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# Record

Feb. 16, 2001

Volume 25 No. 19



Washington University in St. Louis

## Human genome map published by consortium

By JIM DRYDEN

**T**he Human Genome Project public consortium announced Monday that it has assembled and published a nearly completed physical map of the human genome — the genetic blueprint for a human being.

The map, which is more than 95 percent complete and covers 96 percent of the genome, is published in the Feb. 15 issue of the journal *Nature*.

Organized by researchers at Washington University School of Medicine, with contributions from laboratories throughout the world, the map provided the basis for the selection of clones for sequencing, and in turn provided the scaffold on which the draft human genome sequence was assembled. After the multiple centers involved in the

public effort sequenced pieces of DNA, these pieces could be positioned with respect to one another to determine where particular pieces fit with other pieces on a chromosome.

"If you have a large, complicated jigsaw puzzle of, say, a forest scene, a number of trees may look alike," said John D. McPherson, Ph.D., associate professor of genetics in the School of Medicine, co-director of the Genome Sequencing Center and corresponding author of the paper. "Making this map was like simplifying that large puzzle by dividing it up into many small puzzles, each containing one tree, then putting all the pieces of the small puzzles together, and in turn putting all the small puzzles together to make the whole forest. That way, you can build one tree

at a time, and then integrate them into the whole picture."

"In assembling the sequence, it is key to map the pieces back to their proper places in the genome," said Robert H. Waterston, M.D., Ph.D., the James S. McDonnell Professor of Genetics, professor of anatomy and neurobiology, head of the Department of Genetics and director of the Genome Sequencing Center at the School of Medicine, the center that organized the physical mapping effort. "The physical map was a critical guide for the assembly of the human genome sequence."

The public effort to sequence the genome has relied on a map-based approach. The map was a key component in the construction of the working draft of the

See *Genome*, Page 6



(From left) Elaine Mardis, Ph.D., research assistant professor in genetics, Richard K. Wilson, Ph.D., associate professor of genetics, and William A. Peck, M.D., executive vice chancellor for medical affairs and dean of the School of Medicine, celebrate the publishing of the nearly completed map and sequence of the human genome.



## Earthquake program centered at WU

By TONY FITZPATRICK

**I**t doesn't take a catastrophe on the order of the recent India earthquake for civil engineers to realize that earthquake-engineering studies need to be intensified. University civil engineers are engaged in an effort to indoctrinate young earthquake engineers with hands-on research early in their undergraduate careers.

To achieve this effect, University faculty and students have joined forces with engineering educators at 22 other national institutions to form a unique consortium that is considered to be a model for future nationwide educational efforts.

The University Consortium on

**LEFT: Juan Caicedo, graduate student research assistant in civil engineering, and Tyler Ranf (right), junior in civil engineering, observe the simulated effects of an earthquake on a model building in Shirley Dyke's Urbauer Hall laboratory. The model's pitched roof is collapsed and bookshelves and a dresser are toppling, illustrating the devastating effects of a temblor inside a building.**

Instructional Shake Tables (UCIST), funded by the National Science Foundation's Division of Undergraduate Education, is headquartered at Washington University. Shirley L. Dyke, Ph.D., assistant professor of civil engineering, is the director of the consortium.

According to Dyke, the overall goal of the UCIST project is to develop a series of earthquake engineering experiments for integration into a civil engineering undergraduate curriculum. The centerpiece for each experiment is a portable, computer-controlled, bench-scale shake table, constructed to meet a set of specifications developed by the earthquake center investigators.

The experiments will focus on the use of "hands-on" seismic simulation experiments which will offer students opportunities to operate the shake table, excite scaled models of various civil engineering structures such as buildings, bridges, towers and dams, with typical earthquake loads, learn basic concepts in structural dynamics, and use sensors to measure responses of the structures.

"One of the most important

### Inside

Students hold dance to aid Indian earthquake victims. **Page 2**

**"We anticipate that this nationwide effort will result in widespread adoption of these experiments in civil engineering departments across the nation."**

SHIRLEY L. DYKE

challenges facing civil engineers of today is minimizing the severe and tragic consequences of earthquakes," Dyke said. "Future civil engineers must have an understanding of the dynamic response of structures such as buildings, bridges, towers and dams to ground motion. Currently few civil engineering students are exposed to structural dynamics at

See *Earthquake*, Page 2

## Brick-and-mortar projects abundant

By BETSY ROGERS

**W**hy would a university plan to spend nearly \$800 million in precious resources on new construction in a single decade? Why would that money not go toward faculty salaries, or expanding curriculum, or scholarships for worthy students?

The answer at Washington University is that precious resources are indeed committed to new professorships, faculty salaries and student financial support. The University has already created a number of new endowed chairs and earmarked funds for many more; it has expanded financial aid and added a variety of new fellowships and scholarships; and it continues to

add new interdisciplinary programs to meet changing needs and student interests.

The second part of the answer is that state-of-the-art facilities are critical to attracting the best faculty and the brightest students.

"If a university wants to accelerate its ascent through the ranks of the world's great institutions, it must recruit top scholars and top students," said Chancellor Mark S. Wrighton, speaking to a group of neighbors last fall. "To do so, it must offer the latest in technology, facilities conducive to groundbreaking research and attractive spaces for living and working."

So there is a much larger context around the flocking of

See *Buildings*, Page 6

### On-Campus Construction

**Third in a three-part series on the University's investments in campus and community infrastructure**

**Feb. 2:** Maintaining and upgrading the University's buildings

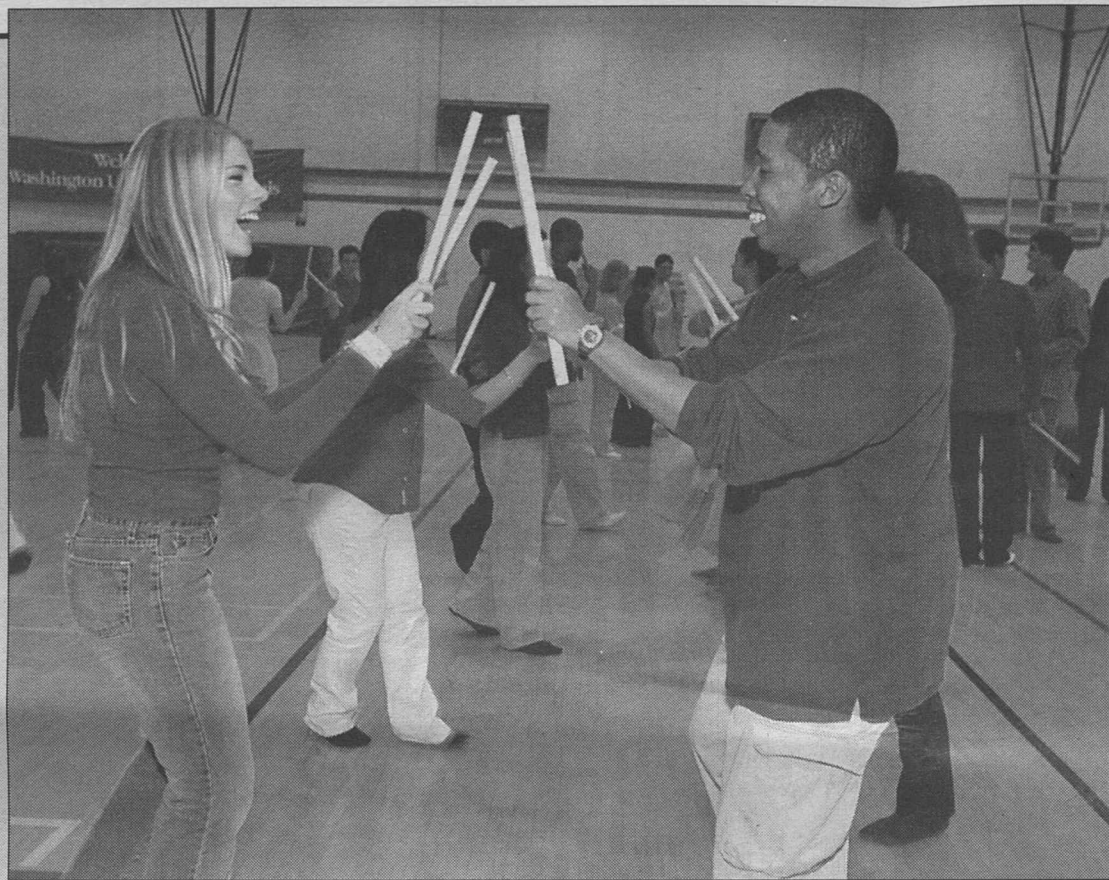
**Feb. 9:** The University's investments in surrounding neighborhoods

**This issue:** New construction around campus



Viewed here looking south from the parking garage, a new chemistry building — one of numerous construction projects on campus — rises from the ground.





**Having fun and helping others** Sophomores Charlene Krieger (left) and Chris Wheat enjoy Raas for Relief on Saturday at the Recreational Gym in the Athletic Complex. Raas is a traditional Indian dance. The fund-raising event was held to help aid earthquake relief efforts in India and was co-hosted by Atma, the Hindu Students Association; Ashoka, the Indian Students Association; and the Muslim Students Association.

## Limited competition selection committee initiated

By ANNE ENRIGHT SHEPHERD

Theodore Cicero, Ph.D., vice chancellor for research, has appointed faculty from both the Hilltop and Medical campuses to a standing committee selected to strengthen and streamline review of applications for limited-competition research grants.

The University receives many notifications of research funding opportunities for which applications are limited to one or two per institution. This committee will review internal applications and select the strongest candidates to represent the University when applicants from both Hilltop and School of Medicine campuses are eligible.

The University-wide Limited Competition Selection Committee replaces ad hoc groups formed in the past to review similar applications. It does not, however, replace the Executive Faculty's Research Affairs Committee at the School of Medicine, which will continue to serve as the review committee for limited competi-

tions applicable only to the medical school.

In the same vein, a Hilltop Research Affairs Committee will be created to consider limited competitions that primarily affect the Hilltop Campus.

Also, the review process for the Pew, Searle and Howard Hughes Medical Institute awards will remain unchanged.

The Hilltop and Medical campuses will have equal

representation on the new committee, with Cicero as the committee's chair voting only in the event of a tie. Initial committee members include: Raymond E. Arvidson, Ph.D., the James S. McDonnell Distinguished University Professor and professor of earth and planetary sciences in Arts & Sciences; Jeffrey I. Gordon, M.D., chair of molecular biology and pharmacology; Ralph S. Quatrano, Ph.D., the Spencer T. Olin

Professor and chair of biology in Arts & Sciences; Philip D. Stahl, Ph.D., the Edward Mallinckrodt, Jr. Professor of cell biology and physiology; David C. Van Essen, Ph.D., Edison Professor of Neurobiology and department head; Clifford M. Will, Ph.D., professor and chair of physics; Frank C-P Yin, M.D., Ph.D., the Stephen F. and Camilla T. Brauer Professor of biomedical engineering; and Charles F.

Zorumski, M.D., the Samuel B. Guze Professor and chair of psychiatry. Standardized application procedures will ensure objectiv-

ity and provide uniformity in the proposal review process. Details of all open competitions are posted on the Web at <http://intramed.wustl.edu/OCFR/grants.nsf/Current>. Applications will be reviewed quickly and every effort will be made to notify applicants of the committee's decision within 10 working days after the proposal's submission.

For more information, call Cicero at 362-7010.

**The Hilltop and Medical campuses will have equal representation on the new committee, with (Theodore) Cicero as the committee's chair voting only in the event of a tie.**

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## Family members' mental health problems addressed

By ANN NICHOLSON

Support for family caregivers of persons living with mental health problems is the focus of a community workshop developed by University faculty and a national family support group.

The event will be from 8:30 a.m.-3:30 p.m. Feb. 24 at the Holiday Inn Select-St. Peters-St. Charles, 4221 South Outer Road, St. Peters.

The program is co-sponsored by the George Warren Brown School of Social Work, School of Medicine, the St. Louis branch of the National Alliance for the Mentally Ill (NAMI St. Louis) and the Missouri Institute of Mental Health at the University of Missouri-Columbia School of Medicine.

"Even though family and friends often have primary responsibility for the care of loved ones with mental illness, they are

sometimes overlooked in the treatment of the illness," said David E. Pollio, Ph.D., associate professor at the University's social work school and an organizer of the workshop. "Education and supportive family and friends are critical in helping a loved one who is ill."

The workshop, which is open to the public, is designed to give basic information about severe mental illness to family and friends of people who are recovering from schizophrenia, bipolar (manic depressive) disorder, severe depression or other mental illnesses.

Topics to be covered include the causes of and treatments for severe mental illness; the resources available to help people recover from mental illness; how families and friends can best relate to loved ones; and how family and friends can cope with their responsibilities as caregivers.

Hundreds of area residents have taken part in previous workshops, which are held three times a year.

Other University faculty involved in workshop presentations and planning are Michael Polgar, Ph.D., research associate with the social work school's Center for Mental Health Services Research; and the medical school's Carol North, M.D., associate professor of psychiatry and head of the workshop's organizing committee, and Laura Sherman, M.D., instructor in psychiatry.

The registration fee is \$15 for family members and \$35 for mental health care providers. The fee covers the cost of education materials, lunch and coffee breaks. Registration scholarships are available for families who need assistance. For more information, contact NAMI St. Louis at 966-4670.

## Earthquake

**National consortium headquartered at WU**

— from Page 1

the undergraduate level. This program seeks to integrate this important topic into the undergraduate curriculum by introducing a series of hands-on experiments."

Each of the participating universities has purchased this equipment and is developing at least one experiment to be distributed to other universities. Each university will subsequently integrate three of these experiments into their undergraduate curriculum.

"We anticipate that this nationwide effort will result in widespread adoption of these experiments in civil engineering departments across the nation," Dyke said.

Videos of the UCIST shake table in action are available at <http://wusceel.cive.wustl.edu/ucist/>.

The program is a joint effort between a number of universities associated with the three national earthquake centers: Pacific Earthquake Engineering Research Center (PEER), Mid America Earthquake Center (MAE), and Multidisciplinary Center for Earthquake Engineering Research (MCEER).

The students are expected to develop an understanding and an intuition regarding the dynamic nature of structures. Theoretical concepts are reinforced through the use of "hands-on" laboratory experiments, and students have access to modern engineering tools including sensors, actuators, and data acquisition/analysis equipment.

Efforts are also under way to expose non-engineering students to the potential consequences of earthquakes and the dynamic behavior of civil engineering structures. Students are learning about emerging technologies such as structural control techniques and are improving their technical communication abilities.

The equipment is also used extensively for research projects. A handful of students at the undergraduate, graduate, and high school levels have used the equipment for research projects.

"Undergraduate research experiences challenge and motivate students, encouraging them to pursue graduate degrees," Dyke said. "Students are using the experimental facilities to complete individual research projects that contribute to the overall goals of ongoing research programs."

For instance, Dyke is working with civil engineering junior Tyler Ranf on the implementation of the Transfer Function Iteration Algorithm on the instructional shake table in Dyke's laboratory. This work focuses on the development of a technique to simulate an earthquake accurately with the instructional shake tables. His

project will be made available on the Web site to allow institutions across the country to use his program.

As a participant in last summer's NSF-sponsored Research Experiences for Future Structural Engineers, Ranf worked at the University with Kevin Z. Truman, Ph.D., professor and chair of civil engineering, and Phillip L. Gould, Ph.D., Harold D. Jolley Professor of Civil Engineering, on the probability and effects of liquefaction on locks near the New Madrid Fault. He considered the potential impact of an earthquake affecting this critical structure, including both structural damage and nationwide economic impacts.

Ranf's project resulted in a report he submitted to a national undergraduate research paper contest sponsored by the Earthquake Engineering Research Institute (EERI). He won the contest and was fully supported by EERI to travel to Monterey, Calif., to attend the EERI annual meeting and present the paper.

"We're very proud of Tyler, and believe his kind of research experience provides students with a broader perspective about their field and an understanding of basic and applied research," Dyke said. "These are the makings for outstanding future engineers."

Experiments are developed for undergraduate students at all levels and for non-engineering students such as architects and geoscientists, who will benefit from such exposure. Designers of each experiment will develop a laboratory manual containing plans for the test, specimens, relevant theory, experimental setup, required exercises, any in-house software designed for the experiment, and anticipated results for comparison.

Students are exposed to various experiments via videotapes made at the different institutions. For instance, freshman engineering students at one institution focusing on a building model can see a video containing a series of experiments on bridges, towers and liquefaction. The final product will be a CD-ROM, to made available to the academic community at production cost, that will contain all laboratory manuals, photographs of the experiments, software and video clips.

Dyke, Truman and Gould were instrumental in forming the consortium. They outlined their plans and made a presentation on the consortium at the June 2000 ASCE Annual Meeting in St. Louis.

Additional activities include plans for developing two nationwide competitions in earthquake resistant design, one for undergraduates and one for elementary school children. Civil engineering students also use the equipment to perform demonstrations at the St. Louis Science Center during Earthquake Awareness Weekend in the first weekend of February.

## Record

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 **Washington University in St. Louis**



## Medical School Update

# Chronic pain clues provided by study of mice

By JIM DRYDEN

**S**chool of Medicine investigators have found that a protein that allows nerve cells to communicate may enhance perceptions of chronic and persistent pain. In the February issue of *Nature Neuroscience*, they reported the protein, called NR2B, makes mice more aware of minor pain for longer periods of time.

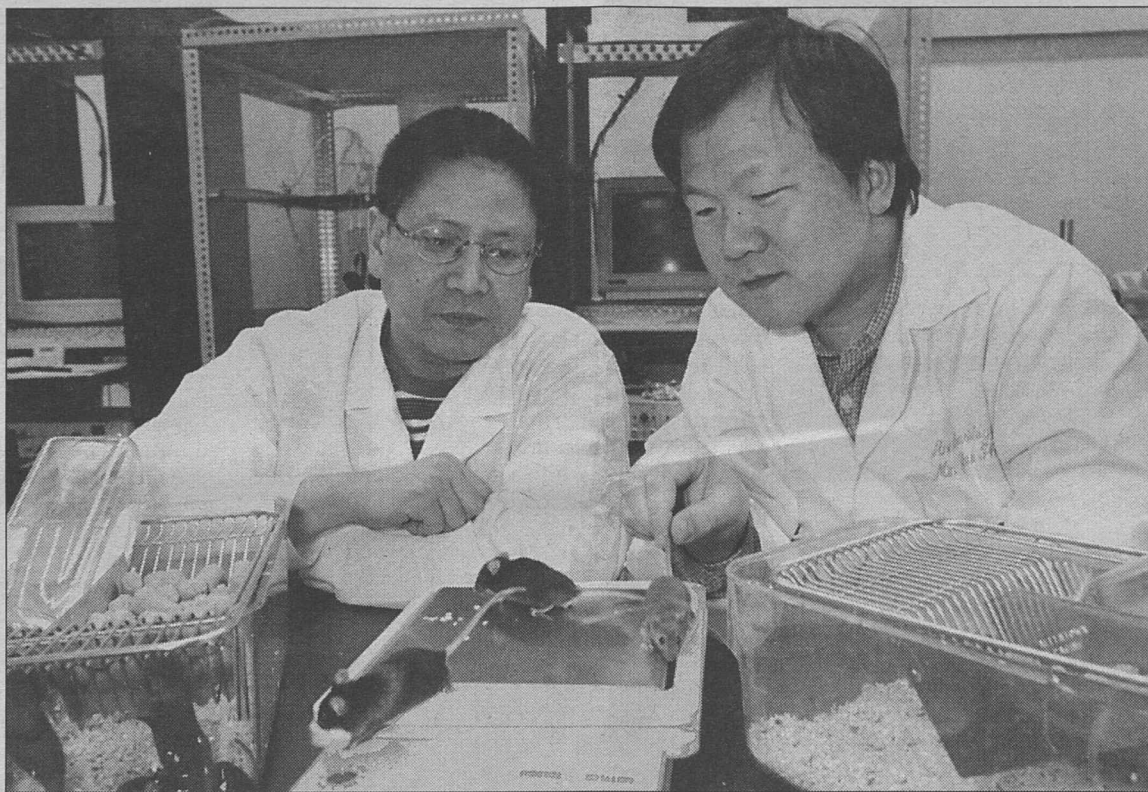
"That sustained response appears to mimic what happens in people who experience pain long after the painful stimulus has disappeared," said principal investigator Min Zhuo, Ph.D., associate professor of anesthesiology and of anatomy and neurobiology. "So interfering with NR2B in humans might be a strategy for treating chronic pain."

NR2B is one of the mix-and-match building blocks of important cellular proteins called NMDA receptors. Like radio receivers, these receptors sit on the cell surface, tuned in to messages sent from neighboring cells and carried by the chemical messenger glutamate. More importantly, they function only when the number and intensity of neuronal messages reach a prescribed threshold level.

Because NMDA receptors only become activated at these threshold levels, they tend to be the primary neuronal receptors involved in important brain functions such as learning and memory and in injurious brain processes such as stroke, head injury and drug abuse. They also are the primary receptors involved in persistent pain.

The researchers studied a strain of genetically altered mice created by Joe Tsien, Ph.D., and his colleagues at Princeton University to make extra NR2B in forebrain areas. The Washington University group — which included anesthesiology fellows Feng Wei, Ph.D., and Guo-Du Wang, Ph.D.; M.D./Ph.D. student Geoffrey Kerchner; and Zhou-Feng Chen, Ph.D., assistant professor of anesthesiology — found that these mice reacted to acute pain in the same way as normal mice.

But the NR2B mice seemed to have stronger or longer periods of behavioral responses to two different models of more persistent, inflammatory pain. None of the mice demonstrated pain symptoms in the absence of an injury.



By studying genetically altered mice, Zhou-Feng Chen (left), Ph.D., assistant professor of anesthesiology, and Min Zhuo, Ph.D., associate professor of anesthesiology and of anatomy and neurobiology, and their colleagues determined that a protein that allows nerve cells to communicate may enhance perceptions of chronic and persistent pain.

"We believe that when an injury occurs, NMDA receptors in regions of the forebrain may play an important role in processing discomfort from that pain, and they could be a potentially important target for treating chronic pain," Zhuo said.

Past research with mice has shown abnormally high NR2B levels are related to other behavioral changes and biological changes in the brain. In 1999, Zhuo was part of a research team that reported in *Nature* that NR2B mice performed better in behavioral tests of learning and memory.

Long-term potentiation (LTP), a physiological change thought to be important for learning and memory, was also enhanced in the NR2B mice. Like oil lubricates pistons to help an engine work, LTP lowers the threshold neurons must reach before firing off a message. That makes it easier for them to send messages back and forth along sensory pathways.

In 1999, Zhuo detected the LTP enhancement by studying slices of NR2B mouse brain. When the brain slices were exposed to a weak

electrical stimulation, transmissions between neurons at junctions called synapses were significantly strengthened (potentiated) for a long period

**"Our study has provided a target for the development of drugs that would be highly selective for persistent pain. They would allow people to ignore chronic pain while leaving the rest of the pain system intact."**

MIN ZHUO

of time.

"In these experiments, we wanted to learn if strengthened connections in forebrain areas affect animals' responses to pain," Zhuo said.

When a mouse or human encounters a painful event, receptors on the skin, muscle or internal organs trigger an electrical impulse that travels along a nerve fiber to the dorsal horn of the spinal cord. There, the fiber connects with a nerve cell, which relays the pain signal up the spinal cord to the brain.

Under normal conditions, these synaptic transmissions are handled by neuronal receptors called

glutamate AMPA and kainate receptors. However, when excessive information reaches these synapses between nerve cells, normally dormant NMDA receptors can be activated, and a series of intracellular signaling molecules can be triggered. This cascade of events leads to long-lasting changes in the way neurons communicate and can lead to changes in how the human or the animal perceives external pain signals.

Brain imaging studies in humans have shown that forebrain structures called the cingulate cortex and the insular cortex help perceive pain. But how cells in those structures perform that function was not known.

The genetically altered mouse that overexpresses NR2B, consequently enhancing the activity of NMDA receptors, provided Zhuo and colleagues with a ready-made model for exploring NR2B's role in the forebrain. The researchers prepared brain slices from the anterior cingulate cortex and the insular cortex of both normal and NR2B mice.

They also examined spinal cord slices from both strains. The

spinal cord slices responded similarly to a small electrical stimulus. But the NMDA receptor-mediated responses in the forebrain slices from the NR2B mice were enhanced when compared with the normal mice.

In other experiments, the research team observed the behavior of mice subjected to mildly painful stimuli. There was no observable difference in behavior between the standard and NR2B mice. The differences that did occur were evident only hours or days following injections that caused an inflammatory response at the injection site.

The mice were anesthetized and then given an injection in the hind paw with either formalin or a chemical irritant called complete Freund's adjuvant (CFA). In the formalin test, when the anesthesia wore off, both normal and NR2B mice licked and bit the injection site. But the NR2B mice who got formalin injections continued licking long after the other mice had stopped. And in response to contact from a small filament that normally causes no response, the NR2B mice injected with CFA would withdraw their paw and escape.

The results can be interpreted in several ways. "Perhaps the animals with more NR2B can detect pain sooner in case of injury," Zhuo said. "That could help them avoid more serious injury. But if an injury is not avoidable, the enhanced NMDA receptor activity in the forebrain would make them more likely to feel persistent pain."

Zhuo believes that deactivating the NR2B protein might help people with chronic pain. In particular, such a strategy may help patients with allodynia — pain induced by a stimulus that is not normally painful, such as a gentle touch. Many current drugs that target NMDA receptor activity work by interfering with all NMDA receptors. Therefore, they also block acute pain, which can be protective.

"You want to be able to feel painful heat on your skin when you're cooking, so you can quickly withdraw your hand if you need to," Zhuo said. "Our study has provided a target for the development of drugs that would be highly selective for persistent pain. They would allow people to ignore chronic pain while leaving the rest of the pain system intact."

## Outstanding leaders in medical student education receive honors

By ANNE ENRIGHT SHEPHERD

**T**he School of Medicine recently recognized the first recipients of the Samuel L. Goldstein Leadership Awards in Medical Student Education. Honors were bestowed on Thomas H. Gallagher, M.D., assistant professor of medicine; Robert S. Wilkinson, Ph.D., professor of cell biology and physiology; and a joint award was given to Kathleen McGann, M.D., assistant professor of pediatrics, and Angela M. Sharkey, M.D., associate professor of pediatrics.

The selection committee also gave special recognition to Kenneth M. Ludmerer, M.D., professor of medicine, for his contributions to medical education, which have had an impact on medical students nationally and internationally.

"These top-notch educators are a credit not only to the School of Medicine but to the entire profession," said William A. Peck,



Gallagher



Wilkinson



McGann



Sharkey



Ludmerer

M.D., executive vice chancellor for medical affairs and dean of the medical school. "But it is our students who benefit most from the dedication and extraordinary teaching ability shown by these outstanding men and women."

The awards recently were established in memory of Samuel L. Goldstein, a longtime friend of the medical school, in recognition of faculty members who have contributed in an outstanding manner to medical student education. The recipients were selected by a committee of their peers after a formal

nomination process. The honors will be awarded annually.

**Gallagher**, who joined the University in 1995, earned a bachelor's degree in religion from Carleton College in 1986 and a medical degree from Harvard University in 1990. His research interests include bioethics, managed care and doctor-patient communication.

**Wilkinson** has been recognized for outstanding teaching almost annually in the past decade. Before joining the University in 1975, he earned a bachelor's degree in physics from Rice University in 1968 and a Ph.D., also in physics,

from the University of Texas in Austin in 1974. His research in neuroscience looks at the relationship between synaptic structure and

function in nerve cells. **McGann** specializes in pediatric infectious diseases and joined the University faculty in 1994. She majored in psychology and molecular, cellular and developmental biology at the University of Colorado in Boulder, graduating in 1981 before earning a medical degree from the University of Pennsylvania in 1985.

**Sharkey**, a pediatric cardiologist, also is director of fetal echocardiography and director of noninvasive services at St. Louis Children's Hospital. After graduating from Creighton University in 1982, she earned a medical degree

from Saint Louis University in 1986. She then did an internship and residency at Cardinal Glennon Children's Hospital and a pediatric cardiology fellowship at The Children's Hospital of Philadelphia before joining the University in 1992.

**McGann** and **Sharkey** are also co-coursemasters of the women and children's health clerkship.

**Ludmerer**, also a professor of history in Arts & Sciences, is considered a leading authority on medical history and medical education. He has published two books on the history of medical education, both of which were nominated for a Pulitzer Prize and a Bancroft Prize. He earned a bachelor's degree in the history of science from Harvard University in 1968. He then graduated from Johns Hopkins University with a master's degree in the history of medicine in 1971 and a medical degree in 1973. He joined the University in 1980.



# University Events

## Dark comedy 'Marie and Bruce' presented by PAD

By LIAM OTTEN

Wallace Shawn is perhaps best known as a character actor, having appeared in dozens of films, from Hollywood comedies like "The Princess Bride" (1987) and "Clueless" (1995) to Louis Malle's classic two-person dialogue "My Dinner With Andre" (1981). Perhaps less widely recognized, however, is Shawn's career as an Obie Award-winning playwright, whose often wickedly funny works have been staged at prestigious venues across the United States and Europe.

Beginning Thursday, the University's Performing Arts Department in Arts & Sciences will present Shawn's darkly comic "Marie and Bruce," a unsparing account of 24 hours in a tempestuous urban marriage.

"Marie and Bruce" follows a day in the life of a troubled New York couple, whose often savage (if darkly funny) bickering can make "Who's Afraid of Virginia Woolf?" sound like the pinnacle of domestic bliss. From the opening monologue, in which Marie frankly informs the audience that she is considering divorce, to Bruce's overindulgence at a swanky loft party and the final denouement in a Japanese restaurant, the pair gives new — and not entirely welcome — meaning to the phrase "emotional honesty."

"This is a fierce little play, a polemic about love," said William Whitaker, artist-in-residence in the PAD who directs the 15-member cast. "It's as if all our

### "Marie and Bruce"

**WHO:** The University's Performing Arts Department in Arts & Sciences

**WHERE:** The A.E. Hotchner Studio Theatre, Mallinckrodt Center, Room 208

**WHEN:** 8 p.m. Feb. 22-24 and March 1-3; 2 p.m. Feb. 25

**TICKETS:** \$8 for senior citizens and University faculty, staff and students; \$12 for the general public. Available at Edison Theatre Box Office (935-6543) or MetroTix (534-1111).

basest instincts, all the things we have secretly wondered about 'the beloved,' get said out loud."

Whitaker warns that audiences accustomed to seeing the actor Shawn in light-hearted-film roles may be surprised at the playwright's almost cruelly satiric force.

"When you look at the roles that someone like Sam Shepherd plays, for example, you sort of expect him to write the kind of expansive, Western-American dramas that he does," Whitaker said. "But if you expect Wallace Shawn to write 'cute' or 'charming' plays — well, watch out."

"Shawn is out to punch you in the face with his strange, dangerous musings about the interior life of the American scene. For anybody who's ever been in a relationship, it's as if everything has been made manifest, with

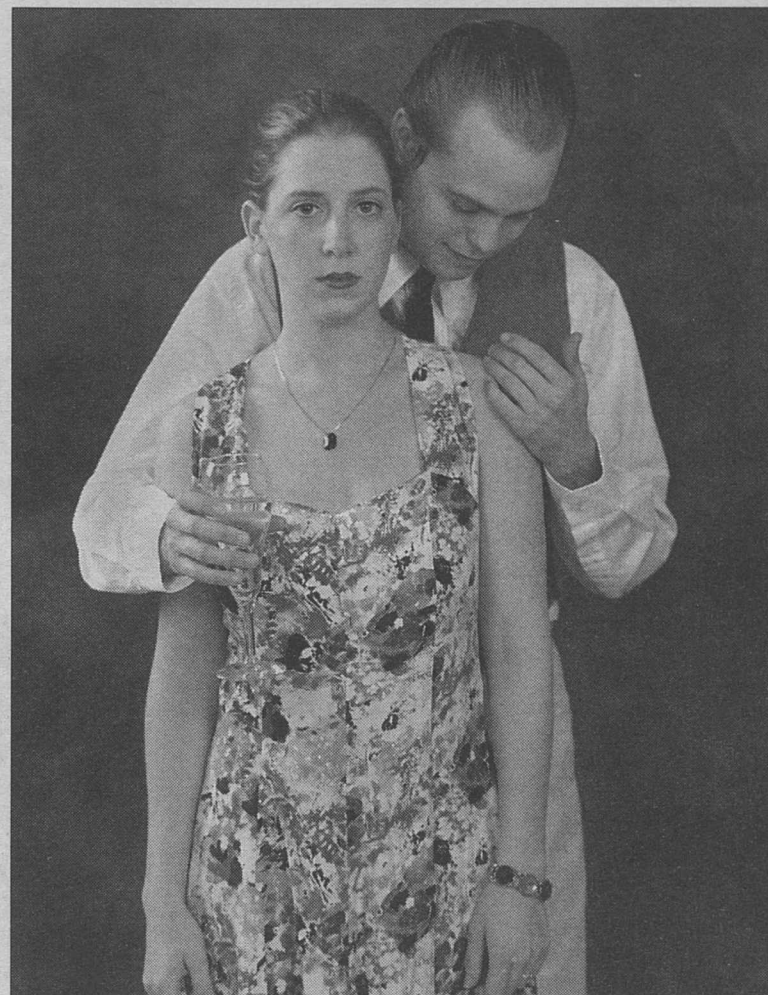
editor-free, rocket-fuel cruelty. Dramatically, he wants us to own up to our darkest secrets — to recognize what we're like outside of the public eye, when all the masks come off."

Whitaker noted that the actors, particularly juniors Annie Erickson and Barrett Graves in the title roles, have brought to their performances "an extraordinarily sophisticated notion of what this relationship is all about. It's really amazing to see."

The scenic design, by junior Justin Barisonek, is a marvel of theatrical efficiency that quickly transforms from an urban apartment setting into a gallery-style loft and, later, into the Japanese restaurant. Lighting design is by junior Katie Foresman, with costumes by Sallie Durbin, costume shop supervisor.

Shawn is the author of 14 plays, including "A Thought in Three Parts" (1975), "Aunt Dan and the Lemon" (1985), "The Fever" (1991) and "The Designated Mourner" (1996). As an actor, his film credits include "All That Jazz" (1979), "The Hotel New Hampshire" (1984), "Radio Days" (1987), "Scenes From the Class Struggle in Beverly Hills" (1989), "Vegas Vacation" (1997) and "Vanya on 42nd Street" (1994). He lent his voice to the films "Toy Story" (1995) and "All Dogs Go To Heaven 2" (1996) and has appeared on television in "Taxi," "The Cosby Show," "Murphy Brown" and "Star Trek: Deep Space Nine," among others.

Shows Feb. 22-24 and March 1-3 begin at 8 p.m., with a 2 p.m.



Juniors Annie Erickson and Barrett Graves play the title roles in "Marie and Bruce" at The A.E. Hotchner Studio Theatre.

performance Feb. 25, all in the A.E. Hotchner Studio Theatre, Mallinckrodt Center, Room 208. Tickets — \$8 for senior citizens and University faculty, staff and students, and \$12 for the general

public — may be purchased at the Edison Theatre Box Office (935-6543) or through MetroTix (534-1111).

For more information, call 935-6543.

## "Fires on the Plain" • History of Childhood • The Invisible Violent Universe • Martin Marty

"University Events" lists a portion of the activities taking place at Washington University Feb. 16-28. Visit the Web for expanded calendars for the School of Medicine ([medschool.wustl.edu/events/](http://medschool.wustl.edu/events/)) and the Hilltop Campus ([cf6000.wustl.edu/calendar/events/](http://cf6000.wustl.edu/calendar/events/)).

### Exhibitions

**"Caught By Politics: Art of the 1930s and 1940s."** The Gallery of Art. Through March 18. Steinberg Hall Aud. 935-4523.

**"Farewell to Bosnia."** Gilles Peress, photographer. The Gallery of Art and the St. Louis Chapter of the United Nations Assoc. Through March 18. Steinberg Hall Aud. 935-4523.

### Film

#### Tuesday, Feb. 20

**6 p.m. Chinese Film Series.** "The Emperor and the Assassin." Room 219 Ridgley Hall. 935-5156.

#### Wednesday, Feb. 21

**7 p.m. Gallery of Art Film Series.** "Phantom Lady." Robert Siodmak, dir. (1944). Steinberg Hall Aud. 935-4523.

#### Tuesday, Feb. 27

**6 p.m. Japanese Film Series.** "Fires on the Plain." Room 219 Ridgley Hall. 935-5156.

#### Wednesday, Feb. 28

**6 p.m. Near Eastern Film Series.** "Rocking Horse." Room 219 Ridgley Hall. 935-5156.

**7 p.m. Gallery of Art Film Series.** "Double Indemnity." Billy Wilder, dir. (1944). Steinberg Hall Aud. 935-4523.

### Lectures

#### Friday, Feb. 16

**9:15 a.m. Pediatric Grand Rounds.** "Growing Up Right: Recent Advances in the History of Childhood." Walton O. Schalick, III, instructor in pediatrics, newborn medicine div. and asst. prof. of history. Clopton Aud., 4950 Children's Place. 454-6006.

**Noon. Cell biology and physiology**

**seminar.** "Signal Transduction Pathways Governing Salmonella's Lifestyle." Eduardo A. Groisman, assoc. prof. of molecular microbiology. Room 426 McDonnell Medical Sciences Bldg. 362-6950.

**Noon. Computational biology seminar.** "Blue Gene: Protein Folding With Molecular Dynamics." Ruhong Zhou, IBM Thomas J. Watson Research Center, Yorktown Heights, N.Y. Room 2204 Shriners Bldg. 362-4195.

**7:30 p.m. St. Louis Astronomical Society lecture.** "The Invisible Violent Universe." Wayne Clark, St. Louis Astronomical Society. Co-sponsored by earth and planetary sciences and NASA's Missouri Space Grant Consortium. Room 162 McDonnell Hall. 935-4614.

#### Monday, Feb 19

**Noon. Lung biology conference.** "A Novel Adhesive Site on Tropoelastin Which Promotes Cell Spreading." Tom Broekelmann, research assoc. in cell biology. Room 801 Clinical Sciences Research Bldg. 362-8983.

**Noon. Neurology and neurological surgery research seminar.** "BH-3 Only Proteins in Neuronal Apoptosis." Eugene M. Johnson Jr., the Norman J. Stupp Prof. of Neurology and prof. of molecular biology and pharmacology. Schwarz Aud., first floor, Maternity Bldg. 362-7379.

**3 p.m. School of Law and Black Law**

**Students Assoc. lecture in honor of Black History Month.** Maxine Waters, U.S. Congresswoman (D-Calif.). Bryan Cave Moot Courtroom, Anheuser-Busch Hall. 935-4958.

**4 p.m. Condensed matter/materials and biological physics seminar.** "NMR Studies of Carbon Nanotubes and Nano-channels in a-Si:H." Yue Wu, prof. of physics and astronomy, U. of N.C., Chapel Hill. Room 241 Compton Hall (coffee 3:45 p.m.). 935-6276.

**4 p.m. Immunology Research Seminar Series.** "The MHC-I Molecule As a Focus for Innate and Adaptive Immunity: Interactions With Natural Killer (NK) and T Cell Receptors." David H. Margulies, molecular biology section, National Insts. of Health, National Institute of Allergy and Infectious Diseases, Bethesda, Md. Eric P. Newman Education Center. 362-2763.

#### Tuesday, Feb. 20

**Noon. Molecular Microbiology and Microbial Pathogenesis Seminar Series.** "Phenotypic Variation and Intracellular Parasitism *Histoplasma capsulatum*." William E. Goldman, prof. of molecular microbiology. Cori Aud., 4565 McKinley Ave. 747-2630.

**12:05-12:55 p.m. Program in Physical Therapy research seminar.** "Resolving Disagreements Between Patients and Providers Related to Managed Care." Thomas H. Gallagher, asst. prof. of medicine, internal medicine dept. Classroom B114, 4444 Forest Park Blvd. 286-1404.

**4:15 p.m. Earth and planetary sciences colloquium.** "Generation of Zonal Winds by Thermal Convection in Rapidly Rotating Spherical Shells." Jonathan Aurnou, terrestrial magnetism dept., Carnegie Institution of Washington. Room 162 McDonnell Hall. 935-5610.

#### Wednesday, Feb. 21

**11 a.m. Assembly Series.** Muslim Students Assoc. lecture. "Globalization and Its Impact on Christian-Muslim Relations." Yvonne Yazbeck Haddad, author and prof. of history of Islam and Muslim-Christian relations, Georgetown U. Graham Chapel. 935-5285.

**11 a.m. Public Interest Law Speakers Series.** "The Death Penalty Process: Is It Fixable?" Thomas P. Sullivan, attorney and co-chair, Ill. Governor's Commission on Capital Punishment. Anheuser-Busch Hall. 935-4958.

#### Noon. Orthopaedic research seminar.

"Role of Heparan Sulfate in Limb Patterning and Skeletal Development." Scott Saunders, asst. prof. of molecular biology and pharmacology and of pediatrics. Room 11300 West Pavilion, Barnes-Jewish Hosp. Bldg. 454-7800.

**3:45 p.m. Physics colloquium.** "CMB Anisotropy — Probing Cosmology From the Andes to the Antarctic." Eric Torbet, U. of Calif. Room 204 Crow Hall (coffee 3:30 p.m., Room 241 Compton Hall). 935-6276.

**4 p.m. Mouse genetics conference.** "Use of Transgenic Mice to Study Extracellular Matrix Assembly." Robert P. Mecham, prof. of cell biology and physiology. Room 9941 Clinical Sciences Research Bldg. 362-8983.

**5:15 p.m. Mothers and Babies Research Center conference.** "MIRVs for Overcoming Drug Resistance in Ovarian Cancer: A New Concept of Drug Design." Frederick Sweet, prof. of reproductive biology in obstetrics and gynecology. Room 36, third floor south, St. Louis Children's Hosp. 747-0739.

#### Thursday, Feb. 22

**Noon-1 p.m. Genetics seminar.** "Dissecting Gene Regulatory Networks — Lessons From Yeast." Bing Ren, Whitehead Inst., MIT. Room 823 McDonnell Medical Sciences Bldg. 362-7072.

**4 p.m. Biology seminar.** "Biological Invasion and Ecosystem Change: A Case Study of Exotic Grasses in a Hawaiian Woodland." Michelle Mack, earth system science dept., U. of Calif., Irvine. Room 322 Rebstock Hall. 935-4632.

**4 p.m. Chemistry seminar.** "Use of Organic Synthesis to Study Cell Biology." Matthew Shair, chemistry dept., Harvard U. Room 311 McMillen Lab. 935-6530.

**4 p.m. Foreign Language Pedagogy Colloquium Series.** "Second Language Acquisition Theory: How Does It Inform Language Teaching?" Bill VanPatten, U. of Ill., Chicago. Room 162 McDonnell Hall. 935-5156.

**5 p.m. Vision Science Seminar Series.** "Photochemical Tissue Bonding in the Cornea." Irene E. Kochevar, dermatology dept., Mass. General Hosp., Harvard Medical School, Boston. East Pavilion Aud., Barnes-Jewish Hosp. Bldg. 362-5722.

**7 p.m. Gallery of Art Lecture Series.** "Hans Richter in Exile: Translating Avant Garde Film." Nora Alter, assoc. prof. of German and film and media studies, U. of Fla., Gainesville. Steinberg Hall Aud.

## Yvonne Haddad to address Muslim-Christian relations

Yvonne Yazbeck Haddad will deliver an Assembly Series lecture titled "Globalization and its Impact on Christian-Muslim Relations" at 11 a.m. Wednesday in Graham Chapel.

A prolific author and a professor of the history of Islam and Christian-Muslim relations at Georgetown University, Haddad specializes in contemporary Islamic issues, women in Islam and Islam in America. Haddad has taught in a number of universities in North America, and in the Middle East, as well as India and Africa.

She has edited or authored more than a dozen books, among

them, "The Muslims of America" and "Islam, Gender and Social Change." Haddad co-edited "The Oxford Encyclopedia of the Modern Islamic World" in 1995.

Haddad is active in a wide array of professional organizations and sits on several advisory boards, most notably the Council on Foreign Relations, the American Council for the Study of Islamic Societies, the Arab-American Anti-discrimination

### Assembly Series

**Who:** Yvonne Yazbeck Haddad (right)  
**Where:** Graham Chapel  
**When:** 11 a.m. Wednesday  
**Admission:** Free and open to the public



Committee and the Middle East Studies Association.

The lecture is free and open to the public. For more information, call 935-5285 or visit the Assembly Series Web page (<http://wupa.wustl.edu/assembly>).



# Peter Ho Davies to read for writing program

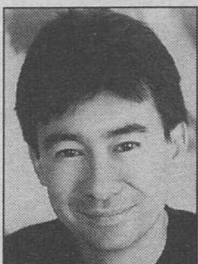
By LIAM OTTEN

Short-story writer Peter Ho Davies will read for the University's Writing Program Reading Series at 8 p.m. Thursday in Hurst Lounge, Duncker Hall, Room 201. A book signing will follow the reading, which is sponsored by the Writing Program in Arts & Sciences and is free and open to the public.

Davies currently teaches at the University of Michigan and is the author of the collections "The Ugliest House in the World" (1997) and "Equal Love" (1999). His work has appeared in such publications as The Atlantic, Harpers, Granta, The Paris Review and Ploughshares, and has been included in the anthologies

"Prize Stories: The O. Henry Awards" and "Best American Short Stories."

"Because his exposure keeps rising, and because his fiction is never quite like anything else you've read, I think Peter is pretty quickly becoming one of the more talked-about and influential younger writers around," said Marshall Klimasewski, assistant professor of English in Arts & Sciences. "And you never get just one story



**Davies:** Reading at Hurst Lounge

with Peter; a narrative centered on an interracial marriage also happens to be about UFOs, or a Western in which John Wayne and Gary Cooper have their roles is set among Communist insurgents in Kuala Lumpur. He makes great fiction out of strange bedfellows, and he always surprises you."

Davies is the recipient of fellowships from the National Endowment for the Arts and from the Fine Arts Work Center in Provincetown; other awards include the John Llewelyn Rhys and the PEN/Macmillan prizes in the United Kingdom and the H.L. Davis Oregon Book Award in the United States.

For more information, call 935-7130.



MARY EUTIMUS

**Present and future philanthropists** Senior Idar Hsin talks with Ford Foundation President Susan V. Berresford (left) before her "Philanthropy in the 21st Century" talk, part of the George Warren Brown School of Social Work's 2001 Spring Lecture Series, Feb. 8 in Brown Hall. Berresford met with about 15 undergraduate students interested in careers in philanthropy.

("Dreams That Money Can Buy" screening 5 p.m.), 935-4523.

## Friday, Feb. 23

**9:15 a.m. Pediatric Grand Rounds.** "Implications of Perinatal Perturbations in Glucose Homeostasis." Sherin K. Devaskas, prof. of pediatrics, vice chair, research in pediatrics, dir., neonatology and developmental biology, Mattell Children's Hosp., Univ. of Calif., Los Angeles. Clopton Aud., 4950 Children's Place. 454-6006.

**11 a.m. Analysis Seminar.** Christina Draghici, mathematics dept. Room 199 Cupples I Hall. 935-6760.

**Noon. Cell biology and physiology seminar.** "Molecular Mechanisms of Synaptic Vesicle Trafficking." George Augustine, the G.B. Geller Prof. of Neurobiology, Duke U. Medical Center. Room 426 McDonnell Medical Sciences Bldg. 362-2300.

## Sunday, Feb. 25

**5 p.m. Art History and Archaeology Lecture Series.** "The West Pediment of the Parthenon." Olga Palagia, U. of Athens, Greece, and Kress Lecturer of the Archaeological Inst. of America. Co-sponsored by Archaeological Inst. of America and classics dept. Room 200 Steinberg Hall. 935-5270.

## Monday, Feb. 26

**Noon. Lung Biology conference.** "Profiles of the Lung Transcriptome (and Other Things on the Side)." Thomas J. Mariani, research instr. in pediatrics. Room 801 Clinical Sciences Research Bldg. 362-8983.

**Noon. Neurology and neurological surgery research seminar.** "Neural Stem Cells, Apoptosis, and Brain Tumorigenesis." Kevin A. Roth, assoc. prof. of molecular biology and pharmacology, of pathology and of immunology. Schwarz Aud., first floor, Maternity Bldg. 362-7379.

**Noon-1 p.m. Work, Families and Public Policy Brown Bag Seminar Series.** "Welfare Reform and Child Well-being." Greg Duncan, Northwestern U. Room 300 Eliot Hall. 935-4918.

**4 p.m. European studies program and political science dept. lecture.** "The Reshaping of Europe: National Transformations, Evolving Institutions, and the

Challenges of Enlargement." Alberta Sbragia, dir., Center for West European Studies, U. of Pittsburgh, Pa. Room 203 Eads Hall. 935-4360.

**4 p.m. Immunology Research Seminar Series.** "The Role(s) of the Major Surface Glycoconjugate LPG in Circumventing Host Defenses by *Leishmania*." Stephen M. Beverly, the Marvin A. Brennecke Prof. of Molecular Microbiology and Head of Dept. Eric P. Newman Education Center. 362-2763.

**4 p.m. Pain Center seminar.** "The Reorganization of the Somatosensory and Motor Systems in Primates With Therapeutic Amputations of a Limb or High Cervical Spinal Cord Damage." Jon H. Kass, Centennial Prof. of psychology, Vanderbilt U. Room 5550 Clinical Sciences Research Bldg. 362-8560.

**7 p.m. Architecture Monday Night Lecture Series.** Grand Center Housing Competition lecture. Richard Gluckman, architect, Gluckman Mayner Architects, New York. Steinberg Hall Aud. (reception 6:30 p.m., Givens Hall). 935-6293.

## Tuesday, Feb. 27

**Noon. Molecular Microbiology and Microbial Pathogenesis Seminar Series.** "Cytolethal Distending Toxin: A Bacterial Product Which Disrupts the Eukaryotic Cell Cycle." Lawrence Dreyfus, assoc. prof. of biological sciences, U. of Mo., Kansas City. Cori Aud., 4565 McKinley Ave. 747-1029.

## Wednesday, Feb. 28

**11 a.m. Assembly Series.** Inaugural Spirituality Week lecture. Martin Marty, renowned theologian, ordained minister, author and the Fairfax M. Cone Distinguished Service Prof. Emeritus of history of Christianity, U. of Chicago. Graham Chapel. 935-5285.

**8 p.m. The Paul Rava Memorial Lecture.** "The Actor's Art of the Mask: An Evening With the Characters of the Commedia dell'Arte." Mace Perlman. May Aud., Simon Hall (reception to follow). 935-5175.

## Music

### Wednesday, Feb. 21

**8 p.m. WU Jazz Band.** "Big Band Music of Today." Chris Becker, dir. Holmes Lounge, Ridgley Hall. 935-5581.

### Thursday, Feb. 22

**8:30 p.m. Holmes Jazz Series.** Mike Karpowicz Quartet. Holmes Lounge, Ridgley Hall. 935-5581.

### Friday, Feb. 23

**8 p.m. Music Dept. Voice Recital.** Songs of Hugo Wolf, Charles Ives, Albert Roussel and Hector Fiocco. Christine Johnson, soprano; Henry Palkes, piano; Amy Appel, flute; Christina van Scholkwyk, cello. Graham Chapel. 935-5581.

### Sunday, Feb. 25

**3 p.m. Intercollegiate Concert Band.** Music of Norman Dello Joio and Gordon Jacob. Dan Presgrave, dir. Graham Chapel. 935-5581.

**7:30 p.m. WU Symphony Orchestra.** Rossini's "Overture to *La gazza ladra*," "Violin Concerto in E Minor" of Mendelssohn, Joseph Chen, soloist; Stravinsky's "Firebird Suite." Dan Presgrave, dir. Graham Chapel. 935-5581.

## On Stage

### Saturday, Feb. 17

**8 p.m. OVATIONS! Series.** "Molly Sweeney." Guthrie Theatre, Minneapolis. Brian Friel, writer, and Joe Dowling, dir. Cost: \$25. Edison Theatre. 935-6543.

### Thursday, Feb. 22

**8 p.m. Performing Arts dept. play.** "Marie and Bruce." Wallace Shawn, writer. William Whitaker, dir. (Also Feb. 23, 24 and March 1-3, same time; and Feb. 25, 2 p.m.) Cost: \$12; \$8 senior citizens and WU faculty, staff and students. A.E. Hotchner Studio Theatre, Mallinckrodt Center. 935-6543.

## Sports

### Men's hoops hits 20-win plateau

The men's basketball team moved to 20 wins for the first time since 1995-96 and kept pace with the University of Chicago in the University Athletic Association standings with a pair of big road wins at Case Western Reserve University, 103-47 on Feb. 9, and the University of Rochester, 81-78, Sunday.

Against Case, the Bears hit 59 percent of their second-half shots, including a seven-of-10 performance from behind the three-point arc, on their way to surpassing the century mark for the fourth time this season. Six players finished in double figures, including 14 each by Dustin Tylka, Chris Alexander and Jarriot Rook, who also grabbed a game-high 11 rebounds and added two blocks. Those blocks gave him 60 on the year, breaking a tie with Fred Amos for the University single-season record.

At Rochester, Matt Tabash notched a career-high 19 points, including 17 in the second half, while Rook scored 19, tied his career-high with 13 rebounds and added four blocks. Alexander and Tylka each finished with 17 points as the Bears improved to 20-2.

### Women's basketball wins two on road

Four Bears scored in double figures against Case Western Reserve, beginning a weekend road trip with an 89-75 victory over the Spartans.

The Bears opened the second half with a 10-4 run to take a commanding 12-point lead. Tasha Rodgers scored a career-high 34 points.

Rodgers put on another show Sunday in a 67-50 win at

Rochester. She came just three steals away from a triple-double, garnering 31 points, 12 rebounds and seven steals. Rodgers and Lindsey Merrill scored 24 of the Bears' last 26 to seal the victory.

The 20-2 Bears outscored the Yellowjackets in the paint, 40-8.

### Swimming and diving take third at UAA meet

The University's men's and women's swimming and diving teams both finished in fourth place at the three-day UAA Championships that concluded Saturday at Emory University in Atlanta. The women finished with 542 points, behind winner Emory (1,371.5), Johns Hopkins (1,046) and Case Western Reserve (630.5). The men posted 655 points, behind Emory's 1,290, Johns Hopkins' 1,008 and Carnegie Mellon's 835.

Lindsay Wilkinson was the story of the championships, winning a UAA title in the 100 free and taking all-UAA honors in three individual events and four relays. Wilkinson blazed to a 52.40 to win the 100 free, breaking the UAA record that had stood for eight years. That time also earned her an automatic qualification to next month's NCAA championship.

Elisa Annelin won a UAA title in the 100 breast, took second in the 200 breast and third in the 200 IM. Caitlin Caldwell earned all-UAA honors with the 400 free relay team.

Matt Johnson led the men by winning a UAA title in the 200 free in 1:42.50 and also took third in the 50 free. Matt Greives was second in the 200 breast. The 200 free relay of Johnson, Greives, Ray Robison and Alex Helfers finished third at 1:25.39. Diver Ryan Braun earned third-team all-UAA honors in both the 1- and 3-meter diving events.

## Friday, Feb. 23

**8 p.m. OVATIONS! Series.** "Wake Up and Smell the Coffee." Eric Bogosian, actor and writer. (Also Feb. 24, same time.) Cost: \$25. Edison Theatre. 935-6543.

## Sports

### Friday, Feb. 16

**6 p.m. Women's basketball** vs. Carnegie Mellon U., Pittsburgh. Athletic Complex. 935-5220.

**8 p.m. Men's basketball** vs. Carnegie Mellon U., Pittsburgh. Athletic Complex. 935-5220.

### Sunday, Feb. 18

**1 p.m. Men's basketball** vs. Emory U., Atlanta. Athletic Complex. 935-5220.

**3 p.m. Women's basketball** vs. Emory U., Atlanta. Athletic Complex. 935-5220.

### Tuesday, Feb. 27

**12:30 p.m. Men's baseball** vs. Webster U. Kelly Field. 935-5220.

## Worship

### Friday, Feb. 16

**11:15 a.m. Catholic Mass.** Catholic Student Center, 6352 Forsyth Blvd. 935-9191.

**1:10 p.m. Muslim Friday prayers.** Includes sermon and prayer service. Lambert Lounge, Mallinckrodt Student Center. 935-3543.

### Friday, Feb. 23

**11:15 a.m. Catholic Mass.** Catholic Student Center, 6352 Forsyth Blvd. 935-9191.

**1:10 p.m. Muslim Friday prayers.** Includes sermon and prayer service. Lambert Lounge, Mallinckrodt Student Center. 935-3543.

## Wednesday, Feb. 28

**Noon. Catholic Mass.** Olin Dorm, medical campus. 935-9191.

**12:30 p.m. Ash Wednesday.** Interfaith Service of Ashes. (Following Assembly Series Spirituality Week lecture.) Graham Chapel. 935-9191.

**5:15 p.m. Catholic Mass.** Catholic Student Center, 6352 Forsyth Blvd. 935-9191.

## And more...

### Friday, Feb. 16

**7:30 a.m. Center for the Application of Information Technology briefing.** "Living in the Era of Digital Disruptions." Paul Gustafson, sr. partner with CSC Consulting Group and dir., CSC's Leading Edge Forum. 5 N. Jackson, St. Louis. To register, call 935-4792.

### Saturday, Feb. 17

**7:45 a.m. Continuing Medical Education conference.** "An Update From the Eighth Conference on Retroviruses and Opportunistic Infections." Judy Aberg and Pablo Tebas, infectious diseases dept. Marriott Pavilion, One Broadway. 362-2418.

### Thursday, Feb. 22

**8 p.m. Writing Program Reading Series.** Peter Ho Davies, author, will read from his work. Hurst Lounge, Room 201 Duncker Hall. 935-7130.

### Saturday, Feb. 24

**7:30 a.m. Continuing Medical Education conference.** "Third Annual Update in the Management of Hypertension." Cost: \$55 (includes breakfast). Eric P. Newman Education Center. To register, call 362-6891.

**8:30 a.m. Family support for persons living with mental health problems workshop.** Cost: \$15, family members; \$35, mental health care providers (includes lunch). Co-sponsored by WU School of Medicine, George Warren Brown School of Social Work, National Alliance for the Mentally Ill (St. Louis branch) and the Mo. Inst. of Mental Health, U. of Mo., Columbia School of Medicine. Holiday Inn Select, St. Peters. To register, call 966-4670.



# Genome

**Nearly completed physical map published**  
— from Page 1

genome sequence that was announced June 26, 2000.

Mapping was important because more than 50 percent of the genome is repetitive. Some regions of DNA have sequences that are up to 98 percent identical to one another even though they may be physically located millions of base pairs apart or even on different chromosomes.

"That's where we could have had problems without a map-based approach," McPherson said. "So many parts of the genome look exactly like other parts that if you work only with

small pieces, it's tempting to try to stick similar pieces from different parts together. The physical map allows us to work with large pieces and to know where the little ones are supposed to go."

To make the map, the researchers used bacterial artificial chromosomes (BACs) — large segments of DNA (about 175,000 base pairs long) that are cloned into bacteria. Once human DNA is cloned into bacteria, it can be copied and analyzed. Analysis of those copies allows the clones to be placed in an overlapping series that covers most of the gene-containing portion of the 3.2 billion base pairs of the genome.

Early in the public mapping effort, each of the centers in the genome consortium worked on maps for particular chromosomes. But it soon became clear

that making a fingerprint map of the entire genome would be greatly beneficial to the international effort, so the mapmakers joined together their data from around the world to create one accepted map, accessible to all.

During the last two years, mappers at the University have processed up to 20,000 BAC clones each week — more than 350,000 in all — recording the pattern each clone made when cut with different types of "restriction enzymes." Each type of restriction enzyme homes in on a short, specific sequence of base pairs and slices the DNA strand at that spot. Those patterns, called "fingerprints," distinguished DNA fragments from each other, revealing which clones contained identical stretches of DNA that could be overlapped.

In order to ensure a high level of accuracy in the final map, researchers created enough overlapping clones to cover the entire genome roughly 20 times. Representative clones were distributed to the various sequencing centers, which determined the order of base pairs in each BAC clone. Using sophisticated computer software and knowledge of each clone's map position, the sequences of the BAC clones were assembled back into an intact and complete genome.

The first pass netted a physical map consisting of 7,700 clusters of overlapping clones — or "contigs" — that combine together into one continuous stretch of the map. But since that time, the researchers have used a variety of means — including examinations of data in GenBank (an online repository of sequence data), more detailed

analysis of fingerprints and fingerprints from additional clones — to increase the size of the contigs and, therefore, to reduce the number of gaps between contigs. On Oct. 7, 2000 — the cutoff date for incorporating data into the mapping paper — there were 1,246 contigs. In the four months since that data freeze, that number has fallen below 950.

The researchers continue to make progress and expect to have the map completed soon. The physical map continues to assist those researchers who are finishing the genome sequence and will provide a resource for years to come for researchers wanting to study particular genes.

The international Human Genome Mapping Consortium includes scientists at institutions in France, Germany, Japan, China, Great Britain, Canada and the United States.

# Buildings

**Construction ongoing at Hilltop, Medical campuses**  
— from Page 1

cranes and the drone of construction equipment on both the Hilltop and the Medical campuses. The brick-and-mortar projects serve not some errant "edifice complex" but the University's sustaining mission, to conduct cutting-edge research, to teach and inspire young scholars and to share knowledge to make the world a better place.

The bricks and mortar do add up. Under construction now:

- The Charles F. Knight Executive Education Center at the John M. Olin School of Business. A center for continuing management education for mid- and upper-level business leaders, this building will offer classrooms, dining and lodging facilities for executives from across the region and the nation enrolled in Olin's advanced training programs.

- The Arts & Sciences (A&S) Laboratory Science Building, east of Old McMillan Hall. This new facility will provide much-needed lab space for several A&S departments.

- The Uncas A. Whitaker Hall for Biomedical Engineering, on Millbrook Boulevard east of Hoyt Drive. The School of Engineering and Applied Science broke ground last fall on Whitaker Hall, which will serve a dynamic new

department and an increasingly popular undergraduate major. Actual construction will begin this spring.

- Small-group student housing, at the corner of Millbrook and Big Bend boulevards. Four new buildings here will provide residential space for students with shared interests, embodying a new housing concept that University officials expect to grow in popularity with students.

- Phase I of an 800-car, five-level parking garage behind the fraternity houses at the west end of campus. Phase II will get under way when the small-group housing is finished.

- At the School of Medicine, the Ambulatory Care Center and Alvin J. Siteman Cancer Center, expected to be completed this fall. These facilities, under development in partnership with BJC Health System, will offer comprehensive outpatient care and leading-edge cancer research and treatment.

- The new Southwest Tower at Barnes Hospital, also a joint project with BJC. This project will include both research laboratories and a new emergency department for the hospital.

Also on the drawing boards for this first decade of the new century:

- A new University Center south of Prince Hall, where students and student groups can meet and plan activities;

- A new building for the Department of Earth and



**Cranes dot the skyline at the Medical Campus, where many construction projects are under way or are scheduled to begin soon.**

Planetary Sciences in A&S, on Millbrook Boulevard just west of Hoyt Drive;

- A new Visual Arts and Design Center for the schools of Art and Architecture, the Gallery of Art, the Art and Architecture Library and the Department of Art History and Archaeology in A&S, north of Bixby and Steinberg halls;

- An additional residential house to replace Eliot Residence Hall and to join Nemerov House in a new residential college;

- Three additional buildings for the engineering school, creating a new engineering campus at the corner of Millbrook and Skinker boulevards and freeing existing engineering buildings for the use of A&S departments;

- New parking facilities at the

east end of campus;

- At the medical school, a new Learning and Teaching Center at the corner of Scott and Euclid avenues, expected to be under construction within a year.

These investments, together with expenditures to renovate the University's treasured historic buildings and infrastructure improvements on campus and in surrounding communities, have a powerful ripple effect in the region, according to Executive Vice Chancellor Richard A. Roloff. They spark additional neighborhood improvements and rising property values, Roloff said; they provide hundreds of construction jobs; through targeted University efforts, they expand opportunities for minority- and women-owned firms; and they enhance the St. Louis community overall.

James E. McLeod, dean of the College of Arts & Sciences and vice chancellor for students, agrees. Speaking to a group of neighbors last fall, McLeod said of the University's plans: "This is not about being bigger, but being better. We want to be a great university for this region. No region can sustain growth and prosperity over time without centers of learning. I believe we've been good for each other."

## Graduate student symposium March 24; abstracts due Feb. 23

**T**he Graduate Student Senate (GSS) is soliciting abstracts for the sixth annual Graduate Student Research Symposium.

The March 24 event in Holmes Lounge is open to all graduate and professional students. Its purpose is to encourage graduate and professional students to learn how to present their research or practicum experience in a manner understandable and accessible to people of all backgrounds and levels of expertise — i.e., in a manner similar to how they might communicate them at conferences, job interviews, cocktail parties or grant reviews.

In addition, the symposium offers students an opportunity to meet other students in different programs and develop personal and professional links outside of their own department.

Graduate and professional students, including those not presenting, are encouraged to attend and learn about what other such students are researching or learning.

Cash prizes for graduate students in Arts & Sciences will be given out for first (\$150), second (\$100) and third (\$50) places in the categories of humanities, natural sciences and social sciences.

Abstract submissions are due Feb. 23. Abstract submission forms can be obtained from the GSS Web site at <http://www.artsci.wustl.edu/~gss/>.

The symposium is sponsored by the GSS and the Graduate School of Arts & Sciences. For more information, students should contact the GSS at [gss@artsci.wustl.edu](mailto:gss@artsci.wustl.edu).

## Employment

Use the World Wide Web to obtain complete job descriptions. Go to <https://hr.wustl.edu/> (Hilltop) or <http://medicine.wustl.edu/wumshr> (Medical).

### Hilltop Campus

Information regarding positions may be obtained in the Office of Human Resources, Room 130, West Campus. If you are not a WU staff member, call 935-9836. Staff members call 935-5906.

Lab Technician III 000241

Research Technician 000256

Sr. Research Assistant/Jr. Research Associate 000297

Department Secretary 000323

Research Assistant 000341

General Services Assistant 000377

Research Assistant 010023

Manager, Business Development 010026

Administrative Secretary 010032

Instructional Technology Specialist 010033

Senior Regional Director of Major Gifts 010068

Director of Admissions and Marketing 010069

MBA Records Assistant 010076

Associate Director of Research Communications 010107

Senior Medical Sciences Writer 010108

Mechanic (Bargaining Unit Employee) 010111-2

Assistant Director Donor Relations for Stewardship 010114

Receptionist/Secretary 010121

Appointment Coordinator 010128

Research Assistant/Technician 010129

Deputized Police Officer 010131, 010133

Research Assistant 010140

Coordinator, Programming and All Campus Events 010146

Director 010149

Admissions Assistant 010150

Editor, Publications 010153

Financial Aid Coordinator 010155

Director of Capital Projects 010160

Swing Shift Fireman 010161

Catalog Librarian 010166

Lan Engineer 010171

Deputized Police Officer 010172

Coordinator, Donor Relations 010174

Assistant Director of Career Services 010176

Assistant Facility Manager 010179

Technical Associate Programmer 010181

Zone Manager 010182

Director of MBA Student Services 010184

Research Assistant (cog. science/cog. neuroscience) 010188

Writer-Special Development Communications Projects (part time) 010189

Planned Giving Officer 010194

Administrative Aide 010197

Career Services Information Coordinator 010198

Communications Technician I 010199

Director, Human Resources and Payroll 010201

Application Processor II 010202

Assistant Football Coach 010203

Contract and Grant Coordinator 010204

Administrative Assistant 010209

Project Manager 010210

Senior Prospect Researcher 010213

Director of Compensation and Appointments 010214

Awards Coordinator 010215

Deputy Director 010217

Customer Specialist/Project Coordinator 010218

Lab Technician 010220

Administrative Assistant 010221

Network Engineer 010222

Phone Operator 010223

Secretary 010224

Administrative Assistant 010225

Associate Director of Foundation Relations 010227

Director of Operations, Executive Programs 010228

Senior Compliance Auditor 010229-30

Associate Director, Annual Giving Programs 010231

Accounts Receivable Service Representative 010233

Construction Accounting Assistant II 010234

Accountant 010235

Senior Prospect Researcher 010236

Research Technician (part time) 010237

Application Processor II 010238

Reference/Subject Librarian (Psychology) 010241

Reference/Subject Librarian (German) 010242

Weekend/Evening Manager/Circulation Assistant 010243

Billing Service Representative 010244

Administrative Aide 010247

Assistant General Counsel 010248

### Medical Campus

This is a partial list of positions at the School of Medicine. Employees: Contact the medical school's Office of Human Resources at 362-7196. External candidates: Submit resumes to the Office of Human Resources, 4480 Clayton Ave., Campus Box 8002, St. Louis, MO 63110, or call 362-7196.

Statistical Data Analyst 010553

Coordinator: Protocol 010769

Secretary III 010773

Coordinator: Education 010862

Payroll Assistant 010981

Senior Protocol Coordinator 010877

Purchasing/Payroll Associate 011114

Secretary III (part time) 011116

Senior Departmental Accounting Assistant 011192

Manager, Third Party Reimbursement 011194

## Campus Watch

The following incidents were reported to University Police Feb. 3-13. Readers with information that could assist in investigating these incidents are urged to call 935-5555. This information is provided as a public service to promote safety awareness and is available on the University Police Web site at [rescomp.wustl.edu/~wupd](http://rescomp.wustl.edu/~wupd).

### Feb. 7

6:40 p.m. — Two residents of Shepley House were playing catch with a football when they accidentally knocked off a second-floor sprinkler head. Clayton Fire Department responded and turned the water off. A fire watch was established until the fire system could be repaired. A Residential College Director was notified and was on the scene.

### Feb. 8

10:55 a.m. — A student reported the theft of her

Motorola Star-Tac cellular phone from her desk on the second-floor studio of Givens Hall. Total loss is valued at \$100.

### Feb. 13

8:40 p.m. — A subject not affiliated with the University was arrested on outstanding failure to appear warrants. The subject was released to the St. John's Police Department.

University Police also responded to three additional reports of theft, three reports of automobile accidents, two reports of vandalism and one report of harassing e-mails.



# Notables

## Introducing new faculty members

The following are among the new faculty members on the Hilltop Campus. Others will be introduced periodically in this space.

**Lester K. Spence** joins the Department of Political Science in Arts & Sciences as assistant professor. He earned a bachelor's degree from the University of Michigan in 1991, from where he also expects to receive his Ph.D. in political science. His research interests include race politics and political participation.

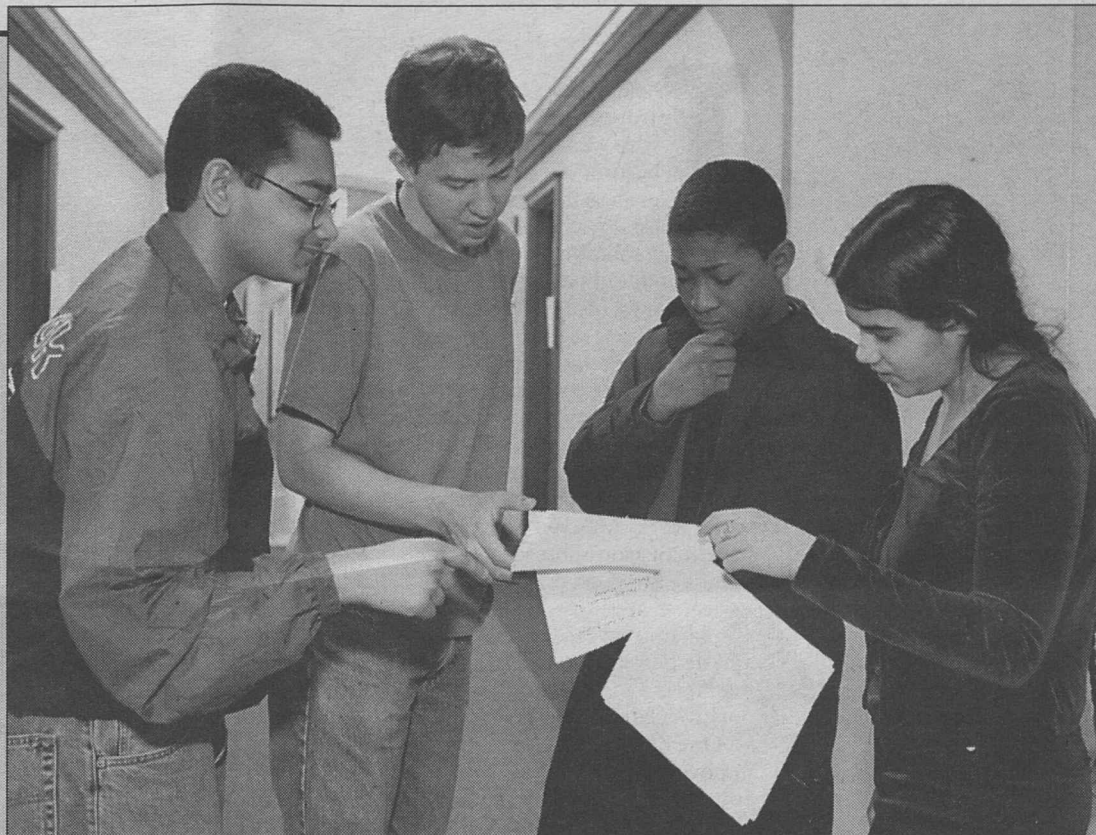
**Andrew Brown**, Ph.D., joins the Department of Romance Languages & Literatures in Arts & Sciences as assistant professor of Spanish. He earned a bachelor's degree in Spanish and history of science from the University of Oklahoma, where he graduated in 1994 with special distinction and Phi Beta Kappa. Brown earned his doctorate in Spanish literature from the University of Virginia in May 2000, where he also worked as instructor of language and of upper-level literature and cinema courses during 1999-2000. He is a specialist in 20th-century Latin-American literature and film, with research focused particularly on narrative writers of the southern cone, and the relationship between modern/postmodern scientific theory and literary discourse. He has published articles and given papers on a considerable range of topics.

## Of note

**John O. Holloszy**, M.D., professor of medicine, chief of the Division of Geriatrics and Gerontology and director of the Section of Applied Physiology in the School of Medicine, has been chosen as the recipient of the 2001 Irving Wright Award of Distinction of the American Federation for Aging Research. The award honors individuals who have made exceptional contributions to basic or clinical research in the field of aging. The award will be presented to Holloszy at the AGE/AFAR Annual Meeting in Madison, Wis. The award carries a cash prize of \$1,000, a citation and also covers all travel expenses to the meeting. Holloszy has received numerous honors, most recently The International Olympic Committee (IOC) Medical Commission-2000 Olympic Prize in Sports Sciences. Holloszy is a 1957 graduate of the School of Medicine and joined the faculty in 1965. ...

**Panos Kouvelis**, Ph.D., director of The Boeing Center for Technology, Information, and Manufacturing and Emerson Distinguished Professor of Operations and Manufacturing Management for the Olin School of Business, received the Best Paper Award 2000 from IIE Transactions, a leading research journal in operations management and industrial engineering. The award was for "Modeling the Design Quality Competition for Durable Products," which he co-authored with Samar Mukhopadhyay, Ph.D., associate professor, School of Business, University of Wisconsin-Milwaukee. The award will be presented at the annual Industrial Engineering Research Conference in Dallas on May 20-23. ...

The Washington University



**Students helping students** (From right) High schoolers Semilla Bland from Gateway Institute of Technology and Jordan Mitchell from Cleveland Junior Naval Academy work with freshman Mickey Phillips and sophomore Tareen Zafrullah, members of the University's debate team that hosted an Urban Debate League (UDL) tournament Feb. 9-10 in Eads Hall. The UDL is designed to assist in the creation of debate programs in underserved high schools. The University debate team, the recipient of an Open Society Institute Grant, currently works directly with five area high schools. The UDL project is a partnership among Washington University, Webster University and University of Missouri-St. Louis.

**Board of Trustees** recently gave its approval for the name of the School of Engineering and Applied Science graduate school to be changed from the Henry Edwin Sever Institute of Technology to the Henry Edwin Sever Graduate School of Engineering and Applied Science. ...

**Gruia-Catalin Roman**, Ph.D., professor and chair of computer science, received an unrestricted grant of \$25,000 from the Ford Motor Company for his research on "Ad-hoc Peer-to-Peer networking." ...

**Jason E. Fritts**, Ph.D., assistant professor of computer science, received the best paper award for his piece "Evaluation of Static and Dynamic Scheduling for Media Processors," given at the Second Workshop on Media Processors and DSPs, December

2000, in Monterrey, Calif. The conference was held in conjunction with MICRO-33. ...

**Gerald L. Early**, Ph.D., the Merle Kling Professor of Modern Letters and professor of English and African-American studies in Arts & Sciences, recently received a Grammy nomination for his album notes in "Yes I Can! The Sammy Davis Jr. Story." ...

**Jonathan D. Gitlin**, M.D., professor of pediatrics in the School of Medicine, has received a five-year, \$1,529,944 grant from the National Institute of Diabetes and Digestive and Kidney Diseases for the study "Biological Roles of Copper in Human Nutrition." ...

**Walter R. Burack**, M.D., Ph.D., the Burroughs Wellcome Fellow in pathology and immunology in the School of Medicine,

has received a three-year, \$188,000 career award in Biomedical Sciences grant from the Burroughs Wellcome Fund. ...

**Timothy G. Buchman**, M.D., Ph.D., the Harry Edison Professor of Surgery in the School of Medicine, has received a two-year, \$215,407 grant from the National Institute of General Medical Sciences for a research project titled "Patient Responsiveness in Surgical Critical Care."

## Correction

Feb. 2 issue, Page 1: A story provided incorrect dates for the laying of the cornerstones of two University buildings. The cornerstone of Cupples I Hall was laid in 1901; Ridgley Hall's was laid in 1902.

## Campus Authors

Andrea Friedman, assistant professor of history and women's studies in Arts & Sciences

### "Prurient Interests: Gender, Democracy, and Obscenity in New York City, 1909-1945"

(Columbia University Press, New York)

The vision of a democratic moral authority that would lessen the cultural influence of anti-obscenity activists and derail efforts to expand the regulatory apparatus for commercial culture emerged in fits and starts. Early in the century women's rights activists in New York declared their right to see plays and movies that critiqued male supremacy and women's exploitation. Just a few years later the staff of the National Board of Censorship of Motion Pictures coupled their own claims to represent public opinion with a campaign to steer clubwomen away from advocating government film regulation, trying to persuade them that female empowerment and effective child protection were to be found along a different path. In the interwar years a new anticensorship coalition made the state the guardian of a commercial culture embodying democratic standards and procedures. These efforts,



disparate as they were, sought to dislodge the vulnerable viewer from a privileged position as the subject of government protection and to substitute adult rights in her or his stead.

"This conceptualization of the relationship between morality and authority was not without its contradictions. The particular forms taken by democratic moral authority — specifically, the emphasis upon the average person as both standard for defining and mechanism for regulating obscenity and the related assault upon child protection as a valid principle of an obscenity regime — especially undermined the legitimacy of female anti-obscenity activists. ... As a consequence, this anticensorship discourse, like developments within anti-obscenity activism, contributed to the masculinization of debates about obscenity. The language of democracy could conceal consequences that were anything but democratic."



**Distinguished visitor** Jorge Arrate, Chile's ambassador to Argentina, spoke on "Human Rights and the Chilean Transition" Feb. 7 in Anheuser-Busch Hall. Arrate, a prolific author of both fiction and nonfiction, served in the cabinet of Salvador Allende in the early 1970s as adviser to the president and then as minister of mines, remaining in the government until the Pinochet coup. Recently, Arrate has served as Chile's minister of education, minister of labor and social security, and minister secretary general of the government. This speech was presented by the Institute for Global Legal Studies of the Washington University School of Law in collaboration with the international studies program in Arts & Sciences.

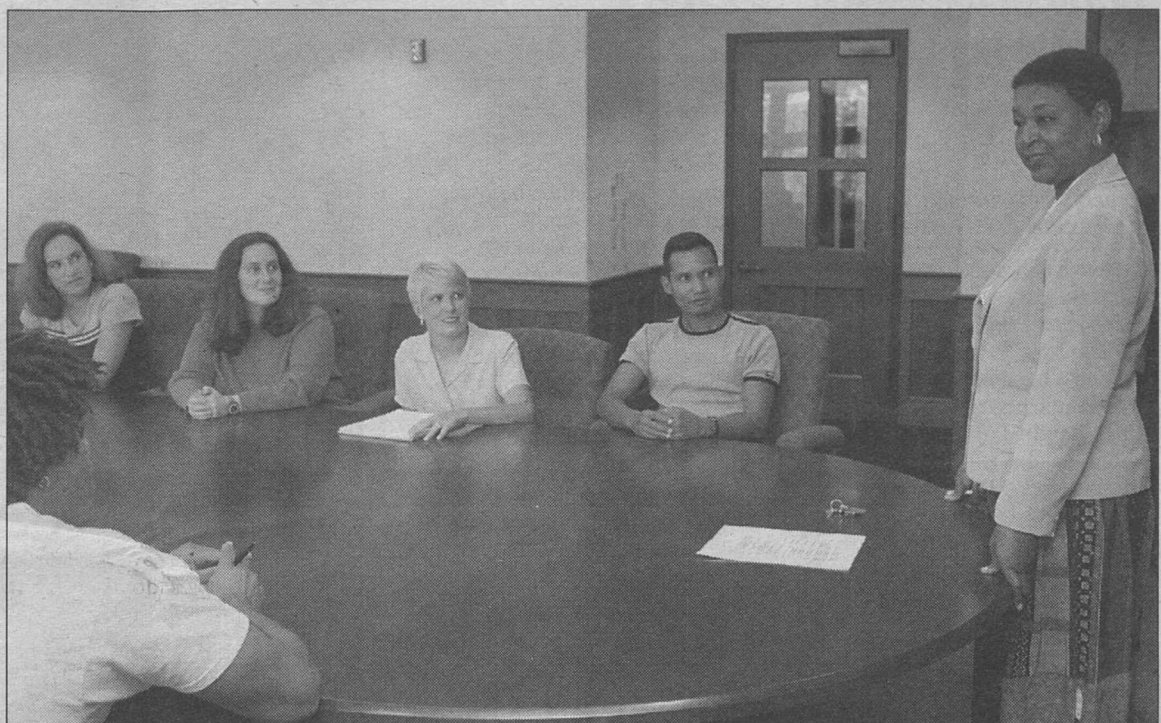


## Washington People

**T**he daughter of sharecroppers in Alabama who went on to become an associate professor at the George Warren Brown School of Social Work and a nationally renowned expert on family caregiving for the elderly, Letha Ann Chadiha, Ph.D., knows full well the value of self-empowerment and the inspirational gifts of mentors.

As a John A. Hartford Geriatric Social Work Faculty Scholar and coordinator of the gerontology concentration in the master of social work (M.S.W.) program, Chadiha's groundbreaking work among caregivers of older African-Americans, eminent scholarship on family relations and dedication to teaching have made her a mentor inspiring positive change.

One of 11 children growing up in poverty in the segregated South, Chadiha recalls her half-sister Magnolia, who was an elementary school teacher, insisting that Chadiha attend



**Letha Ann Chadiha (right), Ph.D.,** associate professor at the George Warren Brown School of Social Work, stresses to her students their obligation as social workers to not only appreciate and respect different cultures, but to become "agents of social, economic and political change — combating inequality in all forms and seeking social justice for all oppressed peoples."

# Empowering African-American caregivers

**Letha Ann Chadiha, Ph.D., strives to teach women problem-solving skills so they can take charge of their lives**

By ANN NICHOLSON

school instead of helping her family toil in the fields.

"I was very rebellious and knew that I did not want to spend my life working in the fields," Chadiha said. "I was essentially determined to escape poverty, and did so through education. Magnolia was a motivational influence in my life. She took me to school beginning at the age of 5, encouraged me in my studies and later helped fund my undergraduate education."

After the death of her father when she was 10, Chadiha points to an extended network of family and friends who helped raise her and encouraged her to achieve her dreams. Having earned a bachelor's degree, two master's degrees and a doctorate, Chadiha cites a litany of mentors who helped shape her career. "They have been my inspiration," she said.

Although she began her post-secondary studies in sociology and anthropology, Chadiha is a social worker at heart.

"I have always identified more with the have-nots than with the haves," she said. "Although I loved anthropology, it was too much based on theory and not enough on action."

Since joining the social work faculty in 1990, Chadiha has focused her work on family relations with an emphasis on marriage, caregiving to older African-Americans and the overall field of aging. Much of her research examines issues of particular importance to the African-American community with broader implications to the fields of family relations and aging. Her path-breaking research has received funding from the National Science Foundation, National Chapter of the Alzheimer's Association, Agency for Health Care Policy and Research, National Institute on Aging and the Office of Research on Women's Health.

"Letha is making unique and important contributions to gerontological research nationally, particularly with her current focus on women caregivers of older African-Americans," said Nancy Morrow-Howell, Ph.D., associate professor of social work, who has conducted several research projects with Chadiha. "She also has been a tremendous asset to the school's gerontology concentration — both helping to

attract more students and increasing their financial support through various fellowship and stipend opportunities," added Morrow-Howell, an expert on aging and chair of the doctoral program in social work.

In 1999, the John A. Hartford Foundation of New York named Chadiha among 10 of the nation's "most talented, mid-career social work faculty." As a foundation scholar, Chadiha is conducting a research project titled "Beyond Coping: An Empowerment Intervention with African-American Women Caregivers of Dependent Low Income Elders."

The ongoing project, which will involve about 60 African-American women from the St. Louis region, is designed to help the caregivers deal with extreme stress and empower them to improve their situations. While a number of research projects have focused on the role of empowerment, very few have looked at it as a tool for helping caregivers, particularly African-American caregivers, Chadiha said.

"The goals are to help the women develop a sense of identity and shared fate, to teach them problem-solving skills so they can move beyond coping and take charge of their lives, and to test the effectiveness of the intervention," Chadiha said.

The intervention project's problem-solving and empowerment approach already is having positive results, with the women reporting receiving much-needed support and feeling a greater sense of control over their predicaments.

"I learned I could be sad, mad, hurt and need help," one participant wrote. "I do not have to do it by myself. I am important too. I have to have time for me so I can be a good caregiver."

In a previous project in conjunction with the St. Louis Alzheimer's Association, Chadiha and Morrow-Howell developed an ethnic-sensitive awareness program on the disease for African-American clergy and

laypersons in the St. Louis region. The program helped African-Americans caring for people with dementia receive vitally needed support both through the association and the church.

Chadiha is also the principal

**"Letha is making unique and important contributions to gerontological research nationally, particularly with her current focus on women caregivers of older African-Americans. She also has been a tremendous asset to the school's gerontology concentration — both helping to attract more students and increasing their financial support through various fellowship and stipend opportunities."**

NANCY MORROW-HOWELL

investigator of a three-year study on the mental health, social functioning and service use of African-American women caregivers in St. Louis and eight rural southeastern Missouri counties. Morrow-Howell and Enola Proctor, Ph.D., the Frank J. Bruno Professor of Social Work Research, are helping conduct the study, which will involve interviewing 600 caregivers in their homes. According to Chadiha, "most caregiving research has focused on urban caregivers and emphasized stress and coping aspects. Innovative components of our project include studying both rural and urban caregivers and examining how their prior life experiences affect their well-being and service use as caregivers."

Although a prolific researcher, Chadiha said she finds working with students her passion. "I was trained as a researcher and do it well, but teaching and advising have become my calling," she said. Last year, she received Western Illinois University's "Most Inspirational Teacher" award in recognition of "excellence in preparing the next generation for academic achievement and leadership."

Chadiha teaches M.S.W. courses in human diversity, analysis of social work practice, and social welfare policies and

services. An adjunct professor of anthropology, she has also taught a course in cultural diversity and assimilation in the Social Thought and Analysis Program in Arts & Sciences.

Social work school alumna Cathy McDougall, a research policy specialist at the AARP Public Policy Institute in Washington, D.C., said Chadiha was instrumental in helping her form a student Gerontological Society of America organization, taught her valuable lessons in research and ultimately helped shape her career.

"Dr. Chadiha was my academic adviser and instantly became a mentor to me," McDougall said. "Throughout the M.S.W. program, she offered me long-term guidance and encouraged my leadership. She also raised my awareness of the research skills I needed to be successful. As a result of her support and teaching, I've been able to start a career conducting policy research on a topic that I am passionate about — the health care concerns and policies that impact older adults."

Chadiha's overall message to her students is one that has ensured her own success.

"I would like them to know they have a lot of potential," she said. "They should listen to their instructors and mentors, but it is important that they achieve what they themselves have set out to accomplish."

### Letha Ann Chadiha, Ph.D.

**Born:** Emelle, Ala.

**Education:** Bachelor of science in sociology, Tuskegee Institute; master of anthropology, Washington State University; master of social work, University of Michigan; doctorate in social work and anthropology, University of Michigan.

**Motivation:** Leaving a legacy for her three sons — twins, Jeffri, a staff writer for Sports Illustrated, and Jon, a human resources professional; and Kizza, a senior at Stanford University.