will be evaluated by a UI committee and nominations will be forwarded to KUL for approval by its faculty committee. Preference will be given to applicants whose projects demonstrate the greatest potential for ongoing research and collaboration with KUL colleagues. Applicants are encouraged to approach their academic counterparts in Leuven before completing the application. If help is needed in contacting KUL, contact Isabel Wong at i-wong@uiuc.edu.

Information on KUL programs and faculty is available on the UI-Leuven website at http://www.uiuc.edu/~kulexchange. Additional information, applications, and instructions may be obtained at the Office of International Programs and Studies.

Mothers Association
Award nominations sought

The Mothers Association is seeking nominations for its bronze Medallion of Honor. The award was created in 1966 to pay tribute to people who, by example and service, used their talents to enrich the lives of others. Since 1977, this award has gone to a woman affiliated in some way with the UI.

Nominations, which are limited to women of current or past association with the UI, must include biographical information and letters of support. Nominations should be submitted to Mothers Association, Medallion of Honor Committee, 303 Student Services Building, MC-306.

The award will be presented to the nominee whose contributions most reflect the standards honored by the Mothers Association. The Mothers Association wishes not only to spotlight the woman, but also draw attention to the prominence of UI graduates in many fields.

The Mothers Association at the UI will present its 2002 Medallion of Honor award at a banquet held during Moms Day Weekend, April 12-14.

Any questions may be directed to Nancy B. Rotzoll, executive director of the Mothers Association, at 333-7063 or rotzoll@uiuc.edu.

Illini Union carry-outs offered
Order baked goods for holidays

The cooks at the Illini Union once again will offer baked goods for Thanksgiving. The carry-out menu includes 9-inch pies (apple for $6.45, pumpkin for $6.20 and pecan for $8.65), carrot layer cake ($12.90), Swedish Limpa bread ($3.95), coffee cake (12 servings/$10.35), poppyseed cloverleaf rolls ($3.95 a dozen), dinner rolls ($3.25 a dozen) and pecan rolls ($11.05 a dozen). Orders must be placed by noon Nov. 19, and may be made by calling 333-1440 or returning an order form to Illini Union Food Service, MC-384. Orders will be available for pickup between 11 a.m. and 1 p.m. Nov. 21 in the Colonial Room of the Illini Union. Free parking will be provided that day in lot D-10, just east of the Union.

Summer 2002 programs

‘Guide to Summer’ seeks input

The Guide to Summer is an information guide to summer programs and activities for current and prospective UI Summer 2002 students. The Division of Summer Session and Special Programs, in seeking campuswide input, to make the guide as comprehensive as possible. Even if your department will not have any summer programs, it is requested that department representatives complete the form before Dec. 7.

Question forms are available through e-mail at summersession@uiuc.edu, or through the Web at www.conted.uiuc.edu/summer/special.pdf. If you already have the question form, mail it to Summer Session, Office of the Dean for Continuing Education, 1406 Presidential Tower, MC-433 or fax it to 333-9561.

Past guides have included information on short courses and conferences of general interest, youth programs, college and special audience, Elderhostel, programs for teachers, study abroad programs and programs in Chicago. The guide is available in March to students at a variety of campus locations and is distributed to campus, college and departmental offices, as well as area high schools, Illinois community colleges and four-year institutions.

The information also will be reprinted in a section of the Summer 2002 timetable.

Environment Horizons 2002
Call for research posters

Environmental Horizons 2002, an annual universitywide conference sponsored by the Environmental Council, will be held April 1 and 2 at the Illini Union. The Environmental Council is soliciting research posters of environmentally related scientific research and outreach. Poster exhibitors will be provided with 55 inches of poster-board space on which to display their materials.

Go to www.environ.uiuc.edu/Horizons2002 for more details and application forms. Applications must be received by Feb. 1 for full consideration.

Focus on the built environment

Two new exhibitions at I space

The built environment will be the focus of two new exhibitions on view Nov. 16 through Dec. 22 at I space, the Chicago gallery of the UI’s Urbana campus.

“A Architectural Scenes: Photography, Buildings and Culture in the 19th and 20th Centuries” features a diverse selection of images by anonymous photographers as well as noted artists such as Adolphe Braun, Harry Callahan, Walker Evans, Robert Macpherson, Alfred Stieglitz and Edward Weston. Also included are vintage and contemporary editions of illustrated books and magazines. The exhibition, which focuses on the attention to light, structure and time shared by architecture and photography, is drawn from the photography collection of Kramatt Art Museum and is curated by UI art history professor Jordana Mendelson, with assistance from graduate students Guisela Lannre and Patty Plummer.

“Giving Form to Values: R.M. Kliment and Frances Halsband Architects, NY” highlights recent work — under construction or just completed — by the New York firm. Projects include the Yale University Divinity School and the Franklin Delano Roosevelt Presidential Library and Visitors Center in Hyde Park, N.Y. The exhibition will include models, construction documents, drawings, diagrams and photographs of the work. Halsband is a visiting Plym Professor this fall at the School of Architecture on the Urbana campus.

An opening reception for “Architectural Scenes” is scheduled from 5 to 7 p.m. Nov. 16 at the gallery, 230 W. Superior St., Chicago. A reception for “Giving Form to Values” will be held 4 to 6 p.m. Jan. 20 at I space. Gallery hours are Tuesdays through Saturday, 11 a.m. to 5 p.m.

Robert Allerton Park and Conference Center
Holiday Showcase is Nov. 24-26

Robert Allerton Park and Conference Center will host its seventh annual Holiday Showcase Nov. 24-26 — from 10 a.m. to 4 p.m. on Saturday and Monday, and from 10 a.m. to 6:30 p.m. on Sunday.

The showcase will feature the work of designers who will create distinct holiday décor for rooms throughout the Robert Allerton House, the century-old, 40-room mansion that now serves as the conference center. Visitors also can take horse-drawn carriage rides between the house and the park’s visitor center and will be able to shop for unique gifts at a variety of designer exhibitors.

Beverages, including a selection of wines, will be served.

Tickets for the event are $10, and proceeds will go to benefit ongoing preservation projects for the mansion and its expansive grounds.

Tickets can be obtained at the park’s visitor center or by calling 762-2721. Directions to the park, along with a map, can be found on the park’s Web site, www.allerton.edu/ allerton/.

Visitors should note that as a result of work on a bridge inside the park, the Conference Center can only be reached by way of the north and west entrances.
25 Sunday  
11:00 a.m. Six micrometers of a biological phenomenon are currently in the Siberian taiga. The study, published in the journal *Science*, found that soil in the region has been warming at a rate of about 1°C per decade since the 1980s, much faster than the global average. The findings suggest that permafrost, which covers about one-fifth of the world's land surface, is thawing at a pace that could have significant implications for climate change.

26 Monday  
9:00 a.m. A team of researchers has discovered a new type of bacteria that can break down plastic. The bacteria, which were found in the digestive systems of marine animals, could potentially be used to help alleviate the plastic pollution crisis. The findings were published in the journal *Nature*.

27 Tuesday  
10:00 a.m. Scientists have announced the discovery of a new species of moon jellyfish, which was found in the depths of the Pacific Ocean. The jellyfish was previously thought to be extinct, and its discovery is considered a significant milestone in marine biology.

28 Wednesday  
11:00 a.m. A study has found that increased exposure to blue light from screens and electronic devices can disrupt sleep patterns and lead to sleep disorders. The study, published in the journal *Proceedings of the National Academy of Sciences*, suggests that reducing screen time before bed could improve sleep quality.

29 Thursday  
12:00 p.m. A new study has revealed that regular exercise can significantly reduce the risk of developing depression. The findings, published in the journal *JAMA Network Open*, indicate that engaging in physical activity for at least 150 minutes per week can lower the risk of depression by up to 30%.

30 Friday  
1:00 p.m. A team of international researchers has mapped the genome of a new species of ancient human. The discovery, published in the journal *Nature*, suggests that this species could have contributed to the genetic heritage of modern humans.

31 Saturday  
8:00 a.m. A groundbreaking new treatment for Alzheimer's disease has been approved by the FDA. The drug, which targets a protein called 

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Entries for the calendar should be sent 15 days before the desired publication date to Inside Illinois Calendar, News Bureau, 807 W. Wright St., Suite 520 East, Champaign, MC 314, or to insidel@uiuc.edu. More information is available from the University Information Technology Services at 333-1085. The online UIUC Events Calendar is at www.uiuc.edu/ucalendar/cal.html.
eminent of the Royal Northern College of Music in Manchester, England. The program includes works from the wind and symphonic band repertoire. Admission charge.

An Evening of Scenes From Opera and Musical Theater, June 24, director: 8 p.m. Recital Hall, Smith Hall. Featuring students of the UI Opera Workshop.

Seniors: Phoebe Male, 8 p.m. Wesley United Methodist Church, 2513 W. Green St., Urbana. Choral concert consisting of five for Grant.

30 Friday
Sinfonia da Camera. Ian Hobson, conductor and soloist. 5 p.m. Foellinger Great Hall, Krannert Center. Miniature chamber symphonies of the Baroque. Admission charge.

Jazz Program perform in Center. Students from the UI Studio Theater, Krannert Theater, Brown, director. 8 p.m. Studio Theater, Krannert Center. A concert of original compositions and arrangements by students and faculty for big band. Admission charge. School of Music.

Harpsichord Extravaganza. Chamber Music Recital. 8 p.m. Memorial Room, Smith Hall. Featuring students of the UI School of Music.

Friday
UI Jazz Orchestra. Douglas Scheller, conductor. 8:30 p.m. Foellinger Great Hall, Krannert Center. A concert of varied works for jazz ensemble. Admission charge. School of Music.

Chamber Music Honors Recital. 8 p.m. Memorial Room, Smith Hall. Featuring students of the UI School of Music.

Friday
UI Symphony Orchestra. Donald Schleicher, conductor. 8 p.m. Foellinger Great Hall, Krannert Center. Haydn’s Symphony No. 104 and Ralph Vaughan Williams’ Symphony No. 2 will be performed. Admission charge. School of Music.

UI Jazz Band II, Matt Olson, leader. 8 p.m. Studio Theater, Krannert Center. Program will feature the debut of the UI World Music Ensemble. Admission charge. School of Music.

U. I. Student Showcase. 8 p.m. Memorial Room, Smith Hall. A recital of vocal students of Sylvia Stone.

Friday
The Fall of the I-Hotel. Noon, 407 Illini Union. The International Hotel was demolished in 1977. More than 20 years later the former site of the building is home to more than 10,000 people remains vacant. Asian American Studies.

On duty
Urban firefighters staff the new fire station on the corner of Gregory and Dermer drives, Urbana. The station began operations the first week of October. The attached six-level parking garage, which opened at the beginning of the fall semester, contains 760 leased parking spaces. Total budget for the construction was $14 million.


Friday
The Film Series “Re-Make/Re-Model” presented by IPRIH Illinois Program for Research in the Humanities. Cabaret Balkan.” 8 p.m. Student Showcase. 8 p.m. Memorial Room, Smith Hall. A recital of vocal students of Sylvia Stone.

Saturday
Remembering World War II and Its Music. 7:30 p.m. Colwell Playhouse, Krannert Center. L'etmois and Dena Verischke host a program of music from the World War II era. Admission charge.


Illini Jazz Lab Band. Shane Pitch, leader. 2 p.m. Music Building auditorium.

Christmas Concert by the UI Gorman Choir, Fred Lawrence, director. 3 p.m. Chapel of St. John the Divine, 1101 S. Wright St., Champaign. Admission charge.

Christmas Concert by the UI Men’s Basketball. UI vs. Texas A&M University. 7 p.m. United Center, Chicago. Admission charge.

Christmas Concert by the UI Women’s Basketball. UI vs. Illinois State University. 7 p.m. Assembly Hall. Admission charge.

Thursday
Women’s Volleyball. UI vs. Purdue University. 7 p.m. Assembly Hall. Admission charge.

Wednesday
Camping at the top of Texas. For more information, call 244-1035 or visit the Web site at www.prairienet.org/cosmo/.

Memorial Day. Admission charge.

International Dinner Series: Thanksgiving Benefit Dinner. 6 p.m. Cosmopolitan Club, 307 E. John St., Champaign. For more information or to make reservations, call 367-3079 or visit the Web site at www.prairienet.org/cosmo/.

International Dinner Series: Mexican Night. 7:30 p.m. Campus Rec Outdoor Center, 51 E. Gregory Drive, Champaign. For more information, call 367-2721. Admission charge.

International Dinner Series: Caribbean Night. 7:30 p.m. United Center, Chicago. Admission charge.

International Dinner Series: Russian Night. 7:30 p.m. University of Illinois, 11 a.m. United Center, Chicago. Admission charge.

International Dinner Series: Chinese Night. Noon. 101 South First Street, Champaign. For more information or to make reservations, call 244-1035 or 762-2721. Admission charge. Robert Allerton Park and Conference Center.

International Dinner Series: Vietnamese Night. Noon. 101 South First Street, Champaign. For more information or to make reservations, call 244-1035 or 762-2721. Admission charge. Robert Allerton Park and Conference Center.

International Dinner Series: Italian Night. Noon. 101 South First Street, Champaign. For more information or to make reservations, call 244-1035 or 762-2721. Admission charge. Robert Allerton Park and Conference Center.

International Dinner Series: Indian Night. Noon. 101 South First Street, Champaign. For more information or to make reservations, call 244-1035 or 762-2721. Admission charge. Robert Allerton Park and Conference Center.

International Dinner Series: South American Night. Noon. 101 South First Street, Champaign. For more information or to make reservations, call 244-1035 or 762-2721. Admission charge. Robert Allerton Park and Conference Center.

International Dinner Series: African Night. Noon. 101 South First Street, Champaign. For more information or to make reservations, call 244-1035 or 762-2721. Admission charge. Robert Allerton Park and Conference Center.

International Dinner Series: Middle Eastern Night. Noon. 101 South First Street, Champaign. For more information or to make reservations, call 244-1035 or 762-2721. Admission charge. Robert Allerton Park and Conference Center.

International Dinner Series: Asian Night. Noon. 101 South First Street, Champaign. For more information or to make reservations, call 244-1035 or 762-2721. Admission charge. Robert Allerton Park and Conference Center.

International Dinner Series: Eastern European Night. Noon. 101 South First Street, Champaign. For more information or to make reservations, call 244-1035 or 762-2721. Admission charge. Robert Allerton Park and Conference Center.

Friday, Nov. 15, 2001
Fractonated proteins are squirted into the vacuum system and then transported into the magnet, where they begin to spin. “The proteins spin at different frequencies, depending on their mass and charge,” Kelleher said. “We gradually lower their orbits to higher and higher radii, and they eventually fly past sensitive detector plates in the mass spectrometer.”

Computers then analyze the data to identify and characterize the proteins. The entire system is becoming increasingly automated for ease and efficiency of operation.

For their initial studies, Kelleher and his students selected two representative life forms: Mycoplasma genitalium, a simple bacterial genome, and Methanococcus jannaschii – an archaean found in sub-marine hydrothermal vents.

First, the researchers showed that multiple proteins could be processed simultaneously. Then they tested a predictive model for database search specificity. The model agreed well with actual searches from a database of about 3,500 protein forms predicted from the genomic sequence of M. jannaschii. The model also should work for the millions of possible protein forms predicted from the human genome.

“These conceptual and technical advances provide a powerful tool for protein characterization in the post-genomic era,” Kelleher said. “By better characterizing proteins, we can improve our fundamental understanding of the blueprint of life.”

The researchers described their technique in the October issue of Nature Biotechnology.

**CALENDAR, CONTINUED FROM PAGE 11**

**27 Tuesday**

Tutusday/Sixteen. “Is That Your FINAL Answer? Preparing for Finals.” 7:30 p.m. 209 Illini Union. For more information on the Web, see www.coalitioneng.uiuc.edu/cgpl/CounselingCenter PageParaprofessionals.

**28 Wednesday**


**5 Wednesday**

“Evolution of the Human Proteome.” Noon. 177 Medical Sciences Building. Lunch/discussion to follow in 3526 VMBSB. For more information, send e-mail to beuoy@uiuc.edu or call 333-6394. Licensing Advisory Committee.

**5 Thursday**

Coffee Hour: Senegalese. 7:30 p.m. Cosmopolitan Club. Coffee Hour: International.

**25 Tuesday**


**25 Wednesday**


**26 Thursday**

“Vascos en America Latina” Garde: From Paris to Chicago. 11 a.m.-5 p.m. Daily. Meet in the main lobby. Entry 10 minutes before until 30 minutes after performance.

**27 Friday**

“Improving our fundamental understanding...” By James E. Kloeppel

The entire system is becoming increasingly automated for ease and efficiency of operation.

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