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Feb. 18, 1999

Volume 23 No. 21



Record

Washington University in St. Louis



110 percent Senior Jana Herrmann, tri-captain of the women's basketball team, receives a congratulatory kiss from David Pearce as he and his brother Richard present her with the Robert L. Pearce Award for "110 percent" effort on the court. Herrmann is the first woman to receive the award, which has been given to a member of the men's basketball team since 1985. The Pearces, both alumni of the University and the basketball Bears, established the award to honor their father. The women's team notched two more victories last weekend, extending its record streak to 29.

MARY BETHUNIS

Ready and able

Emergency plan equips campus for earthquakes, spills and more

By Christine Farmer

Do you know where a fire extinguisher is located in your building or where to go in case of an evacuation?

Signs have started appearing around the Hilltop and West campuses that help answer those and other questions as part of the University's new emergency preparedness and disaster recovery plan.

The plan, which has been in the works for a year, is now being finalized and implemented, said Steven P. Hoffner, assistant vice chancellor for operations.

The four disaster scenarios addressed in the plan are fires, severe weather, earthquakes and hazardous chemical spills. Earthquakes pose the worst danger, Hoffner said, because they strike without warning.

"This is not something you want to think about, but we're a community of roughly 10,000 people, and we need to be able to take care of ourselves," Hoffner said.

Emergency procedure signs should be posted on every floor of every building by March 1. The signs show diagrams of the building with the locations of exits, fire alarms and fire extinguishers. Evacuation instructions also provide the location of the designated assembly area for each building.

The new plan establishes a consistent structure campuswide. "This is an effort to bring together the Hilltop Campus community and recognize that we have the responsibility to be organized," Hoffner said. "In the event of an emergency or disaster, we need to have a system where we're able to handle basic issues."

A Hilltop emergency coordination team has been formed, and all members will

receive a copy of the lengthy plan.

The plan divides the Hilltop Campus and South 40 into five zones; West Campus is a separate zone. Each zone has a primary and secondary liaison designated by the coordination team. The team will meet twice a year to conduct test drills. The zone manager designates a person on each floor to be responsible for building evacuation and accounting of individuals; they will be given safety and first aid training on an annual basis.

The plan also establishes an emergency team and a command center in Anheuser-Busch Hall and lists responsibilities of key administrators.

Chancellor Mark S. Wrighton said that no plan can cover every situation, but it can make us think about our responsibilities and increase our awareness of our vulnerabilities.

"We are not immune to disasters or emergency situations," Wrighton said. "Increasing our preparedness greatly improves our chances for recovering from such occurrences. Planning and preparation are a team effort, involving resources from throughout the University community."

In the event of an emergency, the Department of Facilities and Planning will assess building conditions and post signs stating whether the building is safe.

"In the event of a major disaster, the University's dining services might have to provide

See **Emergency**, page 6

Advisers offer continuity, know-how

Student groups seek mentors among faculty, staff

By David Moessner

"Coach." For 29 years, Jim Burmeister has carried that respect-invoking label — one that suggests tutelage, influence, mentoring.

But while his cheerful whistle is a campus trademark,

Burmeister has never worn one around his neck. His "players" aren't found in the Athletic Complex — they're the members of Thurtene, the University's junior honorary. Burmeister, executive director in the Office of Public Affairs, has served as the group's adviser since 1970.

"It happened very early in the game," Burmeister said, pun apparently unintended, while recalling the origin of his nickname. "The 'Mr. Burmeister' thing was very stiff. But typical of our students here, they handled the situation. They came up with 'Coach' on their own and it works beautifully. It's warm and comfortable and yet says, 'You're different than we are.'"

That difference is what makes the relationship so valuable. Burmeister provides continuity and campus know-how to a group that — selected in late November — must spearhead the nation's largest student-run charitable carnival by April.

"The hardest part is keeping your mouth shut," Burmeister said in reference to his role. "You want to sit and let the students do their thing. You want them to develop and grow. So I try to keep as quiet as I can. There aren't too many new ideas anyway, when you've been involved as long as I have. So

See **Advisers**, page 2

Students, Women's Society collaborate on business plan

By Christine Farmer

The Furniture Exchange at Washington University is implementing new marketing strategies, thanks to consulting help from Master of Business Administration students at the John M. Olin School of Business.

The recommended improvements came from a four-person team participating in the Taylor Community Consulting Program, who developed a plan to help the

Furniture Exchange increase revenues, used to fund University scholarships.

The Furniture Exchange, which is run by the University's Women's Society, buys and sells new and used furniture and household items. It was one of 21 nonprofit agencies in or near St. Louis chosen to receive the free consulting services.

"Our MBA student team was great; they were professional,

See **Exchange**, page 6

New regulations put in place for growing study abroad programs

By David Moessner

"The world is a great book, of which they who never stir from home read only a page." — Saint Augustine.

Less poetic but reflecting like spirit, the University's Study Abroad Task Force has prefaced new regulations for overseas study with this assertion: "As international travel and global interaction, education and communication play an ever greater role in everyday life, our students need to acquire the broad cultural knowledge, the languages and the

practical skills to enable them to participate fully in a global society.

"To assist this goal, all qualified Washington University students should have the opportunity to study abroad in an academically demanding program to complement courses and experiences provided on the Washington University campus."

It's an opportunity that is being embraced. This year, about 300 juniors — roughly 20 percent of the class — will study abroad through programs offered by the University's Office of Interna-

tional Studies and Overseas Programs in Arts and Sciences. That is triple the number that engaged in global studies just six years ago.

Currently, 37 University-sponsored programs are on the docket in 18 countries — Australia, Chile, China, England, France, Germany, Greece, Ireland, Israel, Italy, Japan, Kenya, Korea, the Netherlands, Russia, Spain, Taiwan and Tanzania.

"We anticipate a portfolio of programs that's not much larger than the one we have now, but which will provide every major at

least one opportunity," said Robert Booker, newly appointed director of overseas programs.

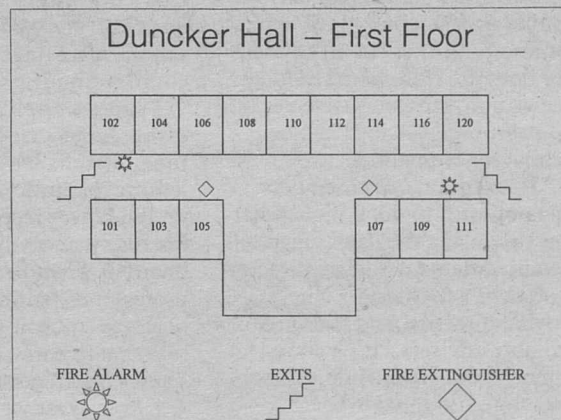
Priscilla Stone, Ph.D., director of international studies, seconds the motion. "Our goal in the coming years is to further strengthen and support these opportunities," she said. "Clearly, our students can only benefit from the study abroad experience."

Natalie Kettner is one who took the challenge to expand her horizons. Now a senior majoring in French, Kettner spent the entire 1997-98 school year in southern

France as part of the Dickinson College in Toulouse program. Situated about two hours from the Pyrenees mountain range that separates France from Spain, Kettner earned 27 credits toward language, literature and religion requirements. But she maintains she netted much more — she found her voice.

"Being integrated among French people is the only way to really learn the language," Kettner said. "It doesn't really help you to hear Americans and their bad accents!"

See **Abroad**, page 6



New signs promote emergency preparedness.



Ever active on campus, Jim Burmeister, executive director in the Office of Public Affairs, always seems to have a ball in the air. For the past 29 years, Burmeister has served as an adviser to Thurtene, providing the junior honorary continuity and guidance.

Advisers

Student groups recruiting faculty, staff mentors

— from page 1

when an idea resurfaces, it's difficult to sit through a 25-minute discussion on its merits.

"But the students here are so bright," he said. "They pretty much know what goes and what doesn't. So there's not a lot of heavy hands-on guidance. I look at myself as a facilitator in a lot of areas. Whether it's campus police or maintenance or facilities or transportation, I can head them in the right direction."

Nurturing guidance of that nature is the goal of the Student Group Activities Committee (SGAC) and the Office of Student Activities. SGAC, one of the three primary committees of Student Union, is actively trying to pair interested faculty, staff and graduate students with any of the nearly 200 student groups on campus — more than half of which are currently without advisers.

"We don't want to force this on anybody," said Ginger Elsea, who is heading SGAC's effort, "but we realize that student groups see advisers as being beneficial. We'd like faculty and staff to know that this is an option if they're interested."

The something-for-everybody list forms a diverse patchwork of the University, from academic-oriented organizations to recreational and social clubs to cultural, ethnic and religious groups. Did you know that the University has two comedy troupes — Kaktabulz and Mama's Pot Roast? Neither has an adviser. Nor does the Hong Kong Students Association, the College Democrats, the Ballroom Dancing Club or Habitat for Humanity.

"Faculty and staff members may not want to do at night what they do during the day," suggested Melanie Adams, associate director of student activities, who helps provide direction and training to fledgling advisers. "It's a good way to meet students outside your discipline and outside your college."

"There are a lot of faculty who have these random interests that we just don't know about," Elsea said. "They don't necessarily come out in the classroom."

Like sailing. Batten down the hatches, but this land-locked University features an esteemed member of the international sailing community. Third-year graduate student Adam Bookman, who serves as a teacher's assistant in political science while studying transitions and consolidation of democracy, moonlights as a coach for the Canadian Olympic sailing team. Last weekend, in fact, he was doing just that off the coast of Miami. In his spare time, Bookman advises the 70-member WU Sailing Club.

"Adam is so involved with the sailing circuit that he keeps us in touch with what's going on," said senior Jason Mendelson, former president of the club that docks three boats at Creve Coeur Lake. "This past semester, we joined the Midwestern Collegiate Sailing Association, and he was a great asset toward that. He already had the connections, so he was able to show us the ropes and serve as an intermediary."

"It seems odd that he'd be in the Midwest," Mendelson said, "but the fact that he's here is a tremendous resource for us. It's a good thing to refer to if anyone is skeptical — we say, 'Our adviser is Adam Bookman.' That brings a lot of respect to our group."

Quarter-century commitments and Olympic pedigree are not necessary requirements to participate, however. Adams said that a one-year pledge is sufficient and that, on average, student groups meet once a week for a couple of hours.

"But we rarely have an adviser drop," Adams said. "And most of them that do, it's because they've left the institution."

Bill Lowry recently re-upped for his 10th year on the Campus Y board of directors. Lowry, associate professor of political science, also serves as co-chair for the organization that features 24 student-run service programs on campus.

"Every year we have over 1,500 students — more than one-third

of our undergraduate population — involved in community service projects," Lowry said. "I find that inspirational in itself. People talk about 'Generation X' and how they don't seem to care as much as people in the past — and it's just not true."

"It's refreshing to be a part of something where students just try and make life better for other people," he said. "We do what we can to try and help them out. We make sure things stay organized and there is some continuity there. Admittedly, there is a time and financial commitment to it. But you get to see the students in an entirely different context and at the same time do something worthwhile for the broader community."

An abrupt ring of the phone interrupts Lowry, who quickly jokes that it's probably someone from Campus Y looking for him to help with another task.

"By the end of every year, I feel like I've got to cut down on things I get involved with," Lowry admitted. "Then I go to the Campus Y Senior Dinner and hear the student testimonials and I realize, 'Hey, I don't want to cut down on this one. This is really good stuff.'"

Members of the community interested in serving as advisers may call Elsea at 935-5901 or Adams at 935-5994.

Partnership

Architects, arts organization collaborate on new building

By ANN NICHOLSON

The University's School of Architecture, in an ongoing collaboration with the city's Forum for Contemporary Art (FCA), is playing a central role in the development of a new building for the nonprofit arts organization. The innovative joint effort also gives members of the community a chance to comment on design proposals.

Each of the eight architects on the short list for the new FCA building in St. Louis will give a lecture in the school's Monday Night Lecture Series. A 6 p.m. reception for the architect and the public in Givens Hall will precede each lecture, which will begin at 6:30 p.m. in Steinberg Hall Auditorium.

Those attending the lectures will be given comment cards for their response to the architects' work, and their comments will be taken into consideration in the final architect selection process for the new facility, to be built at the intersection of Spring and Washington avenues, St. Louis.

"The collaboration with the School of Architecture has been a vital part of the planning process," said Betsy Millard, FCA director, "as we realize a unique opportunity both to involve the St. Louis region in selecting an architect and to build an exciting new space for contemporary art."

Architecture Dean Cynthia Weese, FAIA, and Stephen Leet, associate professor of architecture, are serving on the jury selecting the building's architect. Last spring, students in Leet's graduate studio created theoretical proposals for the new facility and worked directly with FCA building committee members. This spring, students in the studio of Tom Heneghan, visiting professor of architecture, also will design theoretical building proposals for the FCA, now located at 3540 Washington Ave.

The new home for the nonprofit arts organization will share an outdoor plaza and green space with Tadao Ando's Pulitzer

Foundation for the Arts building, currently under construction.

Weese said the partnership with the FCA has been a great opportunity for the school. "The project has allowed our students the opportunity to put their skills to work in creating theoretical design concepts for a new arts building in St. Louis," she said. "The lectures sponsored by the school and the Forum for Contemporary Art also will provide both the University and St. Louis communities the rare and exciting opportunity to be directly involved in the architect selection process."

The lectures in the FCA series, which will be introduced by Bob Winters, outgoing president of the American Institute of Architects-St. Louis, are:

- March 9 — Enrique Norten, director and principal of TEN Arquitectos in Mexico, known for his modernist compositions that draw upon a traditional Mexican heritage.

- March 18 — Swiss architects Annette Gigon and Mike Guyer, whose innovative museum architecture includes the Kirchner Museum in Davos, Switzerland.

- April 1 — Spanish architect Carlos Ferrater, whose buildings are characterized by their unusual use of low cost materials and a puzzle-like combination of geometric forms.

- April 8 — School of Architecture alumni Philip Durham and Elva Rubio, who have designed several innovative St. Louis residences.

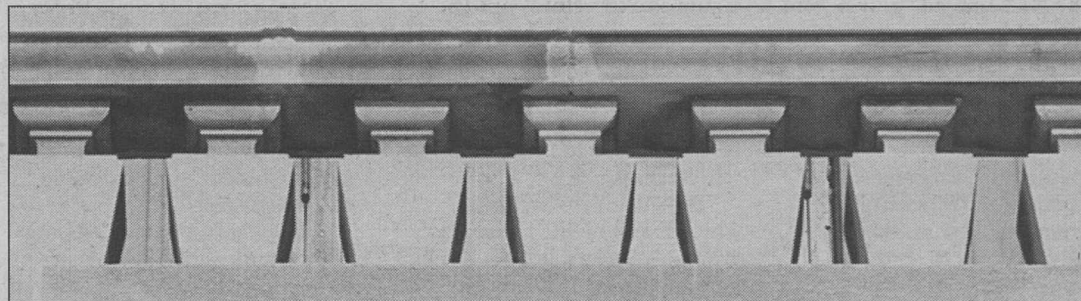
- April 22 — Brad Cloepfil, a principal at Allied Works Architects in Portland, Ore., and co-founder of the University of Oregon-Portland's architecture program.

- April 26 — Peter Zumthor, a leader of the new Swiss architecture and a recipient of the prestigious Carlsberg Architecture Prize.

- May 6 — Self-taught Arizona-based architect Will Bruder, recipient of the Rome Prize from the American Academy in Rome.

- May 12 — Swiss architects Jacques Herzog and Pierre de Meuron, who currently are working on designs for the Tate Museum Bankside in London.

News Briefs



Campus quiz: This railing encloses a balcony on which campus building? Answer below.

Financial help

Some 60 percent of undergraduates at Washington University this year receive some form of financial assistance. The average freshman award is \$19,000; assistance ranges up to \$28,000. Scholarship funds totaling \$40,377,000 come from endowment income and gifts (\$5,761,000) other University sources (\$31,299,000) and government sources (\$3,317,000). Additionally, undergraduates receive loan assistance totaling \$11,968,000 and income from University employment of almost \$2.5 million.

Millennium blues

Despite nationwide efforts to cure computers of anticipated problems caused by the year 2000, several universities already

are preparing for expected problems. Moorhead State University in Minnesota will delay the start of classes in January 2000 by one week, due to concerns over Y2K's effect on sources of electricity, fuel oil, coal and telephone service. The North Dakota State University system also will postpone the first semester of 2000 for similar reasons.

Did you know?

Max Beckmann — the great Expressionist painter whose work is featured in the exhibition "Beckmann and Paris" now at the Saint Louis Art Museum — taught at Washington University for two years in the late 1940s.

Beckmann was forced into exile from his native Germany in 1937, when his work was displayed in the infamous Nazi-sponsored

exhibition "Degenerate Art." He spent the next 10 years traveling, first to Amsterdam, then Paris, New York and finally, in 1947, to St. Louis, where he became visiting professor in the University's School of Fine Arts. Beckmann returned to New York in 1949 and died the following year.

Answer: This substantial balustrade can be found on the south side of McMillan Hospital Building on the Medical Campus.

"News Briefs" includes short items on a wide range of subjects, typically information about resources, benefits and opportunities available to faculty and staff. Readers are invited to submit briefs, which will be used as space permits, to Betsy Rogers, Campus Box 1070, or by e-mail, Betsy_Rogers@aismail.wustl.edu.

Record

Washington University community news

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Medical School Update

Safe blood supply Cost, inventory will drive its use in the next century

By JIM DRYDEN

The U.S. blood supply is safer now than ever, with the risk of infection from tainted blood falling to levels so low they are almost impossible to measure, according to a review article that appeared last week in the New England Journal of Medicine. Investigators surveyed 120 recent studies on blood safety and transfusion.

"We now understand that 15 or 20 years ago, the risk of getting HIV-infected blood was nearly one in 100 in some communities. Today, the risk of HIV virus transmission is somewhere between one in 600,000 and one in a million, and with new tests coming along in the next year or two, that will reduce this risk by another 50 percent," said lead author Lawrence T. Goodnough, M.D., professor of medicine and of pathology at the School of Medicine and director of transfusion services at Barnes-Jewish Hospital.

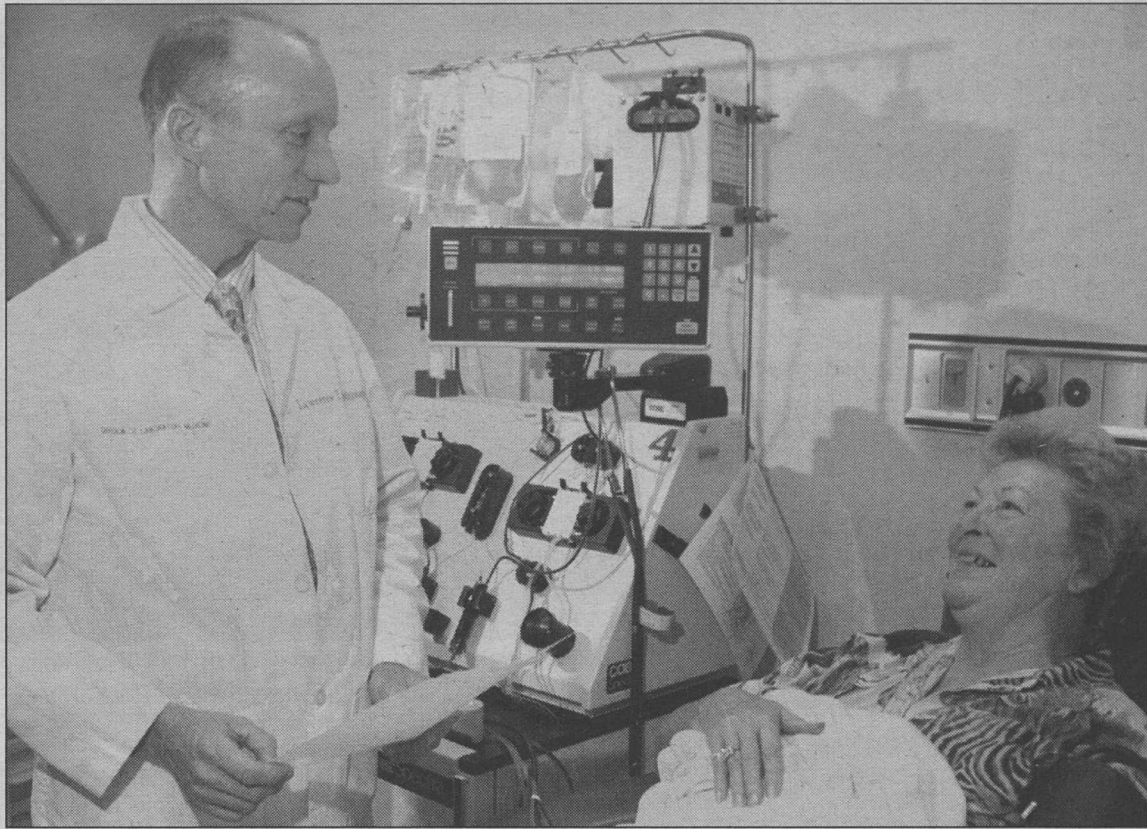
The same trends are evident with hepatitis and other viral agents, according to Goodnough. For example, in the early 1970s the risk of post-transfusion hepatitis was nearly 25 percent, but after 1979, when an all-volunteer blood donor supply was put into place and blood centers could no longer recruit paid donors, the risk of hepatitis transmission declined to about 5 percent. Goodnough and co-investigators reported that more rigorous screening and better testing have further decreased the risk of hepatitis to less than one in 60,000 now. The authors estimate that

the 12 million blood transfusions each year in the United States place only a handful of patients at risk for viral infections. And even for those, the risk of death is less than one in a million.

"While the public perception is that blood transfusion carries a risk of viral infection, the greater risk is dying from a transfusion reaction," Goodnough said. "The most common causes of mortality from blood transfusion reactions would be accidentally giving a patient the wrong blood type or a blood product that is contaminated by bacteria."

Over the last 10 years, the blood supply barely has been adequate to meet the needs in the United States, and only because of a substantial decline in the number of blood transfusions. In the future, with an aging population and more complex health-care needs, doctors will need to be even more conservative in their transfusion practices. With the safety of blood well established, the authors contend that blood transfusion practices now will be driven by inventory and cost rather than blood safety.

In 1997, the last year for which statistics are available, blood centers collected approximately 12.5 million units of blood. That is 1 million fewer units than were donated a decade earlier. Most people do not donate regularly. The authors cite a national survey from 1993 indicating that 46 percent of the population in the United States between 18 and 65 years of age had given blood at some time, but the same survey found that only 5.4 percent had donated in that year.



Lawrence T. Goodnough, M.D., professor of medicine and of pathology, talks with platelet donor Marian Brown in the Barnes-Jewish Hospital Pheresis Laboratory. Brown donates platelets about once a month.

In spite of those facts, the authors believe current supplies might be adequate if health centers practice better blood transfusion strategies. Goodnough and colleagues estimate that some hospitals could reduce their use of blood products by up to 50 percent.

Several studies have shown that patients can do well with less blood. Even the sickest patients can tolerate very low blood counts temporarily, according to Goodnough. A patient is considered anemic if

the red blood cell count, or hematocrit, falls below 39 percent, but studies have shown that hematocrits can fall safely to as low as 24 percent before doctors need to consider a transfusion, he said.

Because physicians have been taught that transfusions are essential in certain situations, it can be difficult to change behavior, but by systematically looking at the reasons for blood transfusions, Goodnough believes, it may be possible to eliminate enough of them to

maintain the delicate balance of supply and demand.

"One thing we're doing at Barnes-Jewish Hospital is asking our anesthesiologists to record why a blood transfusion is given," Goodnough said. "That is not a standard practice in all hospitals. Was there a change in vital signs? Was it because of blood loss? We believe by asking these questions, we will raise the consciousness of the physician, and in some cases, that second thought may eliminate an unnecessary transfusion."

Morris receives \$8.7 million grant to compare healthy aging with Alzheimer's

John C. Morris, M.D., the Harvey A. and Dorismae Hacker Friedman Professor of Neurology, has received a five-year \$8.7 million grant from the National Institute on Aging (NIA). The grant supports a comparison of aging in healthy people and people with dementia.

The NIA-funded study began in 1984 under the direction of Leonard Berg, M.D., professor emeritus of neurology. The researchers want to determine whether Alzheimer's disease is an exaggerated form of aging or whether people can grow old without succumbing to dementia. Therefore they must follow study participants for many years, testing them annually and analyzing brain tissue after death. Among their findings are that even very mild dementia can be distinguished from normal aging and that at least some very old people can die without signs of disease in the brain.

"During the next five years, we will continue our work on distinguishing healthy aging from very early stage dementia with an increasing focus on the 'oldest old'—85 years or older," said Morris, who also co-directs the Alzheimer's Disease Research Center. "We also will expand our methods for detecting Alzheimer's disease to include state-of-the-art imaging techniques."

The program contains four complementary research projects. Morris will continue his studies of the very old, developing quantitative guidelines for separating Alzheimer's disease from other conditions that can affect mental prowess late in life. He also will determine how physical frailty affects cognitive performance.

Joseph L. Price, Ph.D., professor of anatomy and neurobiology, will focus on pathological changes in the brain that occur before a person develops clinically detectable dementia. This stage might represent the earliest stage at which Alzheimer's is distinct from aging and therefore could be a time when drug therapy could delay or even prevent symptoms.

David A. Balota, Ph.D., professor of psychology in Arts and Sciences, will use attention and memory tests to explore the relative contributions to cognitive decline of the brain's frontal lobes and its medial temporal systems.

Researchers believe the frontal lobes help us focus our attention when we encode or retrieve memories. They think the medial temporal systems control more automatic aspects of encoding and retrieval.

Daniel K. Kido, M.D., professor of radiology, and John Csernansky, M.D., the Gregory B. Couch Professor of Psychiatry and associate professor of neurobiology, will determine whether imaging techniques can distinguish normal elderly people from early Alzheimer's patients, who might have lost nerve cells from the brain. They will use magnetic resonance

imaging to compare the shapes and volumes of brain structures such as the hippocampus, which plays a central role in memory. They also will assess nerve-cell loss by using magnetic resonance spectroscopy to measure levels of biochemical markers.

Five core components will support the research. An administrative core, led by Morris, will coordinate and monitor the program. A clinical core, also led by Morris, will recruit participants and provide clinical examinations. The core expects to test about 325 volunteers over five years to obtain 250 new study partici-

pants. A psychometric core, led by Martha Storandt, Ph.D., professor of psychology in Arts and Sciences, will assess performance in areas such as memory, language and ability to organize information. A neuropathology core, led by Daniel W. McKeel Jr., M.D., associate professor of pathology, will perform the brain autopsies and examine and quantify samples for characteristic features of Alzheimer's disease. And a biostatistics core, headed by J. Philip Miller, Ph.D., professor of biostatistics, will provide the statistical expertise needed for experimental design and data analysis.

First Dean's Distinguished Service Award given to Harrison

Anita L. Harrison, the research administrator for The Cancer Center at Barnes-Jewish Hospital and the School of Medicine, recently received the first annual Dean's Distinguished Service Award.

Harrison was recognized for her knack for creating a positive work environment, ability to exceed job responsibilities and contributions to the community.

"Anita is a most deserving recipient of this award," said William A. Peck, M.D., executive vice chancellor for medical affairs and dean of the medical school. "Without her outstanding work, the Cancer Center would not be a reality. She is a fine administrator, a great communicator and always finds a way to do the right thing and to do it right."



Harrison: Cancer Center administrator

Harrison came to the University in the fall of 1995 to implement plans to develop a world-class cancer center at the medical school. The Cancer Center now has nine research programs and 11 clinical programs focused on oncology in addition to laboratory support for cancer research from five core facilities. Another five core facilities are in planning stages.

In addition, Harrison is preparing a grant application for designation as a comprehensive cancer center from the National Cancer Institute. And she works with administrators at BJC Health System, St. Louis Children's Hospital and Barnard Free Skin and Cancer Hospital who are ensuring that Cancer Center facilities will provide optimum care.

Timothy J. Eberlein, M.D., interim director of the Cancer Center, the Bixby Professor and head of the Department of Surgery, said the award was well deserved. "Anita is a walking encyclopedia of knowledge about getting grants," he said, "and she has been able to get administrators, clinicians, researchers and support personnel who have enormous talents but incredible diversities to work together."

Harrison began focusing on cancer in 1992 when her knowledge of biostatistics and public administration led to a position managing clinical research at the comprehensive cancer center of Wake Forest University in Winston-Salem, North Carolina.

She came here four years ago after a year at Wake Forest and two years in a similar position at the University of California-San Francisco.

Harrison said she sees her office's role as the glue holding the Cancer Center together. "There are so many strengths at the medical center. We have a huge powerhouse of research, fantastic clinical programs and we do a great job of training medical students," she said. "If we can take advantage of our strengths and push them forward, I think we're going to make a major impact on cancer."

She said she enjoys helping junior faculty obtain funding and linking up researchers working on similar cancer problems. "If I can do just one of those connections a year, it's worth it," Harrison said.

A minister's wife, she also coordinates volunteers and mentors children once a week at St. Martha's Hall, a shelter for battered women in the city. "I love children, and it's part of my work ethic to give back to the community," she said.

University Events

Feet to amaze, feats to surprise: Rhythm in Shoes at Edison

The soulful feats of Rhythm in Shoes will be on tap at 8 p.m. Feb. 26 and 27 when the 18-member dance troupe brings guest Keith Terry to Edison Theatre for a special family event. As Ed Sullivan would say, it'll be a really good shoe.

Rhythm in Shoes is a wildly inventive company of dancers and musicians that combines such old-time forms as tap, step, clogging and hoe-downs with indigenous American music like swing and blues. The group both honors these traditions and expands upon them, creating work that is boldly original, instantly recognizable and surprisingly contemporary.

Founded in 1980 as the Shuffle Creek Dancers of Bloomington, Ind., the group changed its name to Rhythm in Shoes in 1988 and relocated to Dayton, Ohio, near the homes of artistic directors Sharon Leahy and Rick Good.

Leahy, a renowned choreographer, performer and teacher, has led the group for more than a decade now, winning awards from the Ohio Arts Council and



Not your parents' hoe-down: The soulful feet of Rhythm in Shoes will come to Edison Theatre Feb. 26 and 27.

numerous fellowships from the National Endowment for the Arts. Good has composed for the group since 1987. In 1997, he released "Nova Town," his first collection of original songs.

Keith Terry is a percussionist

and rhythm dancer whose unique brand of "body music" encompasses numerous disciplines, from Japanese taiko drumming to Ethiopian armpit music. Though he is probably best known for his solo work, Terry has worked with

artists including Robin Williams, Bobby McFerrin, the Bobs, the Jazz Tap Ensemble and others. He has performed extensively throughout the United States, Europe and Asia, from the New York's Lincoln Center to the Indonesian Arts

Rhythm in Shoes

Where Edison Theatre

When 8 p.m. Feb. 26 and 27

Tickets \$23 at the box office, 935-6543, or from MetroTix, 534-1111

Festival in Bali to the American Center in Paris.

As a musician, Terry has recorded for Windham Hill Jazz, Inner City and Theresa Records as well as on several soundtracks for film and television, including PBS' NOVA and the film "Bridge of Dreams."

Tickets are \$23 and are available at the Edison Theatre Box Office, 935-6543, or through MetroTix, 534-1111. Purchase one child's ticket for \$12 and receive a second child's ticket free. Call for additional discounts.

The performances are sponsored by Edison Theatre's OVATIONS! Series with support from the Heartland Arts Fund and the New England Foundation for the Arts. For more information, call 935-6543.

Spiritual Homes • Millennial Anxieties • Flatland • Dances with Trees

"University Events" lists a portion of the activities taking place at Washington University through Feb. 27. For a full listing of medical rounds and conferences, see the School of Medicine's website at medschool.wustl.edu/events/. For an expanded Hilltop Campus calendar, go to www.wustl.edu/thisweek/thisweek.html.

Exhibitions

"The Genius of Jean-Antoine Houdon." Through March 21. Steinberg Hall. 935-4523.

"The Getty Center: Photographs by Joe Deal, Models by Richard Meier." Through March 21. Steinberg Hall. 935-4523.

"International Abstraction: Art of the 1950s From the Washington University

Collection." Through March 28. Steinberg Hall. 935-4523.

"Writers Reading Stein." Through March 19. Olin Library Special Collections, fifth floor. 935-5495.

Films

Thursday, Feb. 18

6 p.m. Chinese Film Series. "Myriads of Lights." Room 219 Ridgley Hall. 935-5983.

Friday, Feb. 19

7 and 9:30 p.m. Filmboard Feature Series. "Kundun." (Also Feb. 20, same times, and Feb. 21, 7 p.m.) Cost: \$3 first visit;

\$2 subsequent visits. Room 100 Brown Hall. 935-5983.

Midnight. Filmboard Midnight Series. "Ghostbusters." (Also Feb. 20, same time, and Feb. 21, 9:30 p.m.) Cost: \$3 first visit; \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

Thursday, Feb. 25

6 p.m. Japanese Film Series. "The Burmese Harp" (English subtitles). Room 219 Ridgley Hall. 935-5156.

Lectures

Thursday, Feb. 18

Noon. Genetics seminar. "New Mutagen-

esis Strategies for Revealing Gene Function in Mice." John Schimenci, biology dept., Jackson Lab, Bar Harbor, Maine. Room 823 McDonnell Medical Sciences Bldg. 362-7072.

1 p.m. Center for Mental Health Research seminar. "Quality of Life Among Young Adults With Schizophrenia." Ok Kyung Yang, assoc. prof. of social work, Ewah Women's U, Seoul, Korea. Room G38 Goldfarb Hall. 935-5687.

2:30 p.m. Biomedical engineering/mechanical engineering joint seminar. "Biomechanics of the Larynx." Siddarth Khosla, fellow, laryngology and voice disorders. Room 100 Cupples II Hall. 935-7096.

4 p.m. Biology seminar. "Genomic Imprinting Disruptions and Growth Control in Peromyscus Interspecific Hybrids." Paul Vrana, molecular biology dept., Princeton U. Room 322 Rebstock Hall. 935-6860.

4 p.m. Earth and planetary sciences colloquium. "Influence of Uranium Phases on the Alteration of Spent Nuclear Fuel and the Migration of Radionuclides." Dave Wronkiewicz, asst. prof. of geology and geophysics, U. of Mo.-Rolla. Room 112 Wilson Hall. 935-5603.

4 p.m. East Asian Diasporas Colloquium Series. "New Spiritual Homes: Religion and Asian Americans." David R. Yoo, Claremont McKenna College, Calif. Room 331 Social Sciences and Business Bldg., U. of Mo. 516-5753.

4 p.m. Economics/urban issues seminar. "The Tiebout Hypothesis and Majority Rule: An Empirical Analysis." Holger Sieg, Duke U. Room 300 Eliot Hall. 935-5670.

5 p.m. Vision science seminar. "Lens Epithelial Expression of AlphaA-Crystallin, a Molecular Chaperone With Diverse Functions in the Lens." Usha Andley, assoc. prof. of ophthalmology and visual sciences. East Pavilion Aud., Barnes-Jewish Hosp. Bldg. 362-3362.

Friday, Feb. 19

8:30 a.m. Olin School of Business Seminar Series. "Global Supply Chain Management: Challenges, Opportunities and Successful Practices." Panos Kouvelis, prof. of operations and manufacturing management. Cost: \$100, includes continental breakfast and lunch. Room 112 Simon Hall. 935-7398.

9:15 a.m. Pediatric Grand Rounds. "Hypoglycemia: The Limiting Factor in the Management of Diabetes." Philip E. Cryer, the Irene E. and Michael M. Karl Professor of Endocrinology and Metabolism. Clopton Aud., 4950 Children's Place. 454-6006.

11 a.m. Systems science and mathematics seminar. "Hub and Spoke Model." David Cox, Scott Air Force Base. Room 101 Cupples II Hall. 935-6001.

Noon. Cell biology and physiology seminar. "Molecular Mechanisms of the Circadian Clock in Mammals." Gregor Eichele, Max-Planck Institute, Germany, and Baylor College of Medicine, Houston, Texas. Room 426 McDonnell Medical Sciences Bldg. 362-2254.

1 p.m. Biology seminar. "Peromyscus as a Model System and Future Research Directions." Paul Vrana, molecular biology dept., Princeton U. Room 322 Rebstock Hall. 935-6860.

4 p.m. African and Afro-American studies lecture. "Incidents, Dramas and Tragedy in the History of Race in the 20th Century United States." David Roediger, history dept., U. of Minn. Cohen Lounge, Busch Hall. 935-5690.

4 p.m. Neuroscience biweekly seminar. "Why Hunger, Depression and Choices Are Related, and What Do Glia Have to Do With It All?" Joel Price, prof. of anatomy and neurobiology. Cori Aud., 4565 McKinley Ave. 362-3362.

7:30 p.m. St. Louis Astronomical Society lecture. "Coming at Us From Space—How Often Earth Gets Hit By Things." Claia Bryja, Southwest Mo. State U. Room 162 McDonnell Hall. 935-4614.

Saturday, Feb. 20

9 a.m. Saturday morning neural sciences seminar. "Series: Neurophilosophical Investigations: Perception-Action Spaghetti." Andy Clark, prof. of philosophy. Erlanger Aud., McDonnell Medical Sciences Bldg. 362-3362.

11 a.m. University College Saturday Seminar Lecture Series. "Time Trials: Millennial Anxieties From 1000 to 2000 A.D." Gerhild Scholz Williams, prof. of Germanic languages and literatures. Goldfarb Aud. 935-6788.

Monday, Feb. 22

Noon-1 p.m. Molecular biology and pharmacology seminar. "Regulation of the Developmental Transition From Embryogenesis to Seed Germination." Tuan-Hua David Ho, prof. of biology. The Philip Needleman Library, Room 3907 South Bldg. 362-2725.

Noon. Neuroscience/neurological surgery research seminar. "Presenilins: Their Role in Alzheimer's Disease and Development." Alison Goate, assoc. prof. of genetics and of psychiatry. Schwarz Aud., first floor, Maternity Bldg. 362-3362.

Noon-1 p.m. Work, Families and Public Policy Brown Bag Seminar Series. "How and Why Family Structure Affects Children." Donna Ginther, asst. prof. of economics. Room 300 Eliot Hall. 935-4918.

2:15 p.m. Condensed matter sciences seminar. "Adventures in Flatland." Robert H. Austin, prof. of physics. Room 241 Compton Hall (coffee 2 p.m.). 935-6276.

4 p.m. Biology seminar. "Bacterial Genes Induced Within the Nodule During the Rhizobium-Legume Symbiosis." Valerie Oke, biological sciences dept., Stanford U. Room 322 Rebstock Hall. 935-6860.

4 p.m. Immunology Research Seminar Series. "Immune Memory to Viruses." Rafi Ahmed, Emory Vaccine Center, Emory U. School of Medicine, Ga. Eric P. Newman Education Center. 362-2763.

6:30 p.m. School of Architecture Monday Night Lecture Series. "Dances With Trees: A British Architect Builds in Japan." Tom Heneghan, the Ruth and Norman Moore Visiting Professor. Steinberg Hall Aud. 935-4636.

Trivializing the court

Political scientists Epstein, Knight to give lecture Feb. 24

Lee Epstein and Jack Knight, two members of the Department of Political Science in Arts and Sciences, will deliver an Assembly Series lecture titled "The Trivialization of the Supreme Court" at 11 a.m. Wednesday, Feb. 24, in Graham Chapel. The lecture is free and open to the public.

Epstein and Knight have collaborated on a number of articles and are the co-authors of the recently published book "The Choices Justices Make." The book won the 1998 C. Herman Pritchett Award, presented by the American Political Science Association's Law and Courts Section.

Epstein is the Mallinckrodt Distinguished University Professor and chair of the political science department. Her research interests include constitutional law, public interest law groups and the political aspects of the U.S. court system.

She has authored or co-authored a number of books, including "Constitutional Law for a Changing America," "Conservatives in Court" and "The Supreme Court and Legal Change: Abortion and the Death Penalty." Epstein also has published articles in the American Journal of Political Science, Journal of Politics, Social Science Quarterly and the Harvard Journal of Law and Public Policy, among others. She currently serves as vice president of the Midwest Political Science Association, and from 1987 to 1996, she



Epstein and Knight: Co-authors of award-winning book on Supreme Court

Assembly Series

Who Lee Epstein, Jack Knight

Where Graham Chapel

When 11 a.m. Wednesday, Feb. 24

Admission Free and open to the public

was on the board of overseers for the National Science Foundation's Project on the Supreme Court. In 1997, Epstein's research was featured in a Chronicle of Higher Education article.

Epstein has taught at the University since 1991. She was a member of the faculty at Southern Methodist University from 1986 to 1991 and at Emory University from 1983 to 1986.

She earned a bachelor's degree in sociology and political science from Emory, graduating with high honors in 1980. She then earned both master's and doctoral degrees in political science, also

from Emory, in 1982 and 1983.

Knight is an associate professor of political science, resident fellow in the Center for Political Economy and a member of the Committee on Social Thought and Analysis at the University. His primary areas of interest are modern social and political theory, political economy, law and jurisprudence, institutions and organizations, and the philosophy of social science. His publications include the books "Institutions and Social Conflict" and "Explaining Social Institutions" (with Itai Sened), as well as articles in various journals and edited volumes. Knight serves on the editorial boards of Rationality and Society and the American Journal of Political Science.

Knight has taught at Washington University since 1993 and currently serves as associate chair and director of graduate studies for the department. Previously, he was an instructor at the University of Chicago and the University of Michigan.

He earned a bachelor's degree, double majoring in English literature and religious studies, and a J.D. from the University of North Carolina at Chapel Hill in 1974 and 1977, respectively. Knight earned a master's in 1980 and a Ph.D. in 1989 from the University of Chicago.

For more information, call 935-5285.

Tuesday, Feb. 23

Noon. Biology seminar. "Life Within the Nodule: How Do R. Meliloti Cells Differentiate Into Nitrogen-fixing Bacteroids?" Valerie Oke, biological sciences dept., Stanford U. Room 212 McDonnell Hall (Hilltop Campus). 935-6860.

Noon. Molecular Microbiology and Microbial Pathogenesis Seminar Series. "HIV-1 Vpr and Nuclear Transport." Marie Vodicka, post-doctoral fellow, Fred Hutchinson Cancer Research Center, Seattle. Cori Aud., 4565 McKinley Ave. 362-8873.

12:10-12:55 p.m. Physical therapy research seminar. "Interventions to Reduce Back Injuries for Orderlies." Paul Bohr, instructor, occupational therapy. Classroom C, lower level, 4444 Forest Park Blvd. 286-1400.

4 p.m. Afro and African-American studies lecture. "Crowd, Machine and Whore — Some Motifs in the Music of Black South African Migrant Workers." Veit Erlmann, chair of music history and prof. of ethnomusicology and anthropology, U. of Texas, Austin. Room 103 Eads Hall. 935-5690.

4 p.m. Anthropology Colloquium Series. "Rediscovering Mabokopithecus: New Evidence for the African Ancestry of European Oreopithecus." Brenda Benefit, assoc. prof. of anthropology, S. Ill. U.-Carbondale. Room 229 Prince Hall. 935-5231.

4 p.m. Computational neuroscience seminar. "Computational Neuroscience for Physicists and Engineers." Charles Anderson, research prof. of neurobiology. Room 241 Compton Hall. 362-3364.

4:30 p.m. Mathematics seminar. "Actuarial Careers." Ken Vogl, Towers Perrin, Clayton, Mo. Room 113 Cupples I Hall (tea 4 p.m. Room 200 Cupples I Hall). 935-6737.

Wednesday, Feb. 24

8 a.m. Obstetrics and Gynecology Grand Rounds. "Venus Thromboembolism in Pregnancy." Jan Albrecht, asst. prof. of obstetrics and gynecology. Clopton Aud. 362-1016.

11 a.m. Assembly Series. "The Trivialization of the U.S. Supreme Court." Lee Epstein, the Edward Mallinckrodt Distinguished University Professor of Political Science, and Jack Knight, assoc. prof. of political science. Graham Chapel. 935-5285. *See story on page 4.*

11:50 a.m. Continuing Education AIDS lecture. "Adherence to HIV Therapies: HIV Treatment and Prevention Issues." Fredrick L. Altice, Yale U. Cost: \$10 (box lunch provided). Room A, second floor, Eric P. Newman Education Center. To register, call 362-2418.

3:45 p.m. Physics colloquium. "From Insulator to Superconductor With Hot and Cold Neutrons." Gabriel Aeppli, NEC Research Institute Inc., Princeton, N. J. Room 204 Crow Hall (coffee 3:30 p.m., Room 241 Compton Hall). 935-6276.

4 p.m. Career Center workshop. "Interviewing Techniques." Nancy Sutherland, asst. dir. for experimental learning. Room 150 Umrat Hall. 935-5930.

4 p.m. Geometry seminar. "Willmore Surface in R⁴, I." Ulrich Pinkall, prof., Technische U., Germany. Room 207 Cupples I Hall. 935-4653.

Thursday, Feb. 25

11:35 a.m. Systems science and mathematics seminar. "An Integer Programming Model for Vaccine Procurement and Delivery for Childhood Immunization: A Pilot Study." Edward C. Sewell, prof. of mathematics and statistics, S. Ill. U. at Edwardsville. Room 101 Cupples II Hall. 935-6001.

Noon. Genetics seminar. "Mammalian Female Meiosis: Not Playing by the Rules Can Be Dangerous." Patricia A. Hunt, genetics dept., Case Western Reserve U., Cleveland. Room 823 Genetics Library. 362-7072.

1 p.m. Center for Mental Health Service Research seminar. "Screening for Mental Health Disorders in Primary Care and Other Real World Settings." Janet Williams, prof. of clinical psychology, Columbia U. College of Physicians and Surgeons and research scientist, New York State Psychiatric Institute. Room G39 Goldfarb Hall. 935-5687.

4 p.m. Biology seminar. "Evolution of Axial Patterning in the Metazoa: Insights From Outgroups." John Finnerty, organismal biology and anatomy dept., U. of Chicago. Room 322 Rebstock Hall. 935-6860.

4 p.m. Earth and planetary sciences colloquium. "Minerals and Life Forms." Catherine Skinner, research affiliate, geology and geophysics, Yale U. Room 112 Wilson Hall. 935-5603.

4:15 p.m. Philosophy lecture. "Democracy Electoral and Contestatory." Philip Pettit, prof. of philosophy, Australia National U. and Columbia U. Room 100 Busch Hall. 935-6670.

4:30 p.m. Roever colloquium. "Quaternionic Algebraic Geometry and Differential Geometry of Surfaces." Ulrich

Pinkall, prof., Technische U., Germany. Room 199 Cupples I Hall (tea 4 p.m., Room 200 Cupples I Hall). 935-6760.

Friday, Feb. 26

9:15 a.m. Pediatric Grand Rounds. "Vascular Birthmarks: Advances in Understanding and Management." Larry F. Eichenfield, chief and assoc. prof. of pediatric and adolescent dermatology, Children's Hosp., San Diego School of Medicine, Calif. Clopton Aud., 4950 Children's Place. 454-6006.

10 a.m. School of Law's Public Interest Law Speakers Series. "Corporate Law Firms and the Perversion of Justice: What Public Interest Lawyers Can Do About It." Ralph Nader, consumer advocate. W.L. Hadley Griffin Student Commons, Anheuser-Busch Hall. 935-4958. *See story on page 6.*

1 p.m. Biology seminar "Reconstructing an Ancient Legacy: A Research Program in Pre-Cambrian Developmental Evolution." John Finnerty, organismal biology and anatomy dept., U. of Chicago. Room 322 Rebstock Hall. 935-6860.

Saturday, Feb. 27

8 a.m. Continuing Medical Education program. "The Spine: Skull to Sacrum/Birth to Old Age" (for primary care physicians). Eric P. Newman Education Center. For information and to register, call 362-6891.

9 a.m. Saturday morning neural sciences seminar. "Series: Neurophilosophical Investigations: Consciousness Meets Neurobiology: What Exactly is a Sensory Modality, Anyway?" Brian Keely, philosophy dept. Erlanger Aud. 362-3365.

11 a.m. University College Saturday Seminar Lecture Series. "Looking Forward by Looking Back." Michael W. Friedlander, prof. emeritus of physics. Goldfarb Aud. 935-6788.

Music**Friday, Feb. 19**

8 p.m. OVATIONS! Series performance. Philip Glass, solo piano. Cost: \$23. Edison Theatre. 935-6543.

**Saturday, Feb. 20**

8 p.m. Senior honors recital. "A Cycle of Song Cycles." Music of Martinu, Vaughn Williams, Schumann and Ibert. Nathan Ruggles, baritone, and Henry Palkes, piano. Graham Chapel. 935-4841.

Sunday, Feb. 21

3 p.m. WU Symphony Orchestra performance. Music of Wagner, von Weber, Fauré and Bloch. Dan Presgrave, dir., Deborah Barta, soloist. Holmes Lounge. 935-4841.

8 p.m. New Music Circle concert. Min Xiao-Fen, lute. Cost: \$10 general admision; \$6 students and seniors. Steinberg Hall Aud. 781-9314.

Performances**Sunday, Feb. 21**

7 p.m. Association of Black Students/Campus Y's Cultural Celebration performance. "The Black Continuum." Cost: \$6 students and faculty with I.D.; \$8 general admission. Edison Theatre. 935-5650.

Friday, Feb. 26

8 p.m. OVATIONS! Series performance. "Rhythm in Shoes." Keith Terry, percussionist and rhythm dancer. (Also Feb. 27, same time). Cost: Adults \$23, children \$12, second child free. Edison Theatre. 935-6543. *See story on page 4.*

Miscellany**Thursday, Feb. 18**

7:30 p.m. Campus Y's Cultural Celebration. "Disabilities Awareness Fair." Friedman Lounge. 935-8365 or 721-3403.

Sports**Wednesday, Feb. 24**

5 p.m. Women's basketball team vs. U. of Chicago. Field House. 935-5220.

7 p.m. Men's basketball team vs. U. of Chicago. Field House. 935-5220.

Saturday, Feb. 27

1 p.m. Men's baseball team vs. Buena Vista U. Kelly Field. 935-5220.

Fashion students to preview work

BY LIAM OTTEN

Gluttony may well be a sin, but who could resist such food-for-the-eye as a beautiful gown or a hand-crafted jacket? Certainly not the fashion design students at the University's School of Art, who will present their latest couture confections — based on the twin themes "candy" and "the seven deadly sins" — at the school's annual "Gowns in the Gallery" exhibition Wednesday, Feb. 24. The one-night-only exhibition begins at 7 p.m. in the University's Gallery of Art.

The junior and senior designers will present both ball gowns and ready-to-wear jackets and will be on hand to discuss finer points of their work, such as color choices and construction details. The show also will provide an early glimpse of this year's

'Gowns in the Gallery'

Where Gallery of Art

When 7 p.m. Wednesday, Feb. 24

Admission Free and open to the public

Washington University Fashion Show, a full-blown Paris-style extravaganza of haute couture that takes place May 2 at the Saint Louis Galleria. The theme for that show will be "Sevens" — as in lucky seven, seven days of the week — in recognition of the show's 70th anniversary.

Both the full-scale fashion show and the more intimate gallery show provide valuable professional experience for young designers preparing to launch careers in the fashion industry, said Jeigh Singleton, a well-known designer and head of the University's fashion design program.

"'Gowns in the Gallery' gives students a chance to explain and promote their work on a face-to-face basis," Singleton said, adding that, in the fashion world, many



JOE ANGELES

A wedding dress designed by senior Nada Tindall in the School of Art's Fashion Design Program is shown by model Paris Caldwell. The gown, inspired by Hershey's Kisses, will be on display at 7 p.m. Wednesday, Feb. 24, as part of the show "Gowns in the Gallery," which takes place in the Gallery of Art.

buyers will consider a designer's work in that sort of setting.

"Most people in the business talk about clothes more than they show clothes on models on the runway," Singleton explained. "The gallery show gives students an opportunity to talk about the ideas and concepts behind the dresses."

Singleton added that he teaches his students not to simply trail the fashion industry

pack, but to anticipate trends and, when they can, to set them.

"We're not slaves to what's going on in Paris and New York," Singleton said of his students. "We want to be innovative. We want to be creative. We want to be different. That's what sets us apart."

The show is free and open to the public. For more information, call 935-6470.

Sports Section

Women extend streak to 29 games

The women's basketball team, ranked No. 1 in NCAA Division III with a 21-0 record, 10-0 in the University Athletic Association (UAA), extended two winning streaks with home wins over Carnegie Mellon University, 84-55, and Emory University, 83-56, last weekend. The win over Carnegie Mellon gave WU 26 consecutive wins in the WU Field House, the longest home winning streak in school history. With the two wins, the Bears also pushed their overall winning streak to 29 games dating to last season.

Against Carnegie, WU led by only 10 (48-38) with just over 14 minutes remaining, but a 22-4 run by the Red and Green pushed the lead to 70-42 and put the game out of reach. Juniors Alia Fischer and Sue Tucker shared team-high honors with 15 points each, and fellow junior Emily Harold scored 11 points, grabbed seven rebounds and dished five assists.

Against Emory, Washington U. led 43-32 at halftime, but opened the second stanza on a 19-4 run for a 26-point cushion. Fischer scored 12 points and pulled down a season-high 14 rebounds, while sophomore Tasha Rodgers scored 12 points and Harold tallied 11 points and five assists. Washington U. is back on the road with games at Brandeis University and New York University this weekend.

A sweep of the two games would guarantee WU at least a share of its ninth UAA title in 12 years and lock up an automatic berth to its 11th NCAA tournament.

Men's basketball splits home games

The men's basketball team split a pair of home games last weekend, but held on to its lead in the UAA. The Bears, who lead the University of Chicago by one game with four games remaining in the regular season, defeated Carnegie Mellon University 89-61 Friday, Feb. 12, before Emory University upset the Bears Sunday, Feb. 14, 82-78. In the loss to Emory, sophomore forward Chris Alexander hit 12 of 23 field goals, including 3-of-3 from three-point range, for a career-high 34 points. In the victory over Carnegie Mellon, junior forward Dave DeGreeff tied for game-high honors with 16 points and blocked two shots. He also eclipsed the Washington single-game rebounding record with 22 rebounds. The mark stood for 30 years and was held, in part, by current Bear coach Mark Edwards.

Track and Field sets six records

The men's and women's track and field teams posted numerous impressive individual performances at the Southern Illinois University-Carbondale Saluki/USA Open last weekend in Carbondale. Senior Emily Richard

led a group of seven athletes that broke school records by winning the 5,000 meters with a time of 17 minutes, 13.50 seconds. The time, which was 14 seconds better than her previous personal best, automatically qualified her for next month's NCAA championships and represents the second-fastest time in the country so far this season. On the men's side, freshman Travis Deutman clocked a 4:24.46 in the mile run to set a new school mark, and senior Richard Greene ran an 8.56 in the 60-meter hurdles to eclipse the school record.

Men's tennis opens

The men's tennis team opened its 1999 spring season last weekend with a pair of victories in Iowa. The Bears (2-0) defeated Coe College and Grinnell College by identical 6-1 scores. Junior Arun Nanjappa won a pair of matches during the weekend. In the win over Coe College, Nanjappa, ranked No. 34 by the Intercollegiate Tennis Association in its Fall 1998 rankings and playing at number-two singles, defeated No. 26-ranked Kevin O'Donnell, 6-4, 7-6 (7-4). In the victory Saturday over Grinnell College, Nanjappa topped Felipe Bautista at number-two singles, 6-4, 6-5. Nanjappa also won both of his doubles matches at No. 3 doubles.



Natalie Kettner enjoys Fontainebleau Castle just outside Paris during her junior year abroad under a program offered by the Office of International Studies and Overseas Programs in Arts and Sciences.

Abroad

New road map directs students studying abroad

— from page 1

"It was intimidating at first," she admitted, recalling her early days sitting mum at the University of Toulouse. "I would just sit in my seat and listen. But, soon, I told myself that every time I felt uncomfortable, it was good for me. It meant that I was forcing myself to be better. At first it felt like I was pretending. But by the end of the year, it just started coming out French."

Those who track in Kettner's footsteps to France — as well as the other University-sponsored destinations — will have a new road map to follow, according to Booker. The task force recently made several belt-tightening changes, designed to ensure academic quality and fiscal responsibility. The regulations, which go into effect for the freshman class entering in the fall of 1999, include the following:

- Students may earn full academic credit for study abroad only if they participate in Washington University programs. Further, the goal is to award Washington University grades, and not just credit, for all programs of study abroad.
- Except in rare circumstances, students will study abroad during their junior year.
- Students must declare a major before studying abroad.
- As part of the application

procedure, students must submit a plan of study that includes identifying a project and submitting a formal proposal as well as providing a list of courses to be undertaken while abroad.

- Students must communicate regularly with their advisers while abroad and report to them upon return, providing supporting materials to indicate their success in the designated projects.

- After returning to Washington University, by the first day of classes of the next semester each student must submit a project or portfolio of work completed while abroad.

"Until this year, we've had some students running off to programs of their own choice, coming back with a transcript in hand, presenting it for transfer credit and having advisers trying to figure out where this credit was going to fit," Booker said. "Now, we're requiring upfront planning for that and upfront advising about the risks if you end up in a non-Washington University program that is not academically or logistically sound."

"It's no longer 'I want to go to Australia,'" he said. "It's more, 'I want to do a psychology program — oh good, you have one in Australia.'"

Further faculty involvement is also an enhanced feature. Each department must now designate a study abroad adviser who, in consultation with departmental colleagues, will develop policies and guidelines relevant to their field and discipline. In addition, a Study Abroad Advisory Board

will be formed to assist in reviewing existing and potential programs.

The cost of doing business also has changed. Beginning when the incoming freshman class participates in the fall of 2001, tuition and fees for all study abroad programs will be equivalent to University on-campus totals. The current price structure varies greatly, depending upon the program.

"Out of the higher revenue we will support much more faculty involvement, more funds for program development, review and redesign, as well as some funds for scholarship support," Booker explained.

Cost issues don't alter Kettner's bottom line. "It's a cliché to say that travel opens up your horizons, but it completely does," she said. "It's so easy to get sucked into our own little world. Overall, it was an incredible experience. I think it's an important part of any education."

Ralph Nader giving lecture in 'Access to Justice' series

Renowned consumer advocate Ralph Nader will deliver a lecture on "Corporate Law Firms and the Perversion of Justice: What Public Interest Lawyers Can Do About It," at 10 a.m. Feb. 26 in the W.L. Hadley Griffin Student Commons, Anheuser-Busch Hall. The lecture is part of the School of Law's Public Interest Law Speakers Series on "Access to Justice: The Social Responsibility of Lawyers."

Founder of both the Center for the Study of Responsive Law and the Consumer Project on Technology, Nader was honored by Time magazine as one of the 100 most influential Americans in the 20th century. After beginning his career as a lawyer in Washington, D.C., Nader has spent more than 30 years championing the rights of

consumers from automobile safety to clean water standards, food labeling standards, workplace safety and environmental issues.

Nader's crusade for the public good has involved challenges to corporations, government agencies and institutions, as he has sought to rectify waste, corruption and fraud. Among his achievements, Nader is credited with helping to bring about the federal Water Safety Act and the Freedom of Information Act. He also has worked toward positive change in world trade, health care, the insurance industry and senior and women's rights.

Seating for the lecture will be on a first-come, first-served basis. For more information, call 935-4958.

Emergency

University prepares for varied disasters

— from page 1

food and water to the campus community for several days, and there are things we need to keep on hand," Hoffner said. "Assuming we had to have food shipped from the outside, we have a supplier list and designated areas for helicopters to land listed in the plan."

The provisions list includes, among many other items: 1,200 gallons of bottled water, 1,500 pounds of peanut butter, 12,000 servings of canned meat, 200 gallons of canned milk and 20 cases of chocolate candy.

The plan also contains a vendor list for everything from batteries and bullhorns to tents and toilet paper.

The plan has recommendations for a three- to four-day earthquake survival pack with bedding, food and first aid items

and the order in which they should be packed into a water-proof barrel.

The University's Emergency Support Team's medical duties are outlined in the plan, including triage and the tagging of patients based on priority level.

Each year all residential life staff will receive emergency preparedness and response training as part of their orientation, and student orientation also will include emergency procedures.

A 16-person planning committee headed by Hoffner developed the plan. "It's been a major effort," he said. "When we got started I had no idea it would be this involved. It's hard to prepare for something that you don't know the extent of — whether it's going to be only a few buildings affected or the entire area."

"The overriding goal of this effort," he added, "has been to increase awareness. People here that are not from the Midwest don't know what a tornado siren is when it sounds."

Exchange

MBA students consult with Furniture Exchange

— from page 1

caring, efficient and creative," said Harriet K. Switzer, Ph.D., University coordinator of the Women's Society and secretary to the Board of Trustees. "We give them an A+."

During the team's weeklong effort on the plan, they conducted a student survey and were surprised to discover that less than 20 percent had heard of the business, located at 6551 University Drive, at the north end of the Millbrook overpass.

The solution: a website with links to appropriate sites, information in students' welcoming packets, advertisements in Student Life and campus fliers.

"Working with the Taylor Community Consulting Program

was a win-win situation — students helping the Women's Society to improve its service to students, in order to provide increased scholarship dollars," said society president Mary Behnke.

The Taylor program was funded by employees of Enterprise Rent-A-Car in honor of Jack Taylor, the company's founder, and his son, Andy Taylor, the company's president.

Besides increasing awareness, the student team looked at three other areas for improvements — administration, donations and operations.

Instead of seeking one volunteer to serve as exchange chairperson, the team suggested splitting the chairperson's duties among three co-chairs, each responsible for one area — marketing, donations or operations. That suggestion also is being implemented.

The co-chair responsible for donations should regularly communicate to the 400 society

members the need for donations, along with advertising in local newspapers and distributing fliers, the team said. Increased donations will reduce expenses on inventory purchases.

Recommended changes in operations include adjusting the store hours throughout the year, especially in non-peak demand times. The plan also proposed offering weekend hours to allow students more access to the business. A work study student has been hired, as suggested, to keep the shop open from 11 a.m. to 4 p.m. on Saturdays.

The team gave advice on pricing as well, including having more than one person determine an item's price.

"I really liked doing this because we got to do all aspects of the business — finances, operations and marketing strategies," MBA student Steve West said. "We got to apply everything we learned in class."

Three cases, using conservative estimates, were presented. The best-case scenario shows a \$22,221 annual profit for fiscal year 2000 with an additional 160 customers and 150 more donations.

"The presentation was excellent," said society member Julia Rapp. "It's a comprehensive plan that I think will bring in our volunteers and focus us on the actions we need to take to make this a profitable enterprise."

The Women's Society operates The Bear Necessities gift shop in Wohl Student Center as well. Shop proceeds help fund an annual full-tuition scholarship through the society's Elizabeth Gray Danforth Scholarship Endowment.

Employment

Use the World Wide Web to obtain complete job descriptions. Go to cf6000.wustl.edu/hr/home (Hilltop) or 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.

Administrative Assistant 990119
Director, Arts and Sciences Annual Fund/Director of Development, Olin Library 990120
Researcher 990122
Switchboard Operator (part time) 990143
Administrative Assistant 990144
Apartment Referral Service Coordinator 990145
Public Service Coordinator (part time) 990152
Associate Director, Annual Giving Programs 990156

Secretary 990157
Earth and Planetary Sciences Library Assistant 990158
Director of Executive Education Programs 990159
Associate Dean and Director, Weston Career Resources Center 990160
Administrative Secretary (part time) 990162
LAN Engineer 990167
Library Technical Assistant (Serials) 990168
Private Grant Specialist 990169
Publications Editor 990170
Information Technology Manager 990171
Residential College Director 990172
Department Secretary 990173
Administrative Assistant 990175

Administrative Secretary (part time) 990177
Department Secretary 990179
Personal Computing Support Specialist 990182
Senior Shelving Assistant 990185
Deputized Police Officer 990186
Publications Editor/Writer 990187
Administrative Coordinator 990188
Assistant Director of Development, School of Business 990189
Department Secretary 990190
Retirement Benefits Manager 990191
Coordinator, Experiential Learning Program 990192
Shelving Assistant 990198
Assistant Manager (part time) 990200

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.

Technician 990584
Technician 990610
Secretary/Receptionist (part time) 990881
Reimbursement Supervisor 990939
Data Analyst 990943
Surgical Coding Coordinator 990956
Financial Operations Manager 990959
Lab Technician 991002
Programmer Analyst II 991010
Clinical Therapy Technician 991013

Campus Watch

The following incidents were reported to University Police from Feb. 8-14. 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 Website at rescomp.wustl.edu/~wupd.

Feb. 8

3:14 p.m. — A project superintendent reported that someone stole two two-way radios, valued at \$2,112, from the South 40 construction site.

Feb. 11

4:05 p.m. — A staff member reported that someone stole a double bass fiddle, valued at \$3,500, from Tietjens Hall.

Feb. 14

8:47 a.m. — Bon Appetit employees reported that someone flattened three tires on two food service delivery vehicles at the Wohl Center delivery dock.

University Police also responded to an additional nine theft reports, two public disturbance reports, one fraud report and one report of tampering with a motor vehicle.

Notables

Shirley Dyke receives young scientist and engineer award

By TONY FITZPATRICK

Shirley J. Dyke, Ph.D., assistant professor of civil engineering, received a once-in-a-lifetime award from President Bill Clinton at the White House Feb. 10.

Dyke was one of 60 young scientists and engineers nationwide to receive the Presidential Early Career Award for Scientists and Engineers (PECASE). The presidential honor is the highest bestowed by the U.S. government upon outstanding young scientists and engineers who are in the early stages of their independent research careers.

The awards were given only to researchers who already had received highly competitive funding from other federal funding agencies. Dyke's PECASE achievement followed her 1998 CAREER award from the National Science Foundation (NSF) for research in earthquake hazard mitigation. Dyke was among 20 individuals chosen for that award.

Clinton established the PECASE awards in February 1996 to meet the administration's goals of producing the finest scientists and engineers for the 21st century while maintaining U.S. leadership across the frontiers of scientific research.

Dyke and other PECASE awardees will receive up to \$500,000 over a five-year period to further their research, which supports advances in science for important government missions.

Dyke partook in a ceremony and reception at NSF headquarters in the morning Feb. 10 and a program at the White House in the afternoon. The ceremony presenting her with the PECASE award was in the late afternoon.

"These talented young men and women show exceptional potential for leadership at the frontiers of scientific knowledge," Clinton said. "Their passion for discovery will spark our can-do spirit of technological innovation and move our nation forward and build a better America for the 21st century."

NSF director Rita Colwell said: "These are the 'Golden Globe Awards' for the Albert Einsteins and Marie Curies of tomorrow — our nation's most promising scientists and engineering educators."

Dyke is director of the Structural Control and Earthquake Engineering Laboratory, located in Urbauer Hall, where studies seek ways to reduce losses and property damage from earthquakes.



Dyke: Receives White House award

She will use PECASE funding to incorporate the laboratory facilities into studies and curriculum development to understand the dynamic nature of structures through illustrative experiments, state-of-the-art research projects and "hands-on" experiments.

The goal of the research is to develop guidelines that design engineers can use to employ damping devices tested in the laboratory in new construction and retrofit applications. The damping devices use magnetorheological fluids that have the ability to change from a liquid to a semi-solid when a magnetic field is applied.

Dyke joined the University faculty in September 1996 after receiving a doctorate in civil engineering that year from Notre Dame University. She received a bachelor's degree in aerospace engineering in 1991 from the University of Illinois, Urbana-Champaign.

Of note

Peter M.J. Burgers, Ph.D., professor of biochemistry and molecular biophysics, recently received a four-year \$656,204 grant from the National Institute of General Medical Sciences for a project titled "Structure-function of Yeast DNA Polymerase Delta." ...

Morton E. Smith, M.D., professor emeritus of ophthalmology and of pathology and associate dean emeritus at the School of Medicine, has been named chairman of the board of directors of the American Board of Ophthalmology for 1999.

Speaking of

Shirley K. Baker, vice chancellor for information technology and

dean of University Libraries, recently gave the keynote address at the American Library Association symposium on "New Directions in Resource Sharing." The symposium was sponsored by the Association of Research Libraries and Online Computer Library Center, a nonprofit library service and research organization. ...

Clifford M. Will, Ph.D., professor and chair of physics in Arts and Sciences, will deliver a lecture titled "Einstein's Relativity Put to Nature's Test: A Centennial Perspective" during the meeting of the American Physical Society in March in Atlanta. The invited lecture is part of a series of special symposia organized to celebrate the centennial of the society at a meeting being billed as the largest physics conference ever held in North America. Will also has been named to a three-year term as an

associate editor of Physical Review D, the section of the American Physical Society's flagship journal devoted to particles, fields, gravitation and cosmology.

To press

Tony H. Chang, recently promoted to head of the East Asian Departmental Library, has just published "China During the Cultural Revolution, 1966-1976: A Selected Bibliography of English Language Works." The book provides a general overview of literature on the Chinese Cultural Revolution and its impact on China. With more than 1,000 entries, it includes books, monographs, dissertations and audio-visual materials on a broad range of topics.

New head volleyball coach appointed

By KEVIN BERGQUIST

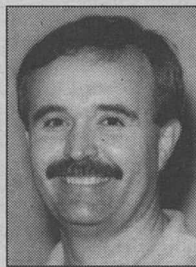
Rich Luenemann, the head volleyball coach the last 18 years at the University of St. Francis in Joliet, Ill., has been named head volleyball coach, according to John Schael, director of athletics.

Luenemann replaces Teri Clemens, who retired at the end of the 1998 season after 14 seasons as coach of the Bears. She left the program as the winningest coach in NCAA volleyball history by winning percentage (529-77, .873). Washington University has won seven of the last 10 NCAA Division III national championships and 11 of 12 University Athletic Association championships.

"An outstanding coach, teacher and person, Rich will be a valuable addition to the Washington University community," Schael said of the fourth volleyball coach in the 23-year history of the program. "He always strives for a high level of excellence and we are confident he will provide positive leadership

to further enhance the excellence for which Washington University volleyball has been known."

At St. Francis, Luenemann compiled a record of 590-262 (.692) and coached the Fighting Saints to the National Association of Intercollegiate Athletics (NAIA) national tournament seven times.



Luenemann: Won 590 matches at St. Francis

Luenemann's most successful season came in 1990, when he posted a 37-11 record and led St. Francis to a fourth-place national finish. The Saints made their most

recent postseason appearance in 1994, finishing fifth.

"This opportunity is a dream come true," said the 48-year-old Luenemann. "I appreciate the tremendous support Washington University has given to its athletic programs and the confidence it has shown in me to be the leader of the volleyball program heading into

the next millennium. I want my coaching tenure to be the continuation of all the good things Washington University volleyball represents — hard work, enthusiasm and success. We want to contend for the national title every year."

A 1996 inductee into the NAIA's Volleyball Hall of Fame, Luenemann ranks fifth among NAIA coaches in career victories. He was twice named the NAIA's Central Region Coach of the Year (1994, 1996) by the American Volleyball Coaches Association.

A member of the Chicagoland Collegiate Athletic Conference Hall of Fame and the league's coach of the year seven times, Luenemann guided the Fighting Saints to 14 conference titles, including the last 13 in succession.

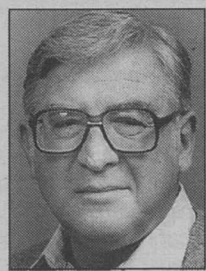
Active in the profession, Luenemann served two terms as the president of the National NAIA Volleyball Coaches.

Luenemann is a native of Litchfield, Ill. He received a bachelor's degree from Eastern Illinois University in 1972 and a master's degree in education from the same institution in 1974.

News Analysis

News Analysis contains excerpts from the For Expert Comment service. The service, which provides timely faculty comments to media around the world, is distributed by the Office of University Communications.

King Hussein of Jordan leaves impressive legacy, many questions, says Le Vine



Victor T. Le Vine, Ph.D., professor of political science in Arts and Sciences, is an expert on hostages, terrorism,

guerrilla warfare and political problems of the Middle East. A long-time research associate at the University's Center for the Study of Islamic Societies and Civilizations, he is president of the Center for International Understanding, a non-profit organization that co-sponsors peace conferences. Here, Le Vine comments on the political ramifications following the death of King Hussein of Jordan:

"King Hussein will be remembered for his extraordinary courage," Le Vine said. "This is a man who put himself and his country on the line in trying to further the peace process. His presence at the signing of the Wye Plantation Agreement — rising as he

did from his sickbed to attend that — was a mark of the man's courage. He was a moderate ruler in a region where moderate rulers are an exception rather than the rule. A pragmatist, but I think a man dedicated to furthering the cause of Middle East reconciliation and peace.

"The Crown Prince, Abdullah, sounds very much like the king's brother, Prince Hassan, who was the former heir presumptive," added Le Vine. "Insofar as foreign, economic or international policy is concerned, not much is likely to change."

"Jordan remains a very poor country, and it will have as one of its main priorities a continuation of good relations with its neighbors, including Israel, and Israeli/Jordanian relations have been quite good. The Israelis were among the first to personally go see Abdullah and I think future commercial ties between Israel and Jordan promise to increase to the extent that those relations remain good."

"Abdullah, I think, will be a strong supporter of the peace process, as indeed the reports of

his conversations have indicated. Although obviously he cannot be the same vigorous and extraordinary exponent of the peace process as was his father, nevertheless, I think he will try to continue those policies.

"The main internal problem is whether or not Abdullah will succeed in gaining the loyalty of the large Palestinian population of the country. Over 50 percent of Jordanians claim some form of Palestinian identity. They are all citizens of Jordan, but they remain a critical variable in the internal politics of the country. So the new king will have to deal with them and gain their support."

"There has been a certain degree of unease in the country," said Le Vine, noting King Hussein's recent decision to name his son as heir to the throne, as opposed to his brother. "The internal jockeying for position continues, but I think Abdullah is likely to get the loyalty of the country's army, which is critical to the survival of his throne."

Campus Authors

William R. Lowry, Ph.D., associate professor of political science in Arts and Sciences

Preserving Public Lands for the Future: The Politics of Intergenerational Goods

(Georgetown University Press, Washington, D.C., 1998)

Comparing national efforts to preserve public lands, William R. Lowry investigates how effectively and under what conditions governments can provide goods for future generations.

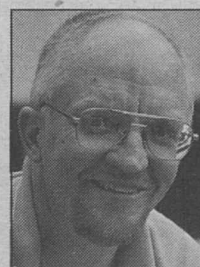
Providing intergenerational goods, ranging from balanced budgets to space programs and natural environments, is particularly challenging because most political incentives reward short-term behavior. Lowry examines the effect of institutional structure on the public delivery of these goods. He offers a theoretical framework accounting for both the necessary conditions — public demand, political stability and official commitment to long-term delivery — and constraining factors — the tensions between public agencies and politicians

as well as between different levels of government — that determine the ability of a nation to achieve long-term goals.

In support of this argument, Lowry evaluates data on park systems from more than 100 countries and provides in-depth case studies of four — the United States, Australia, Canada and Costa Rica — to show how and why the delivery of intergenerational goods can vary.

This extensive comparative analysis of the preservation of public lands offers new insights into the capability of nations to pursue long-term goals.

(Excerpted from the jacket cover.)



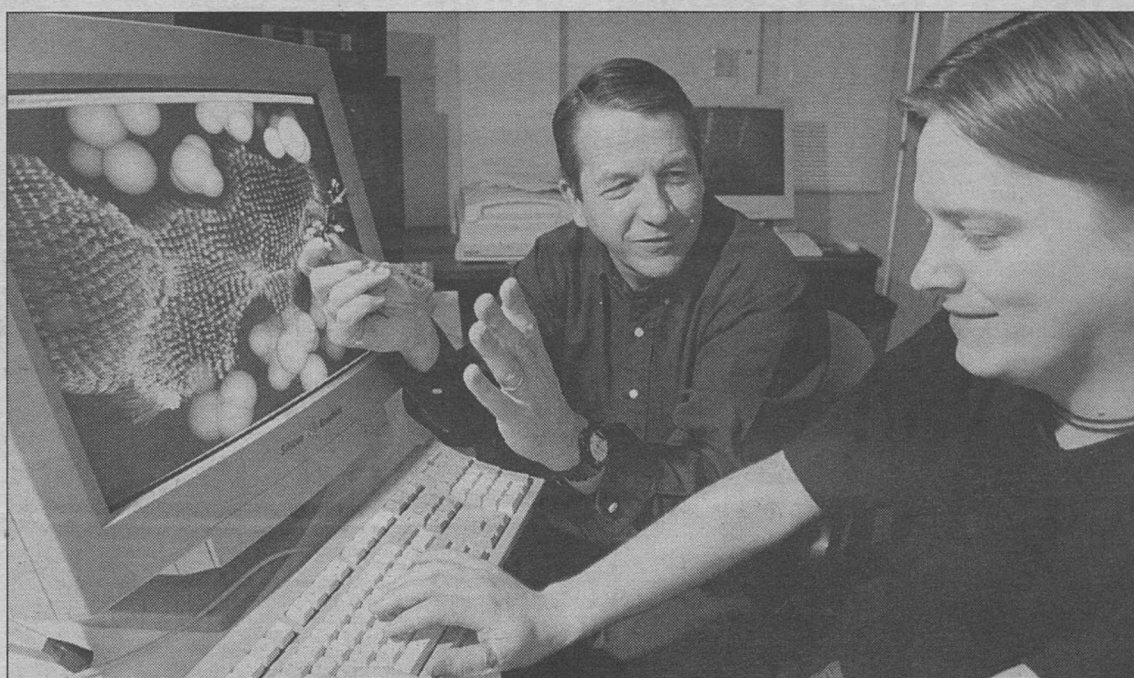
A recent release available at the Campus Bookstore in Mallinckrodt Center on the Hilltop Campus or at the Washington University Medical Bookstore in the Olin Residence Hall. For more information, call 935-5500 (Hilltop Campus) or 362-3240 (Medical Campus).

Washington People

Garland R. Marshall, Ph.D., sees himself as an adolescent trapped in amber, someone whose interests haven't changed since he was young. Once he shook off his working-on-a-nuclear-submarine fantasy, he fixed his periscope on molecules — small molecules that tell cells what to do.

Marshall went to graduate school to become a neurophysiologist, but now he's a medicinal chemist, interested in drug design. He doesn't want simply to find a cure for AIDS or a better malaria drug, however. "I'm much more interested in eliminating bottlenecks in the process of developing therapeutics," he said.

In the process, he has become known for his work on peptides — medically important strings of amino acids. "He is one of the major figures in peptide research in the second half of the century," said Ralph F. Hirschmann, Ph.D.,



Garland Marshall, Ph.D., and Andreas Larsson, (right), a visiting graduate student from Umea University in Sweden, manipulate a model of an enzyme from the AIDS virus.

Opening up bottlenecks in drug development

Garland Marshall pioneers ways to find new therapeutics

By LINDA SAGE

former senior vice president at Merck & Co. and now the Makineni Professor of Bioorganic Chemistry at the University of Pennsylvania. "He is one of the pioneers of conformational analysis of peptides. He also is a delightful person with very high integrity."

Marshall grew up in "most of Texas," hitting 14 schools in 12 years while his father looked for the perfect job. After majoring in biology at the California Institute of Technology in 1962, he moved to The Rockefeller University in New York, where he became fascinated with the workings of neurotransmitters — small molecules that carry messages between nerve cells. "I was interested in how a small molecule can make a change in the properties of a big molecule," he said. "And I'm still interested in the same thing."

Flexible molecules

At Rockefeller, Marshall studied with R. Bruce Merrifield, Ph.D., who would become the 1984 Nobel laureate in chemistry for developing ways to synthesize peptides on a solid matrix. This advance enabled researchers to study the relationships between peptide structure and activity. "Because I had this technology under my belt, I was arrogant enough to think we could determine how peptide messengers work within a year or two," Marshall said. "But I quickly found out that the molecules we were studying are flexible."

Neurotransmitters — and other information-carriers in the body — act like keys that "unlock" large molecules on the surfaces of cells, activating a chain of events that alters the cell's activity. Insulin, for example, tells cells to take in more

glucose and amino acids. Many medications mimic molecules that give orders to cells, but they have to be the right shape to fit into one of the cell's locks. So if a small molecule is flexible, as is usually the case, drug designers have to find out which of the thousands to millions of shapes the key can assume allow it to slip into the lock.

Novel approach

In 1967, the year after he moved to the School of Medicine, Marshall adopted a novel approach to this problem. Turning to the simple computers that were available at that time, he developed software that could display both keys and locks. Because the molecular images could be rotated, researchers could see how they would or would not fit together. The idea was to allow drug designers to assess thousands of compounds for potential activity before testing promising ones in the lab.

Computers at that time were about as powerful as digital watches, and there were no graphical interfaces or laser printers. "Garland started almost from scratch to develop computational methods to analyze peptide structure, conformation and interactions," said George W. Gokel, Ph.D., professor of molecular biology and pharmacology. "The community owes a good deal to him and colleagues who were pioneers in this area when it was a hard thing to do."

In 1979, Marshall founded a company called Tripos to commercialize the molecular modeling software. "If I see something that

obviously needs to be done and no one does it, I get impatient," he said. "We were convinced that we had very useful drug development tools, but no one was willing to make the commitment to support and improve them."

Computer-aided drug design now is commonplace, thanks to companies such as Tripos. "There are still some rough edges," Marshall said, "but there also is excitement in the field because these techniques really are becoming predictive."

Marshall bowed out of Tripos after the company merged with a computer graphics hardware firm in 1987. And he vowed, because of the time involved, never to start a company again. Instead, he threw

"This is probably the most exciting time you could ever dream of being a scientist."

GARLAND MARSHALL

himself into the problem of HIV drug development. The virus that causes AIDS uses an enzyme called a protease for reproduction, and the enzyme has a critical sequence of three amino acids. Therefore, blocking this sequence would be likely to prevent the protease from working. But scientists didn't know the shape of the lock into which an inhibitor would have to fit.

Marshall and his colleagues solved this problem in 1989 by crystallizing the protease with an inhibitor and obtaining the first structure of such a complex. "That stimulated all of my competitors — the major pharmaceutical companies — to turn their chemists loose on the problem," he said. "And they eliminated us as competitors very fast." The ultimate outcome of this research was the development of the protease inhibitors that now are saving many AIDS patients' lives.

Despite himself, Marshall founded another company in 1996, and he still is its president and chief scientific officer. MetaPhore focuses on metal ions, making compounds that remove excess metals from the body or transfer them from one compartment to another. The company also synthesizes and tests metal-containing "enzymes."

"I'm schizophrenic about collaborations between academics and industry," Marshall admitted, "because you can't serve two masters, so you have to be very explicit about how you divide your life." For this reason, he now has a partial leave of absence from the School of Medicine.

No matter where he works, though, puzzle solving is what he likes best — "as when a bright person comes in with some experimental or computational results, and you sit down and figure out what the data mean and what should be done next to test the suggested hypothesis," he said.

A major goal

These bright people recently helped Marshall fulfill one of his major research goals: to find a method for determining the shapes of keys in locks of unknown shape. By chemically limiting the number of shapes a peptide could assume, the researchers found out which shape was acceptable to the target molecule. The target was a cell-surface receptor that interacts with the G proteins that convey many types of messages into cells.

About 70 percent of drugs interact with this class of receptor. But the usual methods for determining structure, such as X-ray crystallography, hadn't worked. "We were fortunate

enough to come up with an experiment that allowed us to determine the receptor-bound conformation of a peptide interacting with one of these receptors," Marshall said.

This work could solve a major bottleneck in drug development. Peptide hormones are important chemical messengers, but they can't be taken orally because stomach enzymes break them down. "But once you know the shape, the computer programs we and others have developed can quickly generate thousands of compounds that might be able to bind to the receptor's active site," Marshall said.

He has received many awards during his 32 years of innovative work, but he's most proud of honors from the field he never officially entered. In 1988, the American Chemical Society gave him its Medicinal Chemistry Award and in 1996 he received the Midwest Award from that society. Marshall also was pleased to receive an honorary degree in 1993 from the Polytechnika in Lodz, Poland, in recognition of his impact on young Polish scientists.

For the future, Marshall will keep his periscope sharply focused. "This is probably the most exciting time you could ever dream of being a scientist," he said. "We're sitting at the intersection of revolutions in molecular biology and microelectronics. So when you're looking for therapeutic targets, you can ask questions that would have been impossible 10 years ago. Right now, you wouldn't have to pay me to come to work — but don't tell the dean."

Garland Ross Marshall, Ph.D.

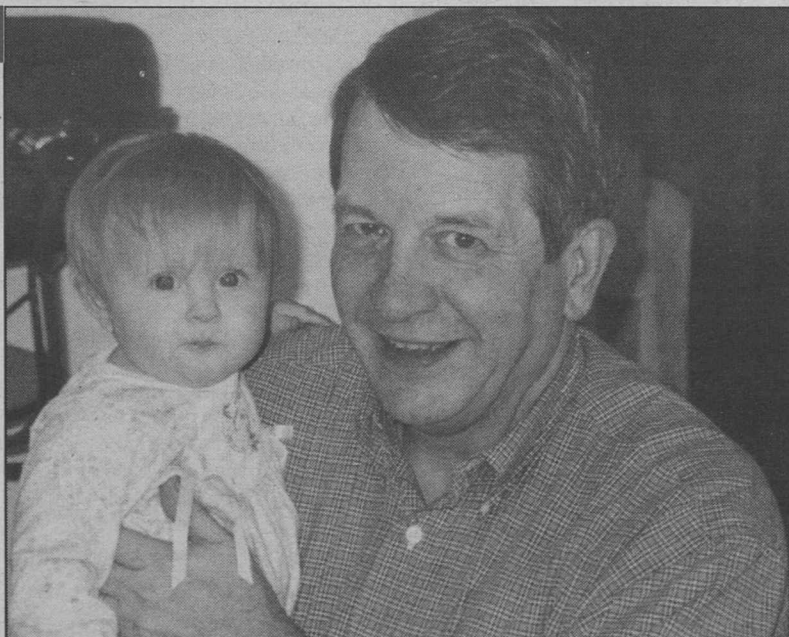
Born San Angelo, Texas

Education California Institute of Technology, B.S., 1962; The Rockefeller University, Ph.D., 1966

University positions Professor of molecular biology and pharmacology, of biochemistry and molecular biophysics, and of biological and biomedical engineering; founder and director, Center for Molecular Design

Family Wife, internationally known quilter Suzanne Marshall; children, Chris, 34; Keith, 31; Melissa, 29; Lee, 27

Hobbies Diving, underwater photography, skiing and spending time with his eight grandchildren



Marshall with his youngest grandchild, Sophia Jacobs, daughter of Washington University medical student Melissa Marshall.