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# Washington University Record, September 23, 1999

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# Record

Sept. 23, 1999

Volume 24 No. 5



## Washington University in St. Louis



Muthanna H. Al-Dahhan, Ph.D., assistant professor of chemical engineering and associate director of the Chemical Reaction Engineering Laboratory, inspects a slurry bubble column reactor, the reactor of choice for a wide range of industrial processes, including ways to produce alternative fuels from coal.

## Hope for Midwest's coal fields Grant funds research into alternative fuels

By TONY FITZPATRICK

An effort to find ways to produce alternative fuels from one of our region's most abundant resources — coal — has received \$548,485 in funding support from the U.S. Department of Energy (DOE).

Muthanna H. Al-Dahhan, Ph.D., assistant professor of chemical engineering and associate director of the University's Chemical Reaction Engineering Laboratory (CREL), won the three-year grant from the DOE's Federal Energy Technology Center for a proposal titled "Advanced Diagnostic Techniques for Three-Phase Slurry Bubble Column Reactors."

Al-Dahhan will collaborate with Milorad P. Dudukovic, Ph.D., the Laura and William Jens Professor and chair of chemical engineering; L.-S. Fan, Ph.D., Distinguished Professor and chair of chemical engineering at Ohio State University; and Bernard A. Toseland, Ph.D., of Air Products and Chemicals Inc., to develop and implement specialized diagnostic techniques at CREL and at Ohio State's Industrial Fluidization Laboratory.

Slurry bubble column reactors are cylindrical vessels in which gas containing one or more reactants — for example, synthesis gas — is mixed with liquid reactants and products and a finely dispersed catalyst.

They are reactors of choice for a wide range of industrial processes, in particular for the conversion of synthesis gas, a carbon monoxide and hydrogen mixture, to fuels and chemicals by processes called Fischer-Tropsch (FT) reactions. FT is an acknowledged route for clean use of coal-derived carbon monoxide and hydrogen gases.

The diagnostic techniques

Al-Dahhan and his colleagues are using will advance the knowledge and understanding of slurry bubble column reactors under FT reaction conditions and generate a new approach for scale-up and design of these reactors.

Illinois alone mines over 47 million tons of coal annually and ranks sixth among coal-producing states. Yet the bituminous or "soft" coal found in Illinois, Missouri, Kentucky and Indiana is notorious for its production of sulfur, a major pollutant. The coal mining industry and coal-mining jobs in the Midwest and mid-South, accordingly, have suffered in recent years because of environmental restrictions and reduced market demand.

There are techniques for sulfur

removal that can be used when synthesis gas is produced from coal. If synthesis gas could be converted to fuel economically, the conversion process would boost both clean synthesis gas production from coal and the coal mining industry. One promising route is FT synthesis.

"The funding received from DOE and the international consortium will be utilized to characterize properly the fluid dynamic and transport parameters via advanced diagnostic techniques available in CREL and to generate a new fundamentally based approach for scale-up, design and operation of high pressure slurry bubble column reactors with immediate application to FT synthesis," Al-Dahhan said.

See Coal, page 2

## Japanese visitors seek help with child abuse prevention

By GERRY EVERDING

Seven delegates from Japanese social service agencies and government health ministries visited the George Warren Brown School of Social Work last week to learn more about how child abuse and related problems are handled in America.

Spurred by a growing recognition of child abuse as a serious problem in Japan, the visit brought representatives of various Japanese agencies and organizations to St. Louis for a three-day program that included visits with local nonprofit and governmental children's services agencies, a day

of short seminars with social work faculty and meetings with Missouri state social services officials.

Among the delegates was Yasuo Matsubara, a professor at Meijigakuin University in Tokyo, who was a research fellow at Washington University in 1987. Matsubara said there have been reports of a significant increase in child abuse and neglect cases in Japan, attributable in part to a weakened economy that is destabilizing the family.

Arlene Stiffman, Ph.D., professor of social work and a lead organizer of their time here,

See Visitors, page 5

## Paper NSF grant proposals soon to be thing of the past

The National Science Foundation (NSF), a principal source of research funding, has made rapid progress toward electronic administration of grants with the Web-based system Fastlane, and in fact researchers will have to submit all progress and final reports via Fastlane by Oct. 1,

according to Theodore J. Cicero, vice chancellor for research.

Cicero's office has notified all deans, directors and department heads that as of Oct. 1 no paper versions of these reports will be accepted at NSF. Researchers must be

See Fastlane, page 2

## Hands-on Undergrads get research experience

By TONY FITZPATRICK

Thirty-five undergraduate biology students and their faculty mentors met Saturday, Sept. 18, on the third floor of McDonnell Hall to report the results of their summer research, giving presentations on topics ranging from the intricacies of neuroscience to the genetics of fruit flies and algae to lizard morphology.

The opportunity to do research was made possible by the Howard Hughes Medical Institute's (HHMI) Summer Undergraduate Research Program, which awards qualified students \$2,900 plus a housing allowance for 10 weeks' intensive laboratory research. Washington University has received HHMI grants since 1993 to operate this program, and over that time 297 students have been HHMI Summer Undergraduate Research fellows.

Students gave both poster sessions and formal presentations on their work. In many instances, the presentations were the first that the students, ranging from sophomores to seniors, have ever given. Chancellor Mark S. Wrighton addressed the group, and Barbara A. Schaal, Ph.D., professor of biology and newly elected fellow of the National Academy of Sciences, gave the keynote address, titled "Biodiversity in the Orphan Crop, Cassava: Basic and Applied Research."

Four individuals whose work is particularly outstanding will present their summer research results at national meetings.

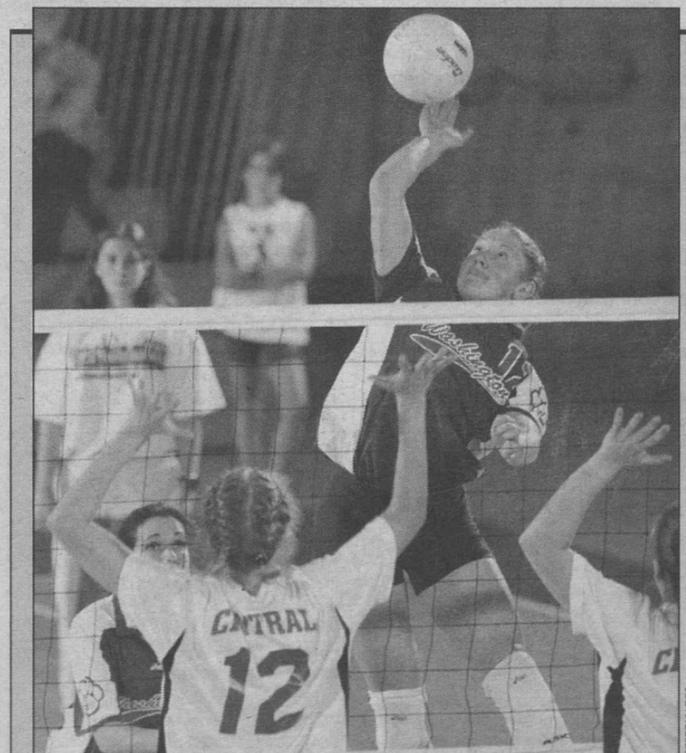
The program is part of larger science outreach programs initiated in the early 1990s by Sarah C. R. Elgin, Ph.D., professor of biology. Students in the Summer Undergraduate Research program find themselves working

on real science problems up to 60 hours or more a week, just like their faculty mentors. The experience is a reflection of the "real world" of the biologist or biomedical scientist.

According to Danny Kohl, Ph.D., professor of biology and a key person in the program, the research experience usually extends beyond the summer of their fellowships. Most students continue working in their labs during the school year by registering for Biology 500, Independent Study, and during subsequent summers are supported by funds from their mentors' research grants.

"We consider the Hughes summer program a one-time-only experience, and from that experience, we expect the mentors to come up with their own funding to support students in subsequent summers," said

See Hands-on, page 6



Soarin' and scorin' Sophomore outside hitter Julie Suellentrop flies high to notch a kill for the volleyball Bears Friday, Sept. 17, against defending NCAA Division III champion Central College (Iowa) at the Washington University National Invitational. The Bears fell to Central, three games to one, and are now 6-6 on the season.



**New chair** School of Law Dean Joel Seligman, J.D. (second from left), celebrates with Chancellor Mark S. Wrighton (left), Peggy Shepley and Lew Shepley following Seligman's installation as the first Ethan A. H. Shepley University Professor. The chair is named for Ethan A. H. Shepley Sr., who was the eighth chairman of the University's Board of Trustees, its 10th chancellor and a 1922 graduate of the School of Law. Medallions in honor of the new professorship were given to Seligman; Peggy Shepley, wife of the late Ethan A. H. Shepley Jr.; and Lew Shepley, son of the former chancellor.

## Music, mounds, millennium

### University College short courses offer wide variety

University College is exploring a variety of topics in its fall 1999 short courses, including literature, music, religion and, in the field, Illinois' Cahokia Mounds, where a day-long trip is planned to learn about one of the most important archaeological sites in North America.

The short courses are:

• **"From St. Louis to Cahokia Mounds: A Fall Pilgrimage"**

The outing will begin at the University with a lecture, then continue by bus, visiting mound groups along the way to Cahokia Mounds State Historic Site. Once there, the group will have lunch and tour the Interpretive Center and the site, where lie the archaeological remnants of one of the most sophisticated prehistoric Indian civilizations north of Mexico.

The pilgrimage, from 8:30 a.m.

to 5 p.m. Oct. 2, will be led by John Kelly, a research associate in the Department of Anthropology in Arts & Sciences and the director of the Powell Archaeological Research Center at Cahokia Mounds. The fee is \$60.

• **"The Music of Francis Poulenc"**

In observance of the centennial year of this popular French composer's birth, this course will include his operas and live performances in class to enhance discussions of his songs and jazz-influenced chamber music.

Sue Taylor, who teaches courses in University College in Arts & Sciences and does music reviews for the St. Louis Post-Dispatch, will teach the course, and guest lecturer Christine Knoblauch-O'Neal, artist in residence in dance, will review the ballet "Les biches" and its

reception in Paris in the 1920s.

The four-week course meets from 2 to 3:30 p.m. Mondays, Oct. 4-25. The fee is \$80, \$70 for members of the University's Friends of Music organization.

• **"Marching to the Millennium"**

This course will examine the origins of the idea of the millennium in Western religious tradition and how that idea has shaped social and political perceptions. Expectations of the first millennium will be contrasted with those of the second. The course will explore the millennial hopes of other religious traditions and the impact millennial thinking has had on North America.

Taught by Frank Flinn, Ph.D., adjunct professor of religious studies, the four-week course will meet from 10 to 11:30 a.m. Tuesdays, Oct. 5-25. The fee is \$80.

A fourth course, "Two 'Novels of Apprenticeship' by George Eliot," is already full. It is co-sponsored with the Department of English in Arts & Sciences and led by Susan Stiritz, who teaches English composition.

For more information on short courses or to register, call 935-6788.

and one of the most exciting is for development of alternative fuels," Al-Dahhan said. "DOE wants to advance the technology of such processes and improve reactor scale and design. The hydrodynamics of gas, liquids and solids in high pressure slurry bubble columns are very complex, and there is much to be learned about this type of technology. But, with CT and CARPT, we can get measurements and images of these processes that no one else can, to quantify the flow field in these reactors. By gathering knowledge both here and at Ohio State University, which also has unique facilities, we hope to advance the modeling for better designed and fully scaled reactors."

Al-Dahhan also collaborates with Sandia National Laboratory in New Mexico on the slurry bubble column project.

## Fastlane

### Paper grant proposals soon to be history

— from page 1

prepared to submit technical reports and scientific data electronically.

"The NSF is at the forefront of all government agencies in moving to paperless grants administration," said Cynthia White, director of sponsored research services in Cicero's office.

White said while the NSF systems are user-friendly, the transition will be challenging for faculty members and support staff. Users will need a personal identification number, available from White at 935-5889, and some training to familiarize themselves with the system. Departments also will need to address software and hardware requirements, technical and administrative support issues, she said.

Training is well along across campus, and every active research department has at least one Fastlane-trained administrator or faculty member. Cicero's office is prepared to conduct additional sessions one-on-one or with small groups of researchers. "We'll provide training for anyone who asks for it," White said.

Cicero considers the Fastlane system to be well-designed, especially in light of recent improvements, and notes that it serves a higher purpose than

simply eliminating paper grants.

"Fastlane will now provide better access and usability to the bank of scientific findings," he explained, "allowing one to search, sort and report on publications, concepts and the scientists involved. The reporting system transforms roomful of unwieldy paper into a database of research results that have vitality and accessibility."

White said this latter function has been a driving force behind changes at federal agencies, responding to pressure from Congress and the American public to be accountable for the results of federal research support.

The NSF's next important Fastlane deadline for researchers is October 2000, when all proposals also must be submitted electronically.

In 1998, as a result of the University's Research Support Services Assessment Project (RSSAP), an Information Technology (IT) Task Force was appointed to address electronic grants submission and other information technology issues. Chancellor Mark S. Wrighton initiated the RSSAP, a University-wide review of research administration support services, in 1997 and asked Cicero to spearhead it.

The NSF is the first federal agency to publish specific deadlines and requirements regarding electronic grants administration. Other agencies, including the National Institutes of Health, are expected to follow suit, and the IT Task Force is monitoring their activities.

## Grant money available to enhance international programs in A & S

The Office of International Studies has an annual sum of \$25,000 in grant money available to faculty for the purpose of encouraging and supporting international programs in Arts & Sciences.

Specifically, the International Activities Fund will be used to assist faculty who act as study abroad advisers in their departments; act as a study abroad liaison to particular programs overseas; or develop, adapt and teach courses specifically for the international studies major.

To apply for an award from the fund, faculty members should complete a one- to two-page proposal, establishing their

eligibility and describing their proposed use for an award. It will be important to provide evidence of how the proposed activities will enhance the student experience and the further internationalization of the program. A brief budget should be appended. No award will exceed \$2,000.

Proposals will be reviewed twice a year, on Nov. 1 and March 1. Deadline for the Nov. 1 review is Oct. 15. Complete proposals should be sent to Priscilla Stone, Ph.D., director of international studies, Campus Box 1088. For more information, contact Stone at 935-5073 or pstone@artsci.wustl.edu.

## Coal

### Grant funds research into alternative fuels

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Two unique techniques are used at CREL. One is gamma ray computed tomography (CT). In principle, it is similar to a medical CAT scan. The other is computer automated radioactive particle tracking (CARPT), which traces the flow of the liquid or the solids by a radioactive particle. In combination, CT and CARPT allow a non-invasive determination of the flow pattern and development of models for different types of multiphase reactors which involve complex interactions of various gas-liquid combinations.

"The slurry bubble column reactor has lots of applications,

## Record

Washington University community news

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**Dizzily fun** Freshman Rachel Alexander glimpses the world a little differently after rotating wildly in this gyration contraption Friday, Sept. 17, at Walk In, Lay Down Theatre.

## Medical School Update

### Breaking the barrier

Researchers take first steps toward protein therapy in humans

By BARBRA RODRIGUEZ

For decades, pharmaceutical companies have struggled to overcome the molecular equivalent of the Great Wall of China: the outer membrane of cells, which prevents all but the tiniest of proteins from entering. Now researchers have slipped a protein that's more than 200 times larger than the average drug into the cells of living mice and shown that the protein functions.

"For the very first time, we've introduced a large, biologically active protein into every cell of the body — including cells in the brain

that are normally protected by the blood-brain barrier," said Steven F. Dowdy, Ph.D., who led the research team at the School of Medicine. The group published its results in the Sept. 3 issue of Science.

Dowdy is an assistant investigator of the Howard Hughes Medical Institute and an assistant professor of pathology and of medicine. Steven R. Schwarze, Ph.D., a postdoctoral fellow in his laboratory, was lead author of the paper.

Getting full-sized, therapeutic proteins into cells would be advantageous because smaller drugs tend to interact with unintended targets. Larger proteins fit only onto the molecules for which they were designed, so they could be given in substantially lower doses, resulting in fewer side effects.

Dowdy led a previous research

team that used test-tube experiments to smuggle an enzyme into HIV-infected cells. The results, reported in Nature Medicine last December and January, focused on a human enzyme that makes cells self-destruct. The enzyme was modified to include a string of 11 amino acids that served as a passport for crossing a cell's outer membrane. But the researchers needed to prove that large proteins could slip into cells in model animals before considering human applications.

In the Science study, Dowdy and fellow investigators first attached a molecular passport

known as a protein transduction domain (PTD) to a compound whose uptake by cells could be monitored. The compound was a dye

called fluorescein, which turns green when exposed to fluorescent lighting. It normally doesn't enter cells because of its size — 2,000 daltons compared with the 500-dalton limit placed on most drugs.

The researchers injected mice with this combined PTD-fluorescein protein and isolated cells from the animals' blood and spleen. All the cells fluoresced green when checked 20 minutes after the injection. Cells in muscle and brain tissue also had soaked up the combined protein. "It was very encouraging to discover that we could get a mouse with an entirely green brain," Dowdy said, noting that the blood-brain barrier, a layer of cells lining the brain's blood



**Volunteering at La Clinica** At a health clinic for Latino families, Steven Jean Lapin, 2, exchanges a high five with Brandon Hadland, a student in the School of Medicine's Medical Science Training Program. A number of medical school physicians and students volunteer at La Clinica, which is held five nights a week in the basement of Scruggs Memorial Methodist Church in south St. Louis.

vessels, normally prevents most proteins from entering.

Dowdy and colleagues then linked a bacterial enzyme to the PTD and fluorescein. Their fluorescent analysis revealed that the 120,000-dalton enzyme, beta-galactosidase, entered all the cell types tested.

Beta-galactosidase was chosen because its activity could reveal whether an enzyme could continue to function after it had been transported into cells by the PTD. Cells take up proteins better if the proteins are at least partially unfolded, as was true for the enzyme.

Dowdy's team tested whether beta-galactosidase trapped inside cells of injected mice converted the enzyme's clear chemical target into a blue dye. A vibrant blue image of the kidney of the first mouse tissue the researchers evaluated is pinned

on a bulletin board above Dowdy's desk. "Once we got this first result, we realized that the protein would be biologically active in the rest of the body," Dowdy said.

The liver, lung and other tissues of the injected mice also turned blue when exposed to the enzyme's target. The animals' entire brains also stained blue within four hours of injection, indicating that a lot of the bacterial enzyme had refolded there by then. Importantly, the PTD didn't work its magic in the brain by destroying the blood-brain barrier. And the animals had no visible behavioral changes or other differences compared with untreated mice.

Dowdy since has tested modified versions of the PTD that should allow proteins to enter brain cells and other cells even more rapidly. And he is using his new technology to determine whether a malfunctioning protein helps jump-start cancer.

He noted that the laboratory's protein-targeting technology also might enable companies to create drugs that act only in disease-related cells, opening up a completely novel avenue of therapeutic approaches. "We can now do things in normal cells of mice that you could have never even dreamed of doing with any reliability a year ago," Dowdy said.

### Park is first pediatric surgeon to receive Javits Neuroscience Investigator Award

T.S. Park, M.D., the Shi H. Huang Professor of Neurological Surgery, has received a prestigious Javits Neuroscience Investigator Award from the National Institute of Neurological Disorders and Stroke at the National Institutes of Health (NIH). The award guarantees research funding for seven years. The amount for the first four years will be \$1.67 million, with an anticipated \$1.3 million total for the next three years.

The award is given to researchers who submit an outstanding grant application, who have a distinguished record of contribution to the field of neuroscience and who are expected to be highly productive in the future. Only four other neurosurgeons in the nation have received the Javits Award, and Park is the first pediatric neurosurgeon.

The award was established to honor Sen. Jacob Koppel Javits of New York, who died of amyotrophic lateral sclerosis in 1986.

"All of us in the Department of Neurological Surgery are extremely proud of Dr. Park's outstanding achievement in receiving a Javits Award," said Ralph G. Dacey Jr., M.D., the Edith R. and Henry G. Schwartz Professor and head of the Department of Neurological Surgery at the School of Medicine and neurosurgeon-in-chief at Barnes-Jewish Hospital. "He is unique among pediatric

neurosurgeons in simultaneously conducting an outstanding program of basic investigation and a world-class practice of pediatric neurosurgery."

Park also is neurosurgeon-in-chief at St. Louis Children's



**Park:** Fifth in United States to receive award

Hospital. He has received continuous NIH funding for 16 years, studying the cellular and molecular mechanisms that can damage the brain's tiny blood vessels during and shortly after birth. Initially, he systematically investigated the regulation of cerebral blood flow by adenosine under normal and pathological conditions in the newborn brain. Oxygen-starved brain cells make adenosine from a chemical fuel called ATP.

More recently, Park and long-time collaborator Jeffrey M. Gidday, Ph.D., assistant professor of neurological surgery, of cell biology and physiology and of ophthalmology and visual sciences, developed ways to look within the brains of anesthetized animals and see real-time interactions between white cells called leukocytes and the endothelial cells that line the microvessels. Using these and other methods,

they showed that leukocytes injure the brain's small vessels after the newborn brain is deprived of oxygen. They then identified several molecules that are involved in this inflammatory response.

With the new NIH funding, Park and Gidday will determine how various chemicals released by endothelial cells and by white cells called neutrophils interact to injure the linings of the brain's small blood vessels after adults have a stroke or injure the spinal cord. In collaboration with several other scientists at the medical school, they will use genetically altered mice and cultures of cells that mimic the endothelium. They hope their findings will facilitate the development of new medications for stroke and spinal cord injury.

Park received a Teacher Investigator Development Award from the NIH in 1984. He serves on a NIH Brain Disorder and Neuroscience study section and is a member of the prestigious Society of Neurological Surgeons and the American Academy of Neurological Surgery.

He joined Washington University as professor of neurological surgery in 1989 and became professor of pediatrics in 1993 and professor of anatomy and neurobiology in 1996. He assumed the Shi H. Huang Professorship in 1997.

### Doris Duke Clinical Scientist Award goes to Michael DeBaun

Michael R. DeBaun, M.D., assistant professor of pediatrics and biostatistics, has received a 1999 Doris Duke Clinical Scientist Award from the Doris Duke Charitable Foundation.

The three-year \$100,000 award supports investigators who are beginning careers as clinical researchers, especially in the areas of sickle cell anemia, heart disease, AIDS and cancer.

"Michael DeBaun is a tremendously talented physician-scientist whose epidemiological and clinical investigative studies on the diagnosis and treatment of children with sickle cell disease are first-rate," said Alan L. Schwartz,



**DeBaun:** Studies sickle cell disease

M.D., Ph.D., the Harriet B. Spoehrer Professor and head of the Department of Pediatrics. "This Doris Duke award will allow him to pursue these studies and improve the lives of children with this disease."

DeBaun studies strokes in children with sickle cell disease. About a fifth of children with the disease have a stroke before they are 12 years old, and two-thirds have a silent stroke that goes unrecognized because the child acts normally. The telltale sign is that the child cannot keep up with schoolwork. DeBaun is trying to understand how best to identify children who've had silent strokes, the risk factors for strokes and the

best way to help these children catch up at school.

He also studies syndromes that predispose children to cancer. He is especially interested in an overgrowth disorder called Beckwith-Wiedemann syndrome and has established the largest registry of children with this disease. This registry has helped him determine the risk of cancer in this population, the frequency of cancer and the clinical features most associated with development of cancer in this group.

After receiving a bachelor's degree from Howard University in 1983 and a medical degree from Stanford University in 1987, DeBaun completed a residency and chief residency in pediatrics at Washington University School of Medicine. He began studying stroke in children with sickle cell disease during a fellowship in pediatric hematology/oncology, also at the medical school.

DeBaun then completed a master's degree in public health at the Johns Hopkins University School of Hygiene and Public Health and a three-year epidemiology fellowship at the National Cancer Institute (NCI).

He joined Washington University in 1996 as an assistant professor of pediatrics after receiving the Robert Wood Johnson Minority Faculty Development Award.

He was honored with the Department of Pediatrics' Harvey Colten Achievement Award in 1997.

DeBaun also is a physician and medical director of the Pediatric Hospice at St. Louis Children's Hospital.

# University Events

## Enchanted Rocks • Human Rights • Holy Lands • Millennium Musical

"University Events" lists a portion of the activities taking place at Washington University Sept. 23-Oct. 2. For a full listing of medical rounds and conferences, see the School of Medicine's website at [medschool.wustl.edu/events/](http://medschool.wustl.edu/events/). For an expanded Hilltop Campus calendar, go to [www.wustl.edu/thisweek/thisweek.html](http://www.wustl.edu/thisweek/thisweek.html).

### Exhibitions

**"Grotesques Glass Graham: Marriage of Masonry."** Through Oct. 8. The architecture of Graham Chapel. Fifth floor, Olin Library. 935-5583.

**"Affinity of Form: African and Modern European Art."** Through Oct. 24. Gallery of Art. 935-4523.

**"Modern Art on Paper."** Through Oct. 24. Gallery of Art. 935-4523.

**"Coins from St. Louis Collections."** Through Dec. 12. Gallery of Art. 935-4523.

**"Egyptian Mummies: Pet Menekh and Henut-Wedjebu."** Through Dec. 12. Gallery of Art. 935-4523.

### Film

#### Thursday, Sept. 23

**7 and 9 p.m. Filmboard Foreign and Classic Series.** "Fahrenheit 451." Cost: \$3 first visit; \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

#### Friday, Sept. 24

**7 and 9:30 p.m. Filmboard Feature Series.** "Glenary Glen Ross." (Also Sept. 25, same times, and Sept. 26, 7 p.m.) Cost: \$3 first visit; \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

**Midnight. Filmboard Midnight Series.** "Wild Things." (Also Sept. 25, same time and Sept. 26, 9:30 p.m.) Cost: \$3 first visit; \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

#### Wednesday, Sept. 29

**6 p.m. Japanese Film Series.** "A Taxing Woman" (English subtitles). Sponsored by Asian and Near Eastern languages and literatures dept. Room 219 Ridgley Hall. 935-5156.

**7 and 9 p.m. Filmboard Foreign and Classic Series.** "Romeo and Juliet." (Also Sept. 30, same times) Cost: \$3 first visit; \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

#### Friday, Oct. 1

**7 and 9:30 p.m. Filmboard Feature Series.** "Go." (Also Oct. 2, same times and Oct. 3, 7 p.m.) Cost: \$3 first visit; \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

**Midnight. Filmboard Midnight Series.** "Raising Arizona." (Also Oct. 2, same time and Oct. 3, 9:30 p.m.) Cost: \$3 first visit; \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

### Lectures

#### Thursday, Sept. 23

**3 p.m. Earth and planetary sciences seminar.** "Recent Advances in the Deep Ocean Geochemistry of CH<sub>4</sub> and CO<sub>2</sub> Hydrates Using ROV Technology." Peter Brewer, senior scientist, Monterey Bay Aquarium Research Institute, Calif. Room 112 Wilson Hall. 935-5610.

#### 3 p.m. Thesis defense.

"Regulation of Midbrain-hindbrain Development by Fibroblast Growth Factors." Jingsong Xu, developmental biology program. Room 3907 South Bldg. 362-7190.

#### 4 p.m. Cardiovascular research seminar.

"Function of NPC1 in Cholesterol Trafficking." Daniel S. Ory, asst. prof. of medicine. Room 801 Clinical Sciences Research Bldg. 362-7190.

#### 4 p.m. Chemistry lecture.

"Photoinduced Processes and Electron Spin Polarization." Haim Levanon, prof. of physical chemistry and dir. of the Farkas Center for Light-Induced Processes, The Hebrew U. of Jerusalem. Room 311 McMillan Lab. 935-6530.

#### 4 p.m. Russian dept. lecture.

"Adam Mickiewicz and Alexander Pushkin: Comparing Two Slavic National Poets." Megan Dixon, prof. of Russian, Principia College, Ill. 935-5177.

#### 4:15 p.m. Philosophy colloquium.

"Consensus in Science." Miriam Solomon, assoc. prof. of philosophy, Temple U. Room 216 Psychology Bldg. 935-6670.

#### 4:30 p.m. Mathematics colloquium.

"Calculus on the Metric Measure Spaces." Jeff Cheeger, prof. of mathematics, Courant Institute, New York U. Room 199 Cupples I Hall (tea 4 p.m., Room 200). 935-6760.

#### 5 p.m. Vison science seminar.

"Transgenic and Knockout Mice to Elucidate Herpesvirus Pathogenesis." David A. Leib, asst. prof. of molecular microbiology and assoc. prof. of ophthalmology and visual sciences. East Pavilion Aud., Barnes-Jewish Hospital Bldg. 362-7190.

#### 6:15 p.m. Germanic languages and literatures reading.

Hansjörg Schertenleib, writer. Hurst Lounge, Room 201 Duncker Hall. 935-5106.

#### Friday, Sept. 24

##### 9:15 a.m. Pediatric Grand Rounds.

"Advances in Echocardiography." Angela M. Sharkey, asst. prof. of pediatrics. Clopton Aud., 4950 Children's Place. 454-6006.

##### Noon. Friday Forum Luncheon Lecture Series.

"Affinity of Form: African and Modern European Art." Thomas Alexander, guest curator. Cost: \$15, includes buffet luncheon. Reservations required. 935-5490.

##### 3 p.m. Economics lecture.

Arthur Robson, prof. of economics, U. of Western Ontario. Room 300 Eliot Hall. 935-5670.

##### 4 p.m. Anatomy and neubiology seminar.

"Molecular Guidance of Cell Migration in the Nervous System." Yi Rao, asst. prof. of anatomy and neurobiology. Room 928 McDonnell Medical Sciences Bldg. 362-7190.

#### Monday, Sept. 27

##### Noon-1 p.m. Molecular biology and pharmacology lecture.

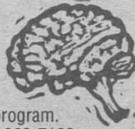
"How G-Protein-Coupled Receptors Activate G-Proteins - The Latchkey Model." Garland R. Marshall, prof. of molecular biology and pharmacology, biochemistry and molecular biophysics and dir., Center for Molecular Design. Room 3907 South Bldg. 362-2725.

##### 4 p.m. Biology seminar.

"Chromatin Remodeling and Transcriptional Repression by the Retinoblastoma Protein." Douglas C. Dean, assoc. prof. of cell biology and physiology and of medicine. Room 322 Rebstock Hall. 935-5348.

##### 4 p.m. Immunology research seminar.

"T Cell Activation: The Role of the Immunological Synapse." Andrew S. Shaw, assoc. prof. of pathology. Eric P. Newman Education Center. 362-2763.

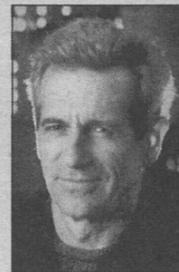


## Legendary James Naughton at Edison

Mr. Showbiz himself, Tony Award-winning actor James Naughton, will bring his legendary voice to Edison Theatre for a special one-night-only OVATIONS! Series performance of "Street of Dreams," his acclaimed cabaret-style solo show, at 8 p.m. Oct. 2.

In "Street of Dreams," which Naughton developed with director Mike Nichols, the singer takes his audience on a guided tour through such wide-ranging musical territory as pop, jazz, country and show tunes. Backed by a five-piece jazz band, Naughton brings cool wit, a suave presence and his impeccable baritone to classic works by Billy Eckstine, Elvis Presley, Duke Ellington, Randy Newman and others. At the same time, Naughton sprinkles his performance with a colorful series of backstage tall tales, culled from a lifetime in show business.

Naughton has won widespread critical acclaim for his work in Broadway dramas and comedies as well as in television and film. He is the recipient of two Tony Awards for Best Actor in a Musical, for his portrayal of



### "Street of Dreams"

Who James Naughton

Where Edison Theatre

When 8 p.m. Oct. 2

Tickets \$30, from Edison Theatre Box Office, 935-6543, or MetroTix, 534-1111.

media-savvy lawyer Billy Flynn in the hit musical "Chicago" (1997) and for his role as a film-noir detective in "City of Angels" (1990), for which he also won a Drama Desk Award. A graduate of Brown University and the Yale School of Drama, Naughton made his New York debut as Edmund in Arvin Brown's production of "Long Day's Journey into Night." His other Broadway credits include "Four Baboons Adoring the Sun," "I Love My Wife" and "Whose Life Is It Anyway?" Off-Broadway, he has appeared in E.L. Doctorow's "Drinks Before Dinner" and "Losing Time."

Naughton's film credits include roles in "The Good Mother" (opposite Diane Keaton), "The Glass Menagerie" (with Joanne

Woodward), "The Paper Chase," "First Kid," "Cat's Eye," "A Stranger is Watching" and "Second Wind." He has starred in the television movies "Travelin' Man," "Necessity," "Last of the Great Survivors," "The Bunker" and "Look Homeward, Angel." He also has appeared on numerous television series, including "Who's the Boss?" "Making the Grade," "Planet of the Apes," "Faraday and Co.," "Brooklyn Bridge" and "The Cosby Mysteries." He is the host of Court TV's "Greatest Trials of All Time."

Tickets are \$30 and are available at the Edison Theatre Box Office, 935-6543, or through MetroTix, 534-1111. There are no discounts for this performance. For more information, call 935-6543.

The performance is sponsored by the Edison Theatre OVATIONS! Series with support from the Regional Arts Commission and the Missouri Arts Council.

**6:15 p.m. Germanic languages and literatures lecture.** "Der Erzähler und der Cyberspace." Walter Grund, writer. Hurst Lounge, Room 201 Duncker Hall. 935-5106.

#### Thursday, Sept. 30

**Noon. Human rights lecture.** Sponsored by College Central. "The Question of Human Rights." Gary Haugen, former officer in charge of UN genocide investigation in Rwanda. McMillan Café. 645-0340.

**4 p.m. Physics lecture.** "Contrast for Cardiac Images T<sub>1</sub>rho-T<sub>2</sub>." W.T. Dixon, prof. of radiology, Emory U. (coffee 3:45 p.m.). Room 241 Compton Hall. 935-6418.

#### Friday, Oct. 1

**Noon. Public Interest Law Speakers Series.** "What is 'Environmental' About Environmental Law in the Supreme Court?" Richard Lazarus, prof. of law, Georgetown U., and fellow, Woodrow Wilson International Center for Scholars. Bryan Cave Moot Courtroom, Anheuser-Busch Hall. 935-4958.

**4 p.m. East Asian Studies Colloquium Series.** "Democracy and Democratization in China." Andrew J. Nathan, prof. of political science, Columbia U. Room 100 Busch Hall. 934-4448.

**6 and 8:30 p.m. Tavel Lecture Series.** "Jordan and Israel: More Stories From the Holy Lands." Sandy Mortimer. Cost: \$4.50. Graham Chapel. 935-5212.

### Music

#### Thursday, Sept. 23

**8 p.m. OVATIONS! Series concert.** String Wizards. Joshua Bell, violinist, Edgar Meyer, double bassist, Sam Bush and Mike Marshall, mandolin-guitar specialists. Cost: \$30 and \$25. Sheldon Concert Hall, 3648 Washington Blvd. 935-6543.

#### Wednesday, Sept. 29

**8:30 p.m. Music dept. concert.** InsideOUT, WU jazz quartet: Ben Looker, piano; Jeff Lash, vibes; Sean Wilhite, bass, and David Taylor, drums. May Aud., Simon Hall. 935-5581.

#### Saturday, Oct. 2

**8 p.m. OVATIONS! Series concert.** "Street of Dreams." James Naughton, baritone. Cost: \$30; WU students, \$12. Edison Theatre. 935-6543.

### Performances

#### Thursday, Sept. 23

**8 p.m. Performing Arts dept. plays** "From Blood to Prayer: Two Plays About Women

## Novelist's work is 'smart, funny, unnervingly convincing'

Novelist Elizabeth McCracken will read from her works for the Creative Writing Program Reading Series at 8 p.m. Thursday, Sept. 23. The reading, in Hurst Lounge, Room 201 Duncker Hall, is sponsored by the writing program in Arts and Sciences.

"I think Elizabeth is clearly one of the best young writers out there," said Marshall Klimasewski, assistant professor of creative writing. "She's as smart, funny and unnervingly convincing as any writer I know about the darker corners of love."

McCracken is the author of "Here's Your Hat What's Your Hurry: Stories" (1993) and the novel "The Giant's House" (1996), which was nominated for a

National Book Award. Granta Magazine recently named her one of the Best Young American Novelists, and she also has received the Barnes & Noble Discover Award and the American Academy of Arts and Letters' Harold Vursell Award. "Here's Your Hat" was named a Notable Book by the American Library Association.

Born in Boston, McCracken earned bachelor's and master's degrees from Boston University, a master of fine arts degree from the University of Iowa and a master's of library science degree from Drexel University, Philadelphia. She has received grants from the National Endowment for the Arts, the Guggenheim Founda-

### Reading

Who Elizabeth McCracken

Where Hurst Lounge, Room 201 Duncker Hall

When 8 p.m. Thursday, Sept. 23

Admission Free and open to the public

tion, the Michener Foundation and the Fine Arts Work Center in Provincetown, R.I. She is currently teaching at the University of Iowa's Writers' Workshop.

The reading is free and open to the public. Copies of McCracken's works will be available for purchase. For more information, call 935-7130.

### Sports

#### Saturday, Sept. 25

**11 a.m. Men's soccer** vs. Case Western Reserve U. Francis Field. 935-5220.

**1:30 p.m. Women's soccer** vs. Case Western Reserve U. Francis Field. 935-5220.

#### Sunday, Sept. 26

**Noon. Men's soccer** vs. Montclair State. Francis Field. 935-5220.

#### Saturday, Oct. 2

**7 p.m. Football** vs. Rhodes College. Francis Field. 935-5220.

### And More...

#### Thursday, Sept. 23

**8 p.m. Creative Writing Program Reading Series.** Novelist Elizabeth McCracken reads from her works. Hurst Lounge, Room 201 Duncker Hall. 935-7130.

#### Friday, Sept. 24

**11:30 a.m. High tea.** Sponsored by the Woman's Club of WU to welcome newcomers to the WU community. Alumni House. 966-4680.

#### Friday, Sept. 24 - Sunday, Sept. 26

**Feminism and naturalism conference.** Co-sponsored by WU and U. of Mo. - St. Louis. Room 222 J.C. Penney Conference Center, U. of Mo. - St. Louis, and Hurst Lounge, Room 201 Duncker Hall. 935-5119.

#### Tuesday, Sept. 28

**8:15 a.m. STD lecture and practicum.** "STD Update." (Also Sept. 29.) Cost: \$65. To register, call 747-0294.

## Art historian Linda Nochlin to speak at Assembly Series

Pioneering feminist art historian Linda Nochlin will deliver an Assembly Series lecture at 11 a.m. Wednesday, Sept. 29, in Graham Chapel. The lecture is free and open to the public.

Nochlin is the Lila Acheson Wallace Professor of Modern Art at New York University's Institute of Fine Arts. Her book "Woman as Sex Object: Studies in Erotic Art, 1730-1970," published in 1972, was significant for introducing a feminist perspective to the field of art history and criticism.

Nochlin's other publications include "Realism and Tradition in Art, 1848-1900," "Impressionism and Post-Impressionism, 1874-1904" and "The Politics of Vision: Essays on Nineteenth-Century Art and Society."

Nochlin served as a professor of art history and the humanities at Yale University from 1989 to 1992, the Distinguished Professor of Art History at City University

in New York from 1980 to 1990, and the Mary Conover Mellon Professor of Art History at Vassar College from 1971 to 1979. She is a fellow of the American Academy of Arts and Sciences and of New York University's Institute for the Humanities. She was awarded a



### Assembly Series

**Who** Linda Nochlin  
**Where** Graham Chapel  
**When** 11 a.m. Wednesday, Sept. 29  
**Admission** Free and open to the public

Guggenheim Fellowship for 1984-85.

Nochlin earned a bachelor's degree in philosophy from Vassar College in 1951 and a master's degree in English from Columbia University in 1952. She received a doctorate in art history from New York University's Institute of Fine Arts in 1963.

For more information, visit the Assembly Series web page (<http://wupa.wustl.edu/assembly>) or call 935-5285.

## Sports Section

### Football team bests Wabash, 24-20

A school-record 95-yard kickoff return for a touchdown and three disrupted punts highlighted a big special teams day Saturday, Sept. 18, as the football team defeated visiting Wabash College 24-20 in a non-conference game at Francis Field. After Wabash took a 20-12 lead with 10 minutes to play in the third quarter, WU wide receiver Cory Snyder returned the ensuing kickoff 95 yards to draw the Bears within 20-18. WU took the lead for good with 1 minute, 34 seconds left in the third on a Mike Gallo one-yard touchdown run. The winning score was set up by the Bears' third big punt defense play of the game. Sophomore Brian Yanites snuffed out Wabash punter Matt Wilhelm's punt, and the Bears recovered on the one-yard line, setting up Gallo's game-winning score.

The Bear defense gave WU a 6-0 lead at the 9:11 mark of the first quarter on a four-yard fumble return for a touchdown.

### Pair of losses for men's soccer

The men's soccer team suffered a pair of tough losses during its weekend swing into the heart of Texas. The Bears dropped a 7-1 decision at Trinity University Friday, Sept. 17, for their first loss of the season. WU trailed only 3-1 at halftime, but three Trinity goals in a 15-minute span blew the game open and enabled the Tigers to tie the NCAA record for longest home field unbeaten streak (37-0-2). Sophomore midfielder Casey Lien provided the Bears' lone tally off an assist from classmate Matt Katke. At Southwestern University on Sunday, Sept. 19, Katke made the team's lone goal to open the scoring, but the Bears fell in double-overtime, 2-1. The Bears, favored to win the University Athletic Association in 1999, get to work on the prediction Saturday, Sept. 25, with a game versus Case Western Reserve University at Francis Field.

### Volleyball fourth at invitational

The volleyball team finished in fourth place with a 1-3 record at

the Washington University National Invitational this past weekend. The Bears dropped three 3-1 decisions—to No. 1 Central College, No. 4 Ohio Northern University and No. 15 Juniata College—before finishing the weekend with a 3-2 win over Illinois Wesleyan University. Junior Katie Gielow was named to the all-tournament team after hitting .402 with 85 kills, 33 digs and 27 blocks on the weekend. She blasted 25 kills and added a career-high 11 blocks against Central and had 24 kills, 11 digs and six blocks against Juniata. Senior Holly Ratkewicz had perhaps the best tournament of her career, hitting .506 and tallying 44 kills with just five errors. Sophomore Julie Suellentrop finished with 54 kills and posted team-highs with nine service aces and 71 digs.

### Runners strong at Vanderbilt

The men's and women's cross country teams continued their strong seasons with two impressive showings at the Vanderbilt University Commodore Classic Saturday, Sept. 18. The men's team finished in fourth place—ahead of four NCAA Division I schools—in the 14-team field. Junior Tim Julien finished fifth behind only four Division I runners with a time of 26 minutes, 44.50 seconds. The women's team finished in seventh place among the 15 teams and first among Division III teams. Junior Susan Chou was tops for the Bears, finishing 11th with a time of 18:39.68.

### Women's soccer suffers first loss

The women's soccer team, ranked No. 2 in the nation, split a pair of road games this weekend, knocking off Wittenberg University 3-0 before suffering its first loss of the season to DePauw University, 2-0. Junior Trisha Young, sophomore Jessica Glick and senior Lynn Telken each scored Saturday, Sept. 18, in the Bears win over Wittenberg. Sophomore Jamie Rosen earned her fourth shutout of the season in the nets. The Bears outshot DePauw 16-12 on Sunday, but were held scoreless for the first time this season.



Robert L. Pierce, Ph.D. (right), associate professor of social work, discusses the basics of U.S. child welfare policy with visitors from Japanese social service agencies and government ministries Sept. 14.

## Visitors

### Japanese officials explore child abuse issues here

— from page 1

said the delegation was enthusiastic in its efforts to better understand American programs dealing with such issues as parental rights, juvenile courts, foster care, child abuse and neglect.

"Their primary interest was the criteria and procedures for separating parents and children and the services provided to parents after such separations," Stiffman said, "but they also found time to take in a St. Louis Cardinals game on Monday night."

The delegation's schedule Tuesday was filled with a series of 45-minute presentations on children's services issues.

In addition to Stiffman, other social work faculty

making presentations were Associate Dean David Cronin, Ph.D.; associate professors Wendy Auslander, Ph.D.; Brett Drake, Ph.D.; Curtis McMillan, Ph.D.; and Robert Pierce, Ph.D.; and assistant professor Melissa Jonson-Reid, Ph.D.

The visit was co-sponsored by the Japanese government and the Japan-based Foundation for Children's Future. During their American tour, the delegation also made fact-finding stops in Florida and Washington, D.C.

## 'Work, families, public policy' seminars resume

Faculty and graduate students with an interest in topics relating to labor, households, health care, law and social welfare are invited to take part in a series of Monday brown-bag luncheon seminars to be held bi-weekly through December.

Now in its fourth year, the "Work, Families and Public Policy" series features one-hour presentations on current research interests of faculty from across campus and from other local and national universities. The presentations, which are held in Room 300 Eliot Hall, run from noon to 1 p.m. and are followed by a half-hour discussion period.

Robert Pollak, Ph.D., the Hernreich Distinguished Professor of Economics in Arts and Sciences and the John M. Olin School of Business, has been the lead organizer for the series for the last three years. Michael Sherraden, Ph.D., the Benjamin E. Youngdahl Professor of Social Development and director of the Center for Social Development at

the George Warren Brown School of Social Work, is co-organizer.

"This series has proved to be a great opportunity to explore the relationships between economics, business, social work and public policy and the importance of these disciplines to the family and the workplace," Pollak said. "The seminars have been well received by faculty and graduate students alike, and this fall's lineup promises more probing discussions."

Scheduled seminars are:

- Sept. 27: Robert Pollak, "Allocating Time";
- Oct. 11: Anne Winkler, Ph.D., associate professor of economics and public policy administration, University of Missouri-St. Louis, "Who Does the Housework in Married Couple Families? It Depends on Whom You Ask";
- Oct. 25: Mark Rank, Ph.D., professor of social work, Washington University, "Poor Chances: Rethinking the Likelihood of Poverty in America";
- Nov. 8: Donna Ginther, Ph.D., professor of economics in Arts and

Sciences, Washington University, "The Effect of Family Structure on Children's Educational Outcomes: Stepparents and Stepchildren";

• Nov. 22: Daniel Hamermesh, Ph.D., professor of economics, University of Texas, Austin, "The Economics of Beauty";

• Dec. 6: Casey Mulligan, Ph.D., associate professor of economics, University of Chicago, "Gerontocracy, Retirement, and Social Security."

The series is sponsored by the schools of business and social work; the Center for Social Development; the Business, Law, and Economics Center; the Department of Economics; the Graduate School of Arts and Sciences; and the Committee on Social Thought and Analysis. The room is provided courtesy of the Center for the Study of American Business.

For more information, contact Pollak at 935-4918 ([pollak@olin.wustl.edu](mailto:pollak@olin.wustl.edu)) or Sherraden at 935-6691 ([sherrad@gwbmail.wustl.edu](mailto:sherrad@gwbmail.wustl.edu)).

## 'Practical tips' Workshop series geared to social workers

Providing practical tips to professionals working in the social services arena is the goal of a series of five half-day continuing education workshops offered this fall by the George Warren Brown School of Social Work.

Geared to social workers — but open to the public — the "Professional Development in Social Work Supervision and Practice" workshop series kicks off Sept. 24 and runs through Nov. 12.

Topics include tips on how racial, gender and class issues influence client interaction; the integration of spirituality and clinical practice; burnout and self-care for social workers; and skills in assessing and intervening with adolescents.

Registration fee for the half-day sessions is \$25 per person. Registration is required, but professionals now working as field instructors for the school may qualify for free admission. Continuing education credits are

available. For more information, call Estelle Rochman at 935-4909.

All sessions will be held in Brown Hall Lounge.

The workshops are:

- **Inroads to Race, Gender and Class: Implications for Practice**, Friday, Sept. 24, 9 a.m. — Larry Davis, Ph.D., professor of social work and the E. Desmond Lee Professor of Racial and Ethnic Diversity, will present his nationally recognized clinical education seminar on the importance of understanding how racial, gender and class factors affect everyday interactions with social services clients.

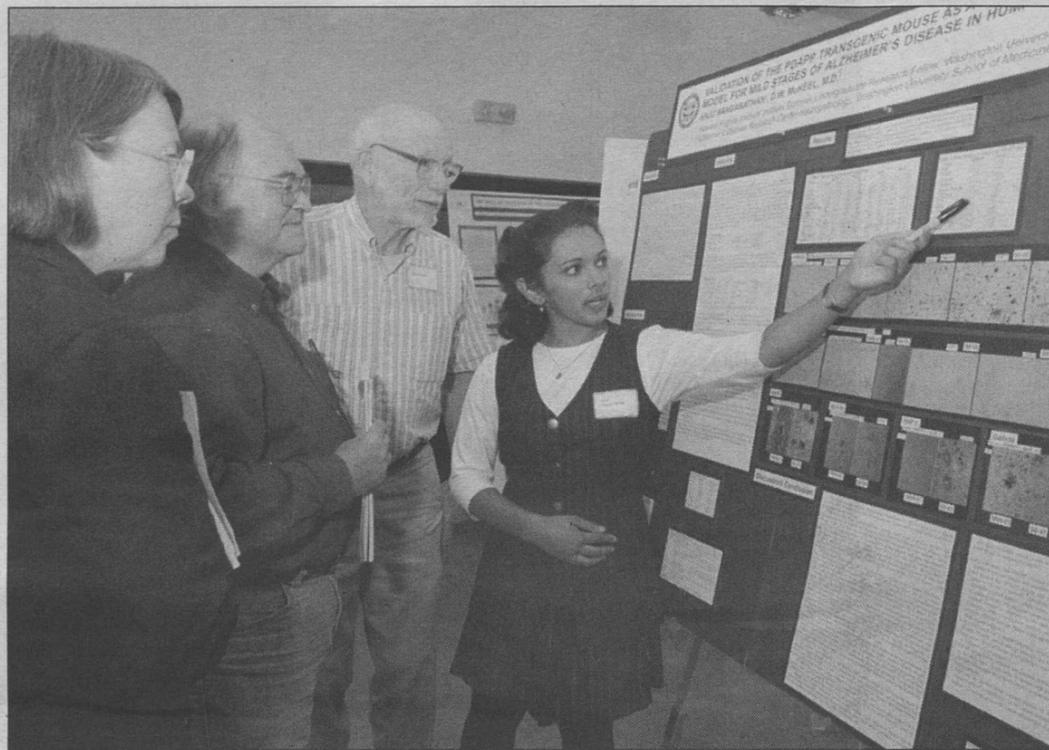
- **The Integration of Spirituality and Clinical Practice**, Oct. 1 and Oct. 8: 1:30 p.m. — Edwin S. Harris, Ph.D., psychologist in private practice and assistant clinical professor of psychiatry at St. Louis University School of Medicine, will focus on ways to combine elements of spirituality and clinical practice in an effective

model for clinical intervention. Participants should plan to attend both sessions.

- **Burnout and Self-Care for Social Workers**, Nov. 5, 9 a.m. — Judith Schechtman, a licensed clinical social worker in private practice and a lecturer at the social work school, will focus on sources of individual stress for human service providers and ways to integrate self-care into one's daily routine.

- **Providers' Roles and Skills in Assessing and Intervening with Adolescents**, Nov. 12, 9 a.m. — Arlene Stiffman, Ph.D., professor of social work, and Violet Horvath, study coordinator, both of Washington University, will focus on effective methods of intervention for common behavioral, mental health, and contextual problems of adolescents.

Four additional workshops will be offered during the spring 2000 semester.



Danny Kohl, Ph.D. (second from right), professor of biology and "matchmaker" in the Howard Hughes Medical Institute's (HHMI) Summer Undergraduate Research Program, listens to a report by Anju Ranganathan, an HHMI summer undergraduate research fellow, during the Sept. 18 symposium, along with Sarah C.R. Elgin, Ph.D., professor of biology, and Daniel W. McKeel Jr., M.D., associate professor of pathology, Ranganathan's mentor.

## Hands-on

### Undergrads get research experience

— from page 1

Kohl. "A good number of them do, leading to continued beneficial research arrangements for both students and faculty.

"There have been and are HHMI fellows who are breathlessly outstanding and do spectacular work," Kohl went on. "There is a modest amount of danger that students get so much satisfaction from their laboratory research and become so drawn to it that they shortchange their other classes. I have to stress to some that they need to appreciate the benefits of a well-rounded education because, as good as they are in the laboratory, they may well be doing that kind of work for the rest of their lives."

In all, \$113,800 was budgeted to the program this summer, of which HHMI provided approximately \$70,000. The rest came from mentors' other grant money.

To qualify for a HHMI fellowship, students must already have served a mentorship period with a Washington University faculty member. To find a mentor, students often go through Kohl, who's been a biology faculty member for more than 35 years. Since well before the HHMI summer program, Kohl has served as "matchmaker" for students and Division of Biology and Biomedical Sciences faculty.

At the beginning of each fall semester, Kohl meets with students to explain research options, ranging from work-study opportunities to the Hughes program. He makes them aware of information posted on the departmental Web site where faculty post potential work opportunities, and he has built a vast network of contacts with the 300 or so members of the division. Often, students come to Kohl after that meeting to explain their special interests and inquire about how to find a mentor working in that particular area.

"My main virtue is that I've lived a long time," Kohl said, smiling. "In 35 years, I've come to know a lot of people, and I'm not shy about calling them. If a student has a notion of what she wants to do, if I don't have a name at my fingertips, I know people who will know. There's never been a student who's come

to me wanting a research setting and who's not gotten one. That says a lot about the willingness of our faculty on both campuses to help out."

The initial faculty impulse to get involved in mentoring is altruism, Kohl said, though gradually working relationships take on a different meaning.

"Overwhelmingly, faculty are appreciative of the exposure to science that they had when they were young, and they're happy to do the same now that they have the chance," Kohl explained.

"But, after staying for a long time in the lab, students often turn out to make significant contributions, and the situation becomes mutually beneficial."

**"There's never been a student who's come to me wanting a research setting and who's not gotten one. That says a lot about the willingness of our faculty on both campuses to help out."**

DANNY KOHL

The experiences have led to co-authorship of papers for a number of students and other grant and fellowship awards.

David Ho, Ph.D., professor of biology, was mentor to Edythe Park, a junior from Odessa, Tex. Along with post-doctoral researcher Yukika Yamauchi, Ph.D., Ho and Park designed a series of experiments to learn more about plant gene expression. Yukika and Park carried out the bench work and discussed developments with each other and Ho.

Ho said the HHMI program

is an outstanding way for students to get firsthand experience.

"All of us learned a lot from this experience," he observed. "It is a thrill to us that Edythe has now developed a strong interest in research. We will even co-author a short paper to be submitted in the near future. Although I have had many graduate students and postdocs work with me in my career, the opportunity to have undergraduates in the lab is always refreshing."

For Park, the summer's work was invaluable. "The summer was a wonderful experience, and I think that the Howard Hughes program is a great opportunity for undergrads to really get a taste of research," she said. "My summer experience helped me to decide to continue with research. Working with Dr. Ho was always interesting, since he continually provided me with challenges."

Christopher

Staples, a sophomore from Martinsville, Va., worked with Alan L. Pearlman, M.D., professor of neurology and cell biology, and postdoctoral fellow Rebecca Riehl, Ph.D., on a brain development project.

"Chris had a little research experience before working with us," Pearlman noted, "but none at all with brain studies. As the months have passed, it's clear he's made enormous progress. He's very hard-working, dedicated and interested. As a result, he's made a real contribution to our studies."

## Campus Watch

The following incidents were reported to University Police from Sept. 13-19. Readers with information that could assist in investigating these incidents are urged to call 935-5555. This release 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).

### Sept. 16

11:08 a.m. — A 25-inch color television/videocassette recorder was reported stolen from Whittemore House. The loss was set at \$500.

### Sept. 17

2:10 a.m. — Four students were discovered on the roof of Cupples I Hall, outside Room 204. The students were identified and reports sent to the Greek Coordinator and the Judicial Administrator.

11:43 p.m. — A person believed to be a student assaulted two security

officers when the officers attempted to escort the subject out of the pit area in front of Beaumont Pavilion during Walk In, Lay Down Theater.

### Sept. 18

11:27 a.m. — A student reported the theft of a compact disc player from his unlocked suite in Shanedling Residence Hall.

University Police also responded to six additional reports of theft, three reports of vandalism, two additional reports of assault and one report of trespassing.

## Help offered families living with severe mental illness

Living with Severe Mental Illness: What Families Must Know," is the focus of a community informational workshop to be held from 8:30 a.m. to 3 p.m. Oct. 2 at the Henry VIII Hotel and Conference Center, 4690 North Lindbergh Blvd., in north St. Louis County.

"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 George Warren Brown School of Social Work 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 care givers.

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 the St. Louis Branch of the Alliance for the Mentally Ill (NAMI St. Louis) at 966-4670.

Hundreds of area residents have taken part in previous workshops, which are held three times annually. The program is sponsored by NAMI St. Louis, the Washington University schools of medicine and social work and the Missouri Institute of Mental Health, School of Medicine, University of Missouri at Columbia.

Other Washington University faculty involved in workshop presentations and planning are Michael F. Polgar, Ph.D., research associate with the social work school's Center for Mental Health Services Research; and three from the medical school: Carol S. North, M.D., associate professor of psychiatry; Konoy Mandel, M.D., a resident in psychiatry;

and Laura Sherman, M.D., instructor in psychiatry.

Other workshop presenters include Francie Broderick, executive director, Places for People; the Rev. Roz Denson, Ph.D., minister, Congregational Care and Counseling, Westside Missionary Baptist Church; Lori DeRosear, D.O., medical director, St. Louis Psychiatric Rehabilitation Center; Melissa Hensley, director of West Pine Group Home, Places for People; Marge Parrish, associate executive director, NAMI St. Louis; Garry M. Vickar, M.D., chief of the department of psychiatry at Christian Hospital Northeast and Northwest; and Joe Yancey, assistant regional manager, Missouri Department of Health.

## Employment

Use the World Wide Web to obtain complete job descriptions. Go to [cf6000.wustl.edu/hr/home](http://cf6000.wustl.edu/hr/home) (Hilltop) or [medicine.wustl.edu/wumshr](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.

Reading Specialist (part time) 980130

Medical Sciences Writer 980189

Secretary 980215

Secretary 990013

Senior Project Leader 990029

Secretary/Technical Typist 990040

Manager 990233

Gift Accountant 990244

Technical Secretary 990245

Director/Executive Faculty Liaison 990280

Computer Support Specialist 990283

Writing Lab Director 990298

Department Secretary 990303

Administrative Secretary 990315

Administrative Coordinator 990316

Curator, Modern Literature Collection/Manuscripts 990318

Administrative Secretary 990320

Input Output Clerk 990326

Senior Project Leader 990340

Assistant 990346

Lab Mechanic 990355

Administrative Assistant 990356

Administrative Assistant 990357

Administrative Assistant 990362

Engineering Librarian 990364

Counselor 990368

Investment Analyst 990369

Research Technician 000003

Accountant 000009

Counselor 000014

Administrative Assistant 000025

Admissions Coordinator/Counselor 000027

Administrative Assistant 000028

Mailroom Supervisor 000032

Systems Programmer I 000034

Director of Admissions 000039

Support Services Assistant 000040

Department Secretary 000041

University Communications Secretary 000042

Department Secretary 000044

Senior Researcher 000046

Receptionist 000050

Administrative Coordinator 000053

Assistant Manager 000055

Assistant Track and Cross Country Coach 000056

Regional Director of Development 000057

Government Grants Specialist 000058

Purchasing Coordinator for Furniture and Design 000060

Director of Campus Police 000061

Communications Technician I 000062

Coordinator, Corporate/Foundation Program 000063

Administrative Coordinator (part time) 000066

Technical Staff 000067

Human Resources Assistant 000068

Assistant Director of BSBA Records and Advising Service 000069

Library Manager 000070

Technical Coordinator 000071

Data Entry Processor 000072

Administrative Secretary 000073

Administrative Secretary 000074

Academic and Financial Analyst 000075

University Communications Secretary 000076

Public Service Coordinator 000077

Financial Service Representative 000079

Counselor 000080

Application Processor 000081

Assistant Library Preparation Specialist 000082

Lab Technician 000085

### 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.

Certified Coder 991200

Research Administrator 991436

Coding Coordinator 991492

Nurse Practitioner 991525

Medical Assistant II 991701

Health Physics Technologist II 991750

Public Safety Officer 991771

Medical Transcriptionist 000167

Pre-certification Coordinator 000192

Lab Animal Technologist 000257

Medical Transcriptionist 000317

Clerk (part time) 000321

Mailroom Attendant 000431

## Notables

### Dental alumni association bestows annual awards

Dale J. Cartwright, D.D.S., and Joseph W.C. Young, D.D.S., are the recipients of the School of Dental Medicine's 1999 Distinguished Alumni awards. They were honored at the alumni association's annual awards banquet, held Saturday, Sept. 18, at the Frontenac Hilton Hotel.

Two 1954 graduates of the former School of Dental Medicine, Cartwright and Young were recognized for their many contributions to dentistry and to their communities.

After serving as a dentist in the U.S. Air Force, Cartwright has maintained a dental practice in his hometown of Cabool, Mo., for 40 years. He also has been president of the Missouri State Board of Dental Examiners and the Springfield Dental Society and a fellow of the American College of Dentists, the Academy of General Dentistry and the International College of Dentists.

In addition to his professional achievements, Cartwright

has served as mayor of Cabool for three terms and as president of the Cabool Jaycees and of the Cabool R-4 board of education. He currently is a director of the Cabool State Bank.

Young, of Honolulu, recently retired from his dental practice after 40 years. His two sons are continuing his practice.

Young is president of the Chung Shan Association of Hawaii and the Washington University Club of Hawaii, as well as a number of other community organizations. He also is a member of the city planning commission and legislative chairman of the Mayor's Downtown/Chinatown Task Force. Young has served as president of four other Chinese organizations, holds directorships in the Chinese Chamber of Commerce and was named the 1998 Model Chinese Father of the Year by the United Chinese Society.



**Music men** Jim Russell (left), associate periodicals editor in the Office of Publications, and Steve Givens, assistant to the chancellor, front Nathanael's Creed, the band that led off the music lineup Friday, Sept. 17, at Walk In; Lay Down Theatre (WILD) in Brookings Quadrangle. Russell and Givens serve as music directors for the five-piece folk-rock band.

### New A&S departmental chairs, program directors named

A number of departmental chairs and program directorships recently have changed hands in the School of Arts & Sciences, according to Edward S. Macias, Ph.D., executive vice chancellor and dean of Arts & Sciences.

Among the changes in leadership are:

**William Bechtel, Ph.D.**, professor of philosophy, is the new chair of the Department of Philosophy. On the faculty since 1994, Bechtel replaces Roger F. Gibson, Ph.D., professor of philosophy, who remains with the department that he chaired since 1989.

Bechtel also serves as associate director of the Philosophy-Neuroscience-Psychology Program. His research and teaching focuses on the philosophy of the cognitive and neurosciences. His central research addresses the role of decomposition and localization as heuristics in developing brain-based models of cognitive function and epistemological issues concerning research techniques such as dissociation studies and neuroimaging. In addition, he does research and teaches in the history and philosophy of biology.

Bechtel edits the journal *Philosophical Psychology* and is co-editor of "A Companion to Cognitive Science" and of the forthcoming reader "Philosophy and the Neurosciences." He is past president of three academic societies.

He earned a doctorate in philosophy in 1977 from the University of Chicago and a bachelor's in religion in 1973 from Kenyon College. He previously taught at the University of Illinois Medical Center and Georgia State University.

**Steven Fazzari, Ph.D.**, professor of economics, is the new chair of the Department of Economics. A member of the faculty since 1982, Fazzari replaces Wilhelm Neufeind, Ph.D., professor of economics, who led the department since 1983.

Fazzari is an award-winning teacher and has held several administrative positions in the department, including six years as director of undergraduate studies.

He was one of a half dozen Hilltop faculty who, in 1997, helped launch a pilot program to bolster interaction between faculty and students through informal residence hall meetings. He has served on several University committees and task forces focused on undergraduate education.

His published research explores the foundations of Keynesian macroeconomics and the link between macroeconomic activity and finance. Fazzari's policy work on deficit reduction and capital gains taxation has been highlighted in several articles in the national press.

He received a doctorate in economics from Stanford University in 1982.

**Ahmet T. Karamustafa, Ph.D.**, associate professor of Islamic thought and religious studies, has been named director of the Religious Studies Program. On the faculty since 1987, Karamustafa assumed the chair from J. Patout Burns Jr., Ph.D., the Thomas and Alberta White Professor of Christian Thought, who recently accepted a position at Vanderbilt University.

Karamustafa's main research area is the social and intellectual history of Islam as a religious tradition in the medieval period. He teaches courses on Islam and comparative religion.

His publications include a monograph on ascetic movements in medieval Islamic mysticism, a book-length study on a 16th-century mystical text in Ottoman Turkish and an edited volume on cartography in traditional Islamic societies. Karamustafa is currently working on two book projects — one on Islamic definitions of religion and the other on medieval Islamic approaches to the question of human agency and subjectivity.

He earned a doctoral degree in Islamic studies in 1987 from McGill University in Montreal.

**Jack Knight, Ph.D.**, professor of political science, is the new chair of the Department of Political Science. A faculty member since 1988, Knight takes the reins from Lee Epstein, Ph.D., the Edward Mallinckrodt Distinguished University Professor of Political Science, who chaired the department since

1995. Knight has served as the department's associate chair and director of graduate studies for several years. He also is a fellow in the Center for Political Economy and a member of the Committee on Social Thought and Analysis. His primary interests are modern social and political theory, political economy, law and jurisprudence, institutions and organizations, and the philosophy of social science.

He taught previously at the University of Chicago and at the University of Michigan. He holds a law degree and a bachelor's degree from the University of North Carolina at Chapel Hill and master's and doctoral degrees from the University of Chicago.

**Steven G. Krantz, Ph.D.**, professor of mathematics, is the new chair of the Department of Mathematics, succeeding Edward N. Wilson, Ph.D., professor of mathematics, who remains on the faculty.

Krantz received a bachelor's degree in mathematics from the University of California, Santa Cruz in 1971. He received a doctorate in mathematics in 1974 from Princeton University. That same year, he joined the faculty of the University of California, Los Angeles, as an assistant professor, before moving to Pennsylvania State University as associate professor in 1981. He joined the Washington University faculty as professor of mathematics in 1986.

Krantz's research concentration is in harmonic analysis and complex analysis. He has held visiting professor posts at universities throughout the world. Among his many honors are two coveted mathematics writing awards — the Chauvenet Prize of the Mathematics Association of America (MAA) in 1992 for expository writing, and the Beckenbach Prize of the MAA in 1994 for his book, "Complex Analysis: The Geometric Viewpoint," published in 1992.

**William J. Paul, Ph.D.**, associate professor in the Performing Arts Department (PAD), has been named director of the PAD's new Film & Media Studies Program.

Paul, who arrived at the University last year from the University of Michigan in Ann Arbor, is the author of "Ernst Lubitsch's American Comedy"

(1983), "Laughing/Screaming: Modern Hollywood Horror and Comedy" (1994) and the forthcoming "Movies/Theaters: Architecture, Exhibition and Film Technology." His essays and reviews have appeared in dozens of journals and magazines, including *Film History*, *The Village Voice*, *Film Criticism*, *Film Comment*, the *New York Times Review of Books*, *American Film*, *Rolling Stone* and others.

Paul is a member of the Society for Cinema Studies and the American Studies Association. He has received research grants from the University of Michigan, the Massachusetts Institute of Technology and the National Endowment for the Humanities.

**Roger J. Phillips, Ph.D.**, professor of earth and planetary sciences, is the new director of the McDonnell Center for the Space Sciences. He replaces Robert M. Walker, Ph.D., the McDonnell Professor of Physics, who was the first director of the center, established in 1975.

Phillips specializes in planetary geophysics, with emphases on Earth, Mars, Venus and the Earth's moon, and has been actively involved in space missions, from Apollo to the currently active Mars Global Surveyor.

He came to the University in 1992 from Southern Methodist University where he had been chaired professor of geophysics since 1982. From 1968 to 1970, he held a variety of positions with the Jet Propulsion Laboratory in Pasadena, Calif., and he was director of the Lunar and Planetary Institute in Houston from 1979 to 1983.

Phillips received a geological engineering degree in 1963 from the Colorado School of Mines in Golden, and master's and doctoral degrees in applied geophysics in 1965 and 1968, respectively, from the University of California, Berkeley.

He is a fellow of the American Geophysical Union and has served as president of its Planetary Sciences Section.

**William E. Wallace, Ph.D.**, professor of art history and archaeology, has been named chair of the Department of Art History and Archaeology. He succeeds Mark S. Weil, Ph.D.,

professor and director of the University's Gallery of Art and Visual Arts and Design Center.

Wallace, who came to the University in 1983 from Columbia University, is an internationally recognized authority on Michelangelo and his contemporaries. He has published extensively on Renaissance art, including the volumes "Michelangelo: The Complete Sculpture, Painting and Architecture" (1998), "Michelangelo: Selected Scholarship in English" (1995) and "Michelangelo at San Lorenzo: The Genius as Entrepreneur" (1994).

He has received numerous grants and awards, including four from the National Endowment for the Humanities and five Washington University Faculty Research grants. In 1996-97, Wallace was a visiting fellow at the American Academy in Rome.

**Rafia M. Zafar, Ph.D.**, associate professor of English and of African and Afro-American studies, has been named director of the African and Afro-American Studies Program. Zafar, who joined the faculty in 1998, assumes the chair from Gerald L. Early, Ph.D., the Merle Kling Professor of Modern Letters, who will continue teaching English, African and Afro-American studies and American culture studies.

Zafar's current research on the intersection between identity, food and American literature was recently awarded a Kate B. and Hall J. Peterson fellowship from the American Antiquarian Society. When completed, that work, tentatively titled "And Called It Macaroni: Eating, Writing, Becoming American," will be published by Oxford University Press. Her study of early black writers, titled "We Wear the Mask: African Americans Write American Literature, 1760-1870," was published in 1997 by Columbia University Press. She also has co-edited two books.

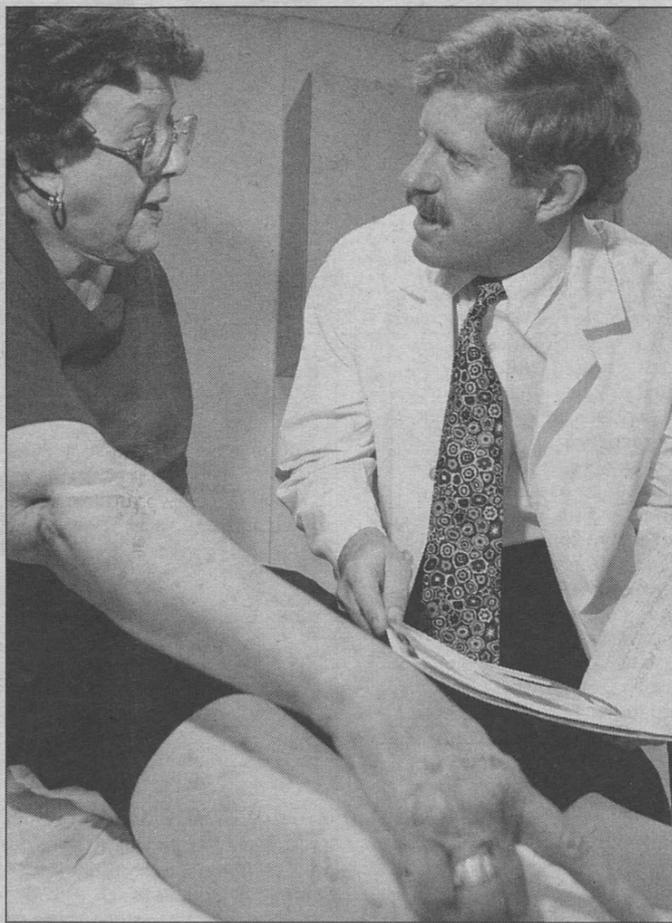
She earned a doctorate in the history of American civilization from Harvard University, a master's degree in English from Columbia University and a bachelor's degree in English and creative writing from the City College of New York.

# Washington People

In 1987, when Jack Watkins was working as general manager at a car dealership in Farmington, Mo., two men broke into his office looking for money. Threatening him with an ax, they chopped off his left hand at the wrist, panicked and fled.

Fearing death, Watkins used his belt as a tourniquet to stop the bleeding and called for help. After being airlifted to Barnes Hospital, he was greeted in the emergency room by the surgeon on call, Bruce A. Kraemer, M.D. It was mere coincidence that Kraemer, a plastic and reconstructive surgeon, had just returned from extensive hand surgery training and was ready for the task.

Watkins underwent eight hand operations, all performed by Kraemer, as well as extensive rehabilitation. Today, he works at



Bruce Kraemer, M.D., associate professor of plastic and reconstructive surgery, discusses treatment for foot ulcers with patient Patricia James.

Mustoe describes Kraemer as having a unique ability to connect to his patients. "He is warm, genuine and kind. For patients, he is truly one who can empathize," he said.

Laurel Wiersema-Bryant, clinical nurse specialist and nurse practitioner, said a commitment to better patient care is at the heart of Kraemer's work. "When Dr. Kraemer became interested in wound care," she said, "he immersed himself in learning everything he could. He's interested in seeking a higher level of patient care, and because of that he's never satisfied with ordinary results."

According to Wiersema-Bryant, Kraemer vacations as hard as he works. "When I hear him planning his vacations, I always tease him about not planning any time to just sit," she said.

## Scuba diver

Kraemer has a passion for scuba diving and has dived in Australia, the Caribbean and Hawaii. This interest led to another hobby — keeping marine fish tanks. He also enjoys traveling with his wife, Beverley, a pathologist at St. John's Hospital, and his 8-year-old daughter, Jessica. This summer the three took a cruise to Scandinavia and Russia and also vacationed at a dude ranch in Colorado.

Although Kraemer approaches both work and play with intensity, he believes his field has reached an era when physicians must be cautious with the advances of medicine. He doesn't endorse the world's first hand

transplants, which were done recently, because he believes more research is needed. "The question is, 'Are we doing things that are beneficial for the patient?' I think being a more senior surgeon helps me understand that it's nice to dream the dream, but the patient has to live with it," he said.

## Taking life and work at full throttle

### Bruce A. Kraemer, M.D., thrives on putting people back together

By NICOLE VINES

a keyboard as a service writer for another car dealership.

Kraemer thrives on putting people back together. Sometimes he reattaches a hand; sometimes he reconstructs the breast of a woman with cancer. And sometimes he does microsurgery to help heal the complicated wound of a diabetic patient. Whatever the situation, the associate professor of plastic and reconstructive surgery is never afraid to tackle the challenge.

"Bruce has developed a reputation as the guy to go to for difficult surgical challenges in the area of reconstructive surgery," said Thomas Mustoe, M.D., professor and chief of the division of plastic and reconstructive surgery at Northwestern University Medical School.

### One speed — blast

Kraemer's colleagues say he only has one speed — blast. He talks, thinks and moves fast. "Bruce approaches life at full throttle," said Leroy Young, M.D., professor of surgery. This fast-paced enthusiasm was amply apparent during the interview for this article. Ditching the usual method of a one-on-one meeting in a quiet office, Kraemer opted to talk between seeing patients, consulting with nurses and rushing to the emergency room to supervise the reattachment of a fingertip.

"I drive my two secretaries nuts because I'm on the go all the time," Kraemer said. "You never know when or what type of an emergency situation is going to pop up, and so I'm always on the run."

Growing up in Buffalo, N.Y., Kraemer knew he either wanted to be a physician — or a bassoonist. In 1972, he enrolled at the University of Tulsa with music scholarships and graduated in three years with a bachelor of

science degree in zoology.

Intrigued most by medicine, he attended Washington University School of Medicine with the intention of becoming an internist. But his plastic and reconstructive surgical rotation caught his attention instead. "Every case in plastics had something special and unique about it," he said. "It was never dull, and that excited me."

After graduating in 1979, Kraemer completed a general surgery internship and residency at the University of Texas Medical School in Houston. He returned to Washington University for a plastic and reconstructive surgery residency before joining the faculty as instructor of surgery in 1988.

Kraemer describes plastic and reconstructive surgery as a "super" specialty. "We have techniques that can take our surgical colleagues' work one step further," he said. "Working as a team, we try to innovate new ways to solve problems, and that's part of the fun."

For the past 12 years he has used what once was considered an instrument of quackery — the leech. Despite such associations, Kraemer, who studied the practice under Harry Buncke, M.D., at the Ralph K. Davies Medical Center in San Francisco, said leeches are perfect for draining blood that sometimes accumulates in replanted fingers and toes.

Kraemer used leeches to save the fingertip of a 7-year-old St. Louis boy. The child's finger was cut so close to the tip that he was able to sew the arteries back together, but there were no veins for return blood flow. A few days earlier Kraemer had gotten his first batch of leeches, which were still in a bucket in his office. After two weeks and 25 leeches, the boy's fingertip was able to drain itself.

Kraemer also directs the Wound Care Center at Barnes-

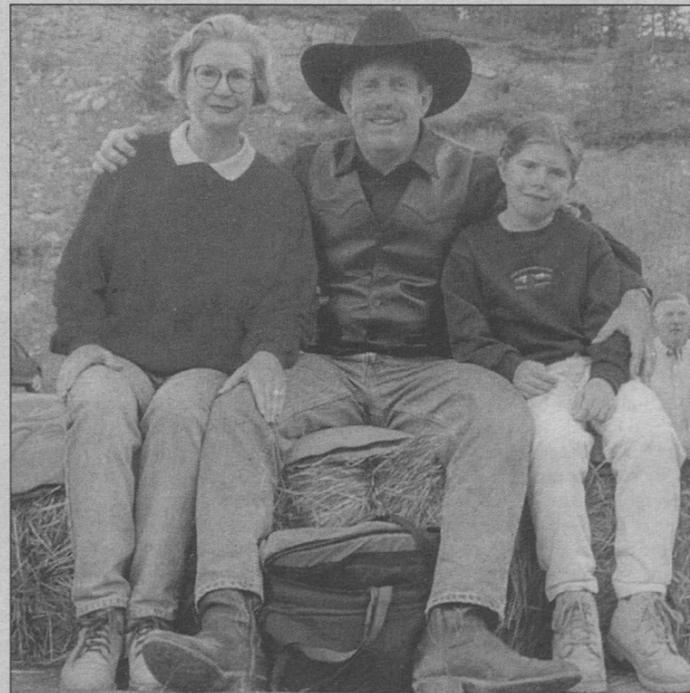
Jewish Hospital, where he treats patients with pressure sores and diabetic and vascular wounds. Currently, he is researching growth factors in pressure sores.

At the center, he works diligently with the nurses and staff not only to heal wounds but

"Bruce has developed a reputation as the guy to go to for difficult surgical challenges in the area of reconstructive surgery."

THOMAS MUSTOE

also to educate patients. "We're faced with trying to get patients to modify behavior as well as their expectations," he said. "It's day two. You take the dressings off a wound, and people expect immediate and perfect results. We try to help people have realistic expectations."



The Kraemers — Beverley, Bruce and Jessica — take time out for a photo at a Colorado dude ranch.

### Bruce A. Kraemer

**Birthplace** Philadelphia, Pa.

**Education** University of Tulsa, B.S., and Washington University School of Medicine, M.D.

**Positions** Associate professor of plastic and reconstructive surgery, director of the Wound Care Center at Barnes-Jewish Hospital

**Family** Wife, Beverley, and daughter, Jessica, 8

**Interests** Scuba diving, marine fish tanks, stamp collecting, photography