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WASHINGTON
UNIVERSITY
IN ST. LOUIS

Vol. 22 No. 20 Feb. 12, 1998



Second-year social work student Mendy Bucy (center) works with third graders Dajuana Clemons (left) and Tanika Greene at Columbia Accelerated Community Education Center in St. Louis, one of the schools newly involved in the Total Quality Schools program.

Key areas of need for technology upgrades found

Washington University needs to update its technology, integrate its computer databases and provide assistance for training and technical support campuswide in order to improve efficiency and remain competitive, according to reports by the eight Information Technology Planning task forces.

Members of the task forces presented those findings to about 100 people at a Feb. 4 meeting in the Eric P. Newman Education Center. The task forces are: Teaching, Learning and Technology; Linking and Supporting the Student Community; Recruiting Students; Technology Support for Research; Technology for Supporting Alumni and Donor Relations; Technology-based Administration; Library and Information Technology; and Over-the-Horizon Technologies.

The reports are the result of four months of work by 70 task force members of the Information Technology Planning group. In October, the group was charged by Chancellor Mark S. Wrighton with assessing existing technological resources Universitywide, identifying opportunities, setting priorities and establishing needs for the future.

"The future of technology is just as important to the future of universities as the printing press," said Christopher I. Byrnes, Ph.D., dean of the School of Engineering and Applied Science. But Byrnes, leader of the Over-the-Horizon Technologies Task Force, advised proceeding carefully.

"It ought to be technology not for technology's sake," he said. "Whatever we do, it should be to add value and add content." Byrnes recommended partnering with industry and experimenting with new systems on a small scale before taking large steps.

The highest costs of upgrading technology, he said, will not be in acquiring the computers but in the software and the technical people required to maintain the systems.

The commitment of resources is "staggering" at other educational institutions that are implementing technological upgrades, said Richard A. Roloff, executive vice chancellor. Roloff recommended watching other institutions' progress and learning from their successes and failures.

Technological advancement at the University, however, is a necessity, said Roloff, a leader of the Technology-Based Administration Task Force. "We have to take action now," he said. "If we don't, we can see some really difficult problems that are going to be costly."

Many of the recommendations strive to

Continued on page 8

Total Quality Schools program applies management tools to public education

Reading, writing and TQS. The phrase isn't catchy, but the Total Quality Schools approach of applying total quality management (TQM) principles to public schools is catching on in the St. Louis area as two more schools — Columbia Accelerated Community Education Center in the city and University City's Brittany Woods Middle School — join those already associated with the program.

Concepts such as customer focus, leadership and empowerment, continuous process improvement and effecting culture change — long applied at Motorola, Federal Express, Xerox and other corporations — are moving from the boardroom to classrooms in public schools. The vehicle is the Total Quality Schools course offered jointly by the John M. Olin School of Business and the George Warren Brown School of Social Work (GWB).

Through the course, senior undergraduate business students, graduate students in the master of business administration (MBA) degree program and students in the master of social work (MSW) degree program work as a team

with teachers, students, administrators and parents at local schools to make improvements using TQM tools. The University students act as facilitators for partner-school teams, guiding them in using techniques such as data collection, process mapping, affinity diagrams and brainstorming.

"The issues the teams address can be as big as improving discipline and reducing absenteeism or as small as re-engineering the lunchroom line," explained Ashley George Gill, assistant dean and director of external relations at the business school and coordinator of the TQS program. "The overriding goal, however, is to improve the educational process."

Corporations and schools face similar organizational challenges: communication, buy-in and involvement of stakeholders. "It doesn't matter if you're selling computers or trying to teach fifth-grade math," said Gill. "The quality concepts are the same."

The consultant team and its partner-school team take extensive training in TQM, led by Dean Kropp, Ph.D., associate dean and the Dan Broida Professor of

Operations and Manufacturing Management at the business school, and Deborah Paulsrud, lecturer at the social work school. The training includes a session on meeting facilitation led by staff from Ernst & Young LLP and donated by the Ernst & Young firm.

The idea is not so much to find and fix specific issues in schools as to learn a method or framework for continuous improvement. "TQS is not a project," said Paulsrud, who co-teaches the course with Kropp. "It's a way of thinking, believing and behaving."

Brainstorming to find solutions is part of the process, she added, "and students usually learn quickly that it's the people who are part of the system who come up with the best solutions. Student consultants are there to support and facilitate. They're not experts sent in to 'fix' problems."

This semester, there are 27 University students in the course — 12 from GWB and 15 from Olin — and each works in a team with one or two other students. The teams are partnered with one of 11 participating schools, representing six school

Continued on page 8

In this issue ...

New PSA test..... 2

The FDA recommends approval of a screening tool that catches nearly all prostate cancers

Probing the prion 3

David A. Harris, M.D., Ph.D., investigates proteins and their role in deadly neurological diseases

Historically black colleges .. 5

Former Congressman William Gray to speak about America's historically black colleges and universities

Expanding minority contracting on campus is plan's goal

Chancellor Mark S. Wrighton announced Tuesday a new program designed to increase participation of minorities and women on campus construction projects. The program will take effect immediately.

The goal of Washington University is to foster minority and women participation on its construction projects at a level that would reflect the population profile of the St. Louis metropolitan area. According to the most recent census information, the St. Louis region is about 18% minorities and 52% women. Progress toward the goal

will be measured on a regular basis, both in terms of the dollar volume on contracts issued to firms that are minority business enterprises or women business enterprises and by the numbers of minority and women workers on projects.

The program was developed over the past year and stems from recommendations by the Committee to Review Policy and Procedures for Engaging Women and Members of Minority Groups on Washington University Construction Projects, appointed by Wrighton to complete its work in 1997.

"Washington University is committed to providing equal opportunity for all who come to work and study on its campuses," Wrighton said. "This commitment includes undergraduate, graduate and professional student admissions; financial aid; and employment opportunities for faculty and staff and now extends to construction contractors and subcontractors engaged in work for the University."

The following is the official statement released by Washington University:

The University must ensure that construction companies engaged in

Continued on page 6

Medical Update



Lifting more than boxes

Scott D. Minor, Ph.D., (left) assistant professor in the Program in Physical Therapy, helps second-year student Amy Steinberg hoist a 67-pound ratchet, used by barge workers to tighten cables. Minor's ergonomics lab was studying how to lift odd-sized objects.

New test to detect prostate cancer wins recommendation of FDA panel

An advisory panel to the Food and Drug Administration has unanimously recommended approval of a new test for detecting prostate cancer. Researchers say the "free PSA test" — an updated version of the standard PSA test — catches almost all prostate cancers and will be used as an aid to differentiate between prostate cancer and other benign prostate conditions.

"This test will help physicians find the cancer in its early stages, and patients who don't have cancer will be less likely to undergo biopsies," said William Catalona, M.D., professor of surgery and head of the Division of Urologic Surgery at the School of Medicine. Catalona, the first to establish the standard PSA test as a screening tool, was the lead researcher in a recent multi-center trial of the free PSA test. The latter measures the amount of PSA (prostate specific antigen) that floats freely in the blood.

According to the study, the free PSA test detects 95 percent of prostate cancers, and the cancers it misses are likely to be small and not life-threatening. The study also showed that the free PSA test could reduce the number of unnecessary biopsies by 20 percent. Catalona presented the study results to an FDA panel Feb. 2. The recommendation for approval came just five months after the data were submitted for review. The average FDA review time for medical devices has been 26 months until recently, as the FDA has made efforts to decrease review times.

The study, conducted at seven medical centers across the country, involved 773 men between the ages of 50 and 75 who had undergone biopsies to determine whether prostate cancer was present. Before the biopsy, physicians drew blood

samples from each patient and made two different measurements of PSA, a protein that can be mass-produced by a cancerous prostate.

In addition to the standard PSA test, which involves measuring the total amount of PSA in the blood, they measured "free PSA," the percentage of PSA that is not bound to other proteins. Previous studies had shown that PSA produced by cancerous prostates is particularly likely to cling to other proteins. Therefore, a low percentage of free PSA could be a sign of cancer.

Only men who had standard PSA levels between 4 and 10 and unsuspicious digital rectal exams were included in the study. Treatment of such patients has been controversial because they have an intermediate level of risk. These patients generally receive biopsies, but only 30 percent will actually have cancer. Many of the others will have benign prostatic hyperplasia, a common swelling of the prostate that also can make PSA levels rise.

Researchers discovered that almost all of the patients with cancer had free PSA levels that made up less than 25 percent of the total PSA detected. If physicians had biopsied only these patients, they would have caught 95 percent of the tumors and cut down the number of negative biopsies by 20 percent. The small group of patients who had cancer but exceeded the 25 percent cutoff were generally older and had low-grade tumors. "For these patients, the best course of action is often watchful waiting," Catalona said. "The free PSA test helps identify the patients who could really benefit from surgery or other treatments."

Catalona believes physicians should still use the standard PSA test for initial prostate cancer screenings. The patients in the gray area of 4 to 10 should then take the free PSA test instead of automatically undergoing a biopsy, he said.

A prostate biopsy costs about \$1,200, so wide use of the new test could lead to huge savings, Catalona said. It is not known how much the free PSA test, officially called the Tandem Free PSA test, will cost. Like the standard PSA test, the latest version was developed by Hybritech Inc., which funded the free PSA test research.

— Chris Woolston

Traumatic head injury and stroke to be focus of study

A team led by William J. Powers, M.D., an associate professor of neurology and of radiology, has received a five-year \$3.7 million grant from the National Institute of Neurological Disorders and Stroke.

Powers and colleagues will determine whether the brain runs short of oxygen after traumatic head injury or a type of stroke called intracerebral hemorrhage, which results from a burst blood vessel. Brain cells die when they are deprived of oxygen for more than a few minutes, and they cannot be replaced.

"The idea is that if blood flow is reduced so much that insufficient oxygen is delivered to the brain, it might be possible to intervene and prevent some of the subsequent damage," Powers said.

The researchers also will find out whether widely used treatments for the two conditions help or hinder oxygen delivery to the brain.

Little is known about the relationship between oxygen delivery and oxygen need in the brains of people with traumatic head injury or intracerebral hemorrhage because such patients usually are too sick to be moved from intensive care to a PET scanner. PET — positron emission tomography — is the only technique that can simultaneously measure cerebral blood flow and oxygen consumption in different brain regions.

The Medical Center has a PET scanner in its neurointensive care unit, however. Therefore, acutely ill patients can be scanned on site and still receive expert care.

Powers and Michael N. Diring, M.D., an assistant professor of neurology, neurological surgery, anesthesiology and occupational therapy, will study 60 patients with intracerebral hemorrhage, which occurs mainly in middle-aged and older people with uncontrolled high blood pressure.

As well as looking for signs that oxygen delivery is reduced to critically

low levels (ischemia), the researchers will determine whether a common treatment — drugs that treat high blood pressure — protects or harms patients with intracerebral hemorrhage.

The other project may help the 2 million Americans who suffer brain damage each year from automobile accidents, gunshot wounds, beatings and other types of trauma.

Diring and Robert L. Grubb Jr., M.D., the Herbert Lourie Professor of Neurological Surgery and a professor of radiology, will use PET imaging to look for ischemia in 60 head-injured patients. They also will place some of the patients on a ventilator at a faster-than-normal breathing rate, a treatment known as hyperventilation.

Tom O. Videen, Ph.D., a research assistant professor of neurology and of

radiology, also will play a leading role. He heads the project's PET Image Analysis Core, which tests and implements the software for aligning images from PET and CT (computed tomography) scans obtained from different subjects and under different experimental conditions.

Joel S. Perlmuter, M.D., an associate professor of neurology and radiology, and Edward L. Spitznagel Jr., Ph.D., a professor of mathematics in Arts and Sciences and of biostatistics at the School of Medicine, also are involved in the research.

To obtain the federal grant, the researchers had to demonstrate the feasibility of their proposal. Funds for the necessary preliminary studies came from the Lillian Strauss Fund, which was established by Malcolm Strauss and his two daughters in 1974. Mrs. Strauss died of a stroke in 1973 at age 47.

Heather Bossin named shared billing and collection services' executive director

Heather M. Bossin has been named executive director of Washington University Shared Billing and Collection Services (WUSBCS). Lee Fetter, chief operating officer of the Faculty Practice Plan, announced the appointment.

"I am especially pleased that we have been able to attract someone with Heather Bossin's outstanding credentials and experience to assume this challenging position," Fetter said. "She has an impressive track record of both internal and external customer service."

WUSBCS is a joint billing and collection operation designed to better serve both the clinical departments and the patients of the School of Medicine.

In her new position, Bossin will plan, organize and direct the billing and collection activities, reimburse-

ment analysis, department relations and system maintenance. As leader of the WUSBCS management team, Bossin



Heather M. Bossin

will oversee cash flow from clinical services and business operations within WUSBCS.

Since 1994, Bossin has served as a principal at the Medimetrix Group — a nationally recognized consulting

firm in Cleveland that specializes in physician practice management.

Bossin graduated summa cum laude with a bachelor's degree in communication in 1983 from Cleveland State University.

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Washington People

Harris exploring cell biology's frontier

A small band of researchers in the Cancer Research Building lab of David A. Harris, M.D., Ph.D., huddled around a radio this past October to hear maverick researcher Stanley Prusiner talk about winning the Nobel Prize. Just 15 years earlier, Prusiner had raised scientific eyebrows by suggesting that proteins could do more than simply serve as foot soldiers for genetic material thought to cause all infectious diseases. Prusiner suggested that proteins might act themselves, without help from DNA or RNA, to cause deadly neurological diseases such as scrapie in sheep and the infamous mad cow disease, a recently identified variant of Creutzfeldt-Jakob disease. Mad cow disease is thought to be responsible for more than a dozen British deaths since 1996.

Despite the award, major questions remain. No one has determined the function of the normal versions of the proteins, called prions, involved in these diseases, which are known as spongiform encephalopathies for the sponge-like pattern of holes they produce in brain tissue. And the factors triggering metamorphosis of these cell surface proteins into a shape that causes nerve cell death still need to be pinned down.

Harris, an associate professor of cell biology and physiology, has become the leading researcher unraveling the intricate pathways for handling the normal and rogue proteins inside cells. His discoveries not only add weight to Prusiner's theory but also may ultimately shed light on the best ways to prevent malformed prions from developing.

"Harris has made tremendous contributions in the study of prion cell biology, which is an important area for understanding these diseases," said Byron Caughey, Ph.D., a prion researcher and a senior investigator at the Laboratory of Persistent Viral Diseases of the National Institute of Allergy and Infectious Diseases in Hamilton, Mont.

Harris' parents nurtured his early interest in science, helping him set up a laboratory in the corner of the family garage in Los Angeles. A pharmacist uncle provided additional equipment so Harris could perform gall bladder surgery on frogs and other experiments. But a first place prize at a junior high science fair helped clinch Harris' career choice.

"I started to realize that I was pretty good at this — that I could actually get a lot of satisfaction from science," Harris said.

Probing the mysterious prion

After completing an M.D./Ph.D. degree at Columbia University in 1983, he ignored the advice of medical school colleagues to do residency training. He instead chose to pursue research by taking a postdoctoral position in neurobiology at the university. The chance to combine medical and research interests in the study of prions occurred by happenstance after Harris moved to the lab of Gerald Fischbach, M.D., former director of the Washington University School of Medicine's Department of Anatomy and Neurobiology.

Harris joined Fischbach's lab in 1986 to isolate a protein that helped form new connections between neurons and muscle cells. Harris unexpectedly isolated a chicken prion protein as a candidate. But early hopes of its role at neuromuscular junctions fizzled when another protein took the honors. By then, Harris' interest in prions had intensified, and he started a lab in 1990 to study these enigmatic cell surface proteins.

"Prions provided an opportunity to investigate a human disease — but from a very basic, cellular and biochemical level," he said.

Like all proteins, a prion made inside a cell travels through a series of membranous compartments in which its chain of amino acids is folded and modified to create a final, mature protein. Prions, for example, gain a lipid tail on one end that anchors them to cells' outer plasma membrane. What piqued Harris' curiosity was the hypothesis that the disease-causing change in shape results from a glitch somewhere in the processing pathway. The glitch makes prions more rigid and causes them to clump together, clogging up the insides of neurons. Infection results when animals then become exposed to these malformed prions.

To better understand the shape change, Harris' laboratory first looked at how cells handle the normal prion proteins. Experiments in mammalian cell lines revealed

that the outermost third of the protein was cleaved off. The researchers discovered that the cleavage occurred when surface prion proteins re-entered the cell and traveled to acidic, enzyme-filled compartments.

The findings hinted at several possible roles for the protein. The cleaved portion could float off and serve as a chemical signal that binds nearby cells. Or the remaining membrane-bound portion could go back to the surface and capture such chemical signals from other cells.

Studies of the re-entry pathway revealed an addi-

To see if mutated prions were similar to infectious ones, Harris used two biochemical hallmarks that identify infectious prions: the proteins do not dissolve in a detergent solution nor can they be cut by enzymes that slice normal proteins into smaller pieces. Harris' lab found the same characteristics in several mutated mouse prion proteins that cause diseases resembling the human inherited forms.

This not only suggested that the mutated proteins might reveal clues about infectious prion behavior but also lent support to Prusiner's hypothesis that prions could do their dirty work without infectious DNA or RNA.

"All we've done is introduce DNA that encodes this mutant protein into cultured cells," Harris said. "And for the first time ever, we produced a prion molecule from scratch with some characteristics of the infectious form."

Results in mice have added to Harris' excitement. Mice that had been modified to express the mutated genes produced prion proteins with the same two biochemical hallmarks as infectious prions. Harris is waiting to see if the mice develop full-blown spongiform encephalopathies and if their brain tissue can infect other mice.

"If he can generate infectious material, it will be a very, very exciting model for both inherited and infectious forms of disease," Caughey said.

Regardless of whether the connection pans out, Harris' cell culture work has revealed another aspect of mutated prions that might be of significance. Unlike the normal versions, these proteins are tough to cleave off the surface of cultured cells. The finding suggests an important difference in the way the malformed proteins interact with cell membranes.

How soon does this membrane change occur? In one theory, proteins called chaperones that normally help newly formed proteins fold correctly may actually steer prions down the wrong path. In fact, other researchers

have found a bacterial and a yeast chaperone that can speed up the shape change of animal prions in test-tube experiments.

Harris said the timing of the earliest change in mouse prions fit this theory. The proteins undergo a series of biochemical alterations, with the earliest occurring almost immediately after the prions are made, when chaperones are most active.

Implications for Alzheimer's disease

Harris also has recently expanded his research to include Alzheimer's disease, which shares several features with prion diseases despite being non-infectious. Leonard Berg, M.D., professor of neurology and former director of the Alzheimer's Disease Research Center at the medical school, and other colleagues say Harris readily applies his extensive knowledge of cell biology to this area as well.

"Harris is very thorough, with a very inquiring mind. He often challenges scientists in other fields to look at their work in a different way," Berg said.

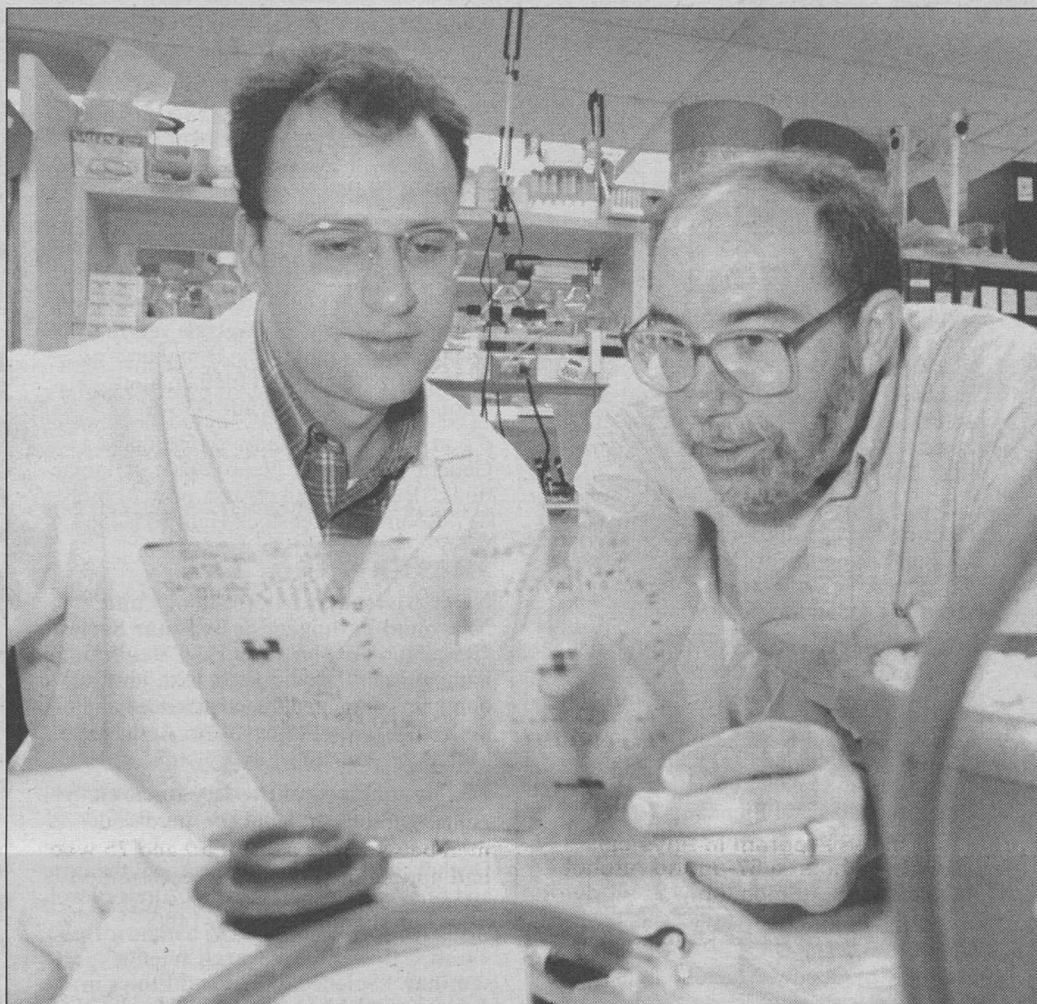
Harris shares his open-minded, systematic approach to science with an international array of postdoctoral fellows in his laboratory. Sylvain Lehmann, M.D., Ph.D., a former fellow who is an investigator at the French national biomedical research agency, Inserm, said: "I am now trying to run a prion research group as well as Harris does. He is always open to new ideas and can change his strategy and focus rapidly, if needed."

In his spare time, Harris listens to classical and jazz music, and reads widely, including novels, short stories and non-fiction works. He also enjoys spending time with his family — son Josh, 12, daughter Rachel, 8, and his wife, Monica Ultmann, M.D., associate professor of pediatrics at Saint Louis University.

In addition, Harris travels extensively to meetings in Europe and the United States to discuss his prion research. Harris also has spoken about the mysterious prion diseases to young, inquisitive minds, such as those in his son's class at school.

In lectures and discussions, Harris communicates an intense enthusiasm for his subject, fueled by a deep interest in discovering what makes prions tick. "Prions are really fascinating from a scientific standpoint," he said. "They represent an entirely new biological principle — one that will probably be relevant to other human diseases and other biological phenomena. It gives me the deepest satisfaction to work on such a novel and intriguing problem."

— Barbra Rodriguez



David A. Harris, M.D., Ph.D., (right) and research associate Roberto Chiesa, Ph.D., analyze samples isolated from the brain tissue of mice injected with prion proteins.

tional aspect of prion behavior. Re-entry requires prion proteins to associate with special pockets on the cell surface that pinch inward and become cargo vessels. But the lipid anchor of prion proteins won't attach to the surface pockets. Harris reasoned that prions must hitch a ride by binding a receptor protein able to link directly to the pockets. He eagerly searches for this linking receptor in the hopes that it may hold the key to prions' transformation.

"Maybe these receptors are holding onto prions during the critical conversion process," he said. If so, a drug that blocks prion-receptor interactions at the cell surface might prevent the shape change and thus the

"Harris is very thorough, with a very inquiring mind. He often challenges scientists in other fields to look at their work in a different way."

— Leonard Berg

deadly diseases. Identifying the receptor also could suggest therapeutic strategies simply by shedding light on the function of the normal prion.

Harris next focused on developing a model system for studying development of infectious prions using mutated forms of the protein. Although some prion diseases occur after infection, others are inherited. Roughly 10 percent of the cases of Creutzfeldt-Jakob disease and all cases of the rare and fatal familial insomnia in humans, for example, result from mutated genes that produce prion proteins more susceptible to conversion.

Calendar

Visit Washington University's on-line calendar at
<http://cf6000.wustl.edu/calendar/events/v1.1>

Feb. 12-21



Exhibitions

"Alberto Meda: [process] [materials] [design]." Through Feb. 15. Givens Hall. 935-6200.

"Art of the '80s: Modern to Postmodern." Through April 5. Gallery of Art, upper gallery. 935-4523.

"Powerful Grace Lies in Herbs and Plants: A Joint Exhibit on Herbal Medicine." Sponsored by Missouri Botanical Garden Library and Bernard Becker Medical Library. Through April. Seventh floor, Bernard Becker Medical Library, 660 S. Euclid. 362-4235.

Selections from the Washington University art collections. Through April 5. Gallery of Art, lower galleries. 935-4523.



Films

Thursday, Feb. 12

7:45 p.m. French and Francophone Film Series. "Un Coeur en Hiver" (1992). Room 162 McDonnell Hall. 935-5175.

Friday, Feb. 13

7 and 9:30 p.m. Filmboard Feature Series. "The Wedding Banquet." (Also Feb. 14, same times, and Feb. 15, 7 p.m.) Cost: \$3 first visit, \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

Midnight. Filmboard Midnight Series. "Adventures in Babysitting." (Also Feb. 14, same time, and Feb. 15, 9:30 p.m.) Cost: \$3 first visit, \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

Tuesday, Feb. 17

7 and 9 p.m. Filmboard Foreign and Classic Series. "Like Water for Chocolate." (Also Feb. 18, same time.) Cost: \$3 first visit, \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

Midnight. Filmboard Midnight Series. "Citizen Kane." (Also Feb. 21, same time, and Feb. 22, 9:30 p.m.) Cost: \$3 first visit, \$2 subsequent visits. Room 100 Brown Hall. 935-5983.

Wednesday, Feb. 18

6 p.m. Chinese Film Series. "Sandwich Man." Room 219 Ridgley Hall. 935-5156.

Thursday, Feb. 19

7:45 p.m. French and Francophone Film Series. "Messidor" (1979). Room 219 Ridgley Hall. 935-5175.

Friday, Feb. 20

7 and 9:30 p.m. Filmboard Feature Series. "I Shot Andy Warhol." (Also Feb. 21, same times, and Feb. 22, 7 p.m.) Cost: \$3 first visit, \$2 subsequent visits. Room 100 Brown Hall. 935-5983.



Music

Sunday, Feb. 15

2:30 p.m. WU Symphony Orchestra concert. Works of Stravinsky, Mozart and Rachmaninoff. Carol Beth True, soloist. The Saint Louis Art Museum Aud., 1 Fine Arts Dr., Forest Park. 935-4841.

Thursday, Feb. 19

7 p.m. Assembly Series performance. "A Musical Conversation." (See story on page 5.)

Friday, Feb. 20

8 p.m. Chamber Choir of WU with SLU Chorale concert. Music from the Renaissance to the 20th Century. Graham Chapel. 935-4841.



Lectures

Thursday, Feb. 12

Noon. Genetics seminar. "Roles of Cell Cycle Checkpoint Genes in Meiotic Recombination in *Drosophila*." Jeff Sekelsky, section of molecular and cellular biology, UC-Davis. Genetics Library, Room 823 McDonnell Medical Sciences Bldg. 362-7072.

2:45 p.m. Physics theory seminar. "The B Meson Decay Constant: How Lattice QCD and Experiment Determine V_{ts} and V_{td} ." Sinead Ryan, Fermilab, Batavia, Ill. Room 241 Compton Hall. 935-6242.

4 p.m. Biology seminar. "Microtubules in Developmental Patterning." Elizabeth Raff, prof. of biology, Indiana U.-Bloomington. Room 322 Rebstock Hall. 935-5348.

4 p.m. Chemistry seminar. "Research Adventures in Organic Chemistry With Undergraduates and Elephants." Thomas Goodwin, prof. of chemistry, Hendrix College, Conway, Ark. Room 311 McMillen Lab. 935-6530.

4 p.m. Earth and planetary sciences colloquium. "The Breakup of Rodinia and Assembly of Gondwanaland." Chris Powell, prof. of geology, U. of Western Australia. Room 112 Wilson Hall. 935-5610.

4:15 p.m. Philosophy lecture and discussion. "The Extended Mind." Andy Clark, prof. of philosophy and dir., philosophy/neuroscience/psychology program. Room 110 January Hall. 935-6670.

4:30 p.m. Mathematics loeb colloquium. "What is Dynamics and do Complex Dynamics?" Eric Bedford, prof. of mathematics, Indiana U.-Bloomington. Room 199 Cupples I Hall. 935-6712.

5 p.m. Vision Science Seminar Series. "Insights Into the Functions of Alpha-Crystalline in the Lens." Usha P. Andley, asst. prof. of biochemistry and molecular biophysics and of ophthalmology and visual sciences. East Pavilion Aud., Barnes-Jewish Hospital Bldg. 362-2676.

8 p.m. Writing Program Reading Series. Author Charles Newman, prof. of English, will read from his forthcoming novel, "In Partial Disgrace." Hurst Lounge, Duncker Hall. 935-7130.

Friday, Feb. 13

9:15 a.m. Pediatric Grand Rounds. "The Rapidly Changing Nature of Pediatric HIV/AIDS." Gregory A. Storch, prof. of pediatrics and assoc. prof. of medicine and of molecular microbiology, and Kathleen A. McGann, asst. prof. of pediatrics. Clopton Aud., 4950 Children's Place. 454-6006.

Noon. Cell biology and physiology seminar. "T cell Receptor-Ligand Interaction: Dynamic Recognition and Response." Paul M. Allen, the Robert L. Kroc Professor of Pathology. Room 426 McDonnell Medical Sciences Bldg. 362-6950.

4 p.m. Film studies lecture. "Zelig and the Truth of Documentary Fiction." Jennifer Hammett, lecturer in cinema, San Francisco State U. Hurst Lounge, Duncker Hall. 935-5216.

4 p.m. Hematology seminar. "Thrombin Allosteric." Enrico Di Cera, assoc. prof. of biochemistry and molecular biophysics. Room 8841 Clinical Sciences Research Bldg. 362-8806.

4 p.m. Neuroscience biweekly seminar. "Upstream and Downstream of BCL-2 Family Proteins." Stanley J. Korsmeyer, prof. of medicine and of pathology. Cori Aud., 4565 McKinley Ave. 362-9062.

Saturday, Feb. 14

11 a.m. University College Saturday Seminar Series. "Mud and Marble in Ancient Athens." Susan Rotroff, prof. of classics. Goldfarb Aud., McDonnell Hall. 935-6788.

Sunday, Feb. 15

12:30 p.m. Catholic Student Center Newman Lecture Series. "The Faith of a Scientist." (See story on page 6.)

Monday, Feb. 16

Noon. Brown Bag Seminar Series. "Does Entrepreneurship Pay?" (See story on page 6.)

Noon. Molecular biology and pharmacology seminar. "Discovery of a Novel Cell Cycle Checkpoint in Yeast with a Potential Connection to Human Cancer." John A. Cooper, prof. of cell biology and physiology. Pharmacology Library: Philip Needleman Library, Room 3907 South Bldg. 362-2725.

3 p.m. Mathematics analysis seminar. "Schwarz Lemmas at the Boundary." Steven Krantz, prof. of mathematics. Room 199 Cupples I Hall. 935-6712.

4 p.m. Biology seminar. "Molecular Genetic Analysis of Plant-Pathogen Interactions." Barbara Kunkel, asst. prof. of biology. Room 322 Rebstock Hall. 935-7569.

Tuesday, Feb. 17

Noon. Molecular Microbiology and Microbial Pathogenesis Seminar Series. "Regulation of Herpes Virus Latency and Pathogenesis." David Leib, asst. prof. of ophthalmology and visual sciences and of molecular microbiology. Cori Aud., 4565 McKinley Ave. 362-8873.

12:10 p.m. Physical therapy research seminar. "Attention and Driving Performance in Alzheimer's Disease." Janet Duchek, asst. prof. of occupational therapy and of neurology. Classroom C, lower level, 4444 Forest Park Blvd. 286-1400.

4 p.m. Ethics and research science seminar. "Science, Fraud and Ethics in American Political Culture: Reflections on the Baltimore Case." Daniel J. Kevles, humanities and social sciences div., Calif. Inst. of Tech. Sponsored by biology and biomedical sciences. Cori Aud., 4565 McKinley Ave. 362-3364.

4 p.m. Film studies lecture. "The Violence of a Perfect Moment: From the Cinema of Attractions to the Action Film." Leo Charney, visiting asst. prof. of film studies, U. of N.M. Hurst Lounge, Duncker Hall. 935-5216.

Wednesday, Feb. 18

8 a.m. Obstetrics and Gynecology Grand Rounds. "Acute Genital Injuries in the Female Patient." Diane F. Merritt, assoc. prof. of obstetrics and gynecology. Clopton Aud., 4950 Children's Place. 362-7139.

11 a.m. Assembly Series lecture. "The Role of Historically Black Colleges and Universities at the Dawn of the 21st Century." (See story on page 5.)

4 p.m. Biochemistry and molecular biophysics seminar. "Photolysis Intermediates of Native and Artificial Visual Pigments." David S. Kliger, prof. of chemistry and biochemistry, UC-Santa Cruz. Cori Aud., 4565 McKinley Ave. 362-0261.

Thursday, Feb. 19

4 p.m. Cancer Center Seminar Series. "Targeting the RB Gene Family in the Mouse." Tyler Jacks, Center for Cancer Research, MIT. Third floor, Children's Hospital Aud. 747-0359.

4:15 p.m. Philosophy colloquium. "Connectionism, Systematicity and the Frame Problem." W.F.G. Haselager, researcher, Unit for Theoretical Psychology, Vrije Universiteit, Amsterdam, The Netherlands. Room 110 January Hall. 935-5119.

4:30 p.m. Comparative arts lecture. First Annual Matheson Seminar in Comparative Arts. "Heroic Artists and Comfortable Armchairs: Monet and Proust Conquer Space and Time." Wendy Faris, prof. of English and of comparative literature, U. of Texas-Arlington. Room 303 Mallinckrodt Center. 935-5170.

8 p.m. Writing Program Reading Series. Author Lucie Brock-Broido, assoc. prof. and dir. of the MFA poetry program

at Columbia U., will speak on the subject of poet Thomas James. Hurst Lounge, Duncker Hall. 935-7130.

Friday, Feb. 20

9:15 a.m. Pediatric Grand Rounds. "Violence and Weapon Carrying in Televised Music Videos: What Pediatricians Should Tell Their Patients." Robert DuRant, prof. of pediatrics and public health sciences and vice chair of health services research, Wake Forest U. School of Medicine. Clopton Aud., 4950 Children's Place. 454-6006.

Noon. Cell biology and physiology seminar. "Intracellular Ca Dynamics: Novel Methods and Sparkling Results." Mark B. Cannell, prof. and chair of physiology, U. of Auckland, New Zealand. Room 426 McDonnell Medical Sciences Bldg. 362-6630.

Saturday, Feb. 21

11 a.m. University College Saturday Seminar Series. "Medieval Paris." Norris J. Lacy, prof. of Romance languages and literatures. Goldfarb Aud., McDonnell Hall. 935-6788.



Performances

Friday, Feb. 13

8 p.m. "OVATIONS!" Series performance. "Cirque Éloize." (Also Feb. 14, same time.) (See story on page 5.)

8 p.m. Performing arts dept. production. "Savage in Limbo." (Also, Feb. 14, 19, 20 and 21, same time, and Feb. 15, 2 p.m.) (See story on page 5.)

Saturday, Feb. 21

8 p.m. "OVATIONS!" Series performance. "Fires in the Mirror: Crown Heights, Brooklyn and Other Identities." Trinity Repertory Company. Co-sponsored by St. Louis Hillel Center. (Also Feb. 22, 2 p.m.) Cost: \$23; discounts available. Edison Theatre. 935-6543.



Miscellany

Saturday, Feb. 14

9:30 a.m. Saturday Workshop. "Paper Bowls." Mold paper bowls with handmade and imported papers. Cost: \$35. To register, call 935-4643.

Tuesday, Feb. 17

7 p.m. Fashion design exhibit. "Gowns in the Gallery." (See story on page 6.)

Wednesday, Feb. 18

7:30 p.m. Panel discussion on Black-Jewish relations. "What's the Big Deal?" Co-sponsored by the Urban League and Jewish Community Relations Council. Women's Bldg. Formal Lounge. 726-6177.

Thursday, Feb. 19

7:30 p.m. Feminist reading group. Discussion of Gloria Anzaldúa's book "Borderlands/La Frontera: The New Mestiza." Open to grad. students and faculty only. Levi Lounge, Room 220 Busch Hall. 935-5102.

Friday, Feb. 20

8 p.m. Costume ball. "Art of the '80s Costume Ball." Sponsored by the Student Gallery Group. Gallery of Art, Steinberg Hall. 935-4523.

Saturday, Feb. 21

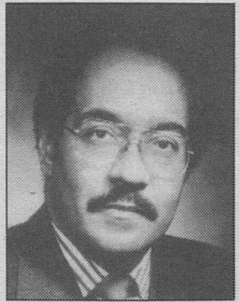
9:30 a.m. Saturday Workshop. "Pyramids, Papyrus and Paper." Charlotte Johnson speaks on papermaking in Egypt. Cost: \$5. To register, call 935-4643.

Cancellation

The 11 a.m. Feb. 14 poetry reading by Toi Derricotte has been canceled.

Historically black colleges, universities topic of Assembly Series lecture Feb. 18

William Gray, former congressman and now head of the United Negro College Fund (UNCF), will deliver the Council of Students of Arts and Sciences Lecture at 11 a.m. Wednesday, Feb. 18, as part of the Assembly Series. The lecture, titled



William Gray

"The Role of Historically Black Colleges and Universities at the Dawn of the 21st Century," is free and open to the public and will take place in Graham Chapel.

Gray has been president and chief executive officer

of The College Fund/UNCF since September 1991. As head of America's oldest and most successful black higher education assistance organization, he has helped The College Fund break new fund-raising records and expand its programs and services. In October 1995, The College Fund concluded its most ambitious capital drive, "CAMPAIGN 2000: An Investment in America's Future," which raised \$280 million. Gray has been instrumental in the relocation of The College Fund's headquarters to the Washington, D.C., area and in the development of a new technology center to link UNCF offices and member colleges

electronically to share scholarship and donor information.

Before becoming president of UNCF, Gray served in the U.S. Congress and was a staunch supporter of education. As chairman of the Democratic Caucus and later as majority whip, he was the highest ranking African American ever to serve in Congress. Gray, who was elected to the House of Representatives in 1978, was an advocate for historically black colleges and universities through his support of set-aside programs at the U.S. Agency for International Development. He was a co-sponsor of the Black College Act, which provides funds for the enhancement of programs, faculty and facilities at black colleges and universities. Gray also was the first African American to chair the House Budget Committee.

In May 1994, Gray accepted a request from President Bill Clinton to serve in a temporary position as special adviser to the president on Haiti. In that role, which concluded in September 1994, he helped develop and carry out U.S. policy to restore democracy to Haiti. In 1995, he received the Medal of Honor from Haitian President Jean-Bertrand Aristide.

Gray earned a bachelor's degree from Franklin and Marshall College in 1963. He received a master's in divinity from Drew Theological Seminary in 1966 and a master's in theology from Princeton Theological Seminary in 1970.

For more information, call 935-5285.

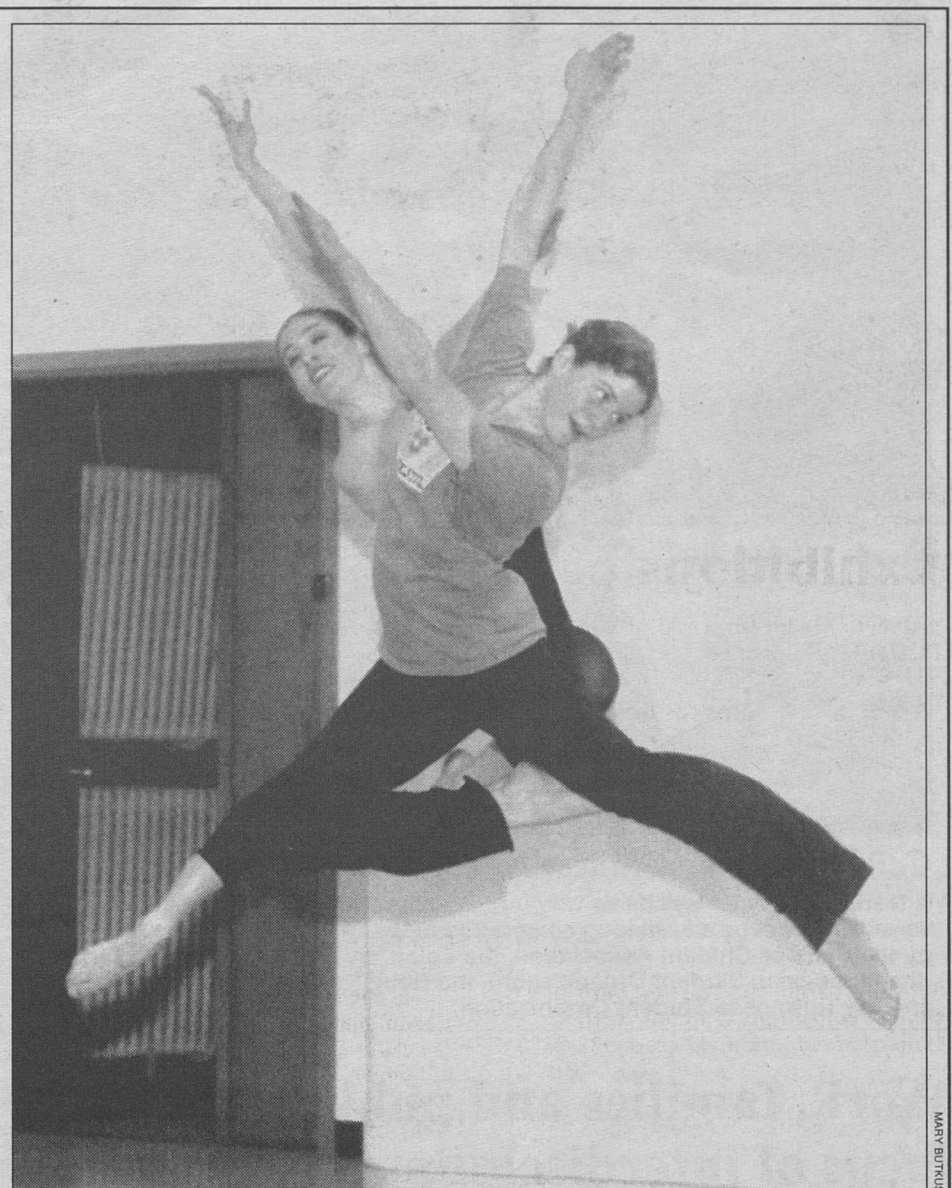
Eliot Trio presents 'A Musical Conversation'

Washington University's Eliot Trio, made up of three prominent St. Louis musicians, will present "A Musical Conversation" at 7 p.m. Thursday, Feb. 19, as part of the Assembly Series. The event, made possible by the St. Louis Symphony Orchestra's Community Partnership Program, will feature a lecture and a performance and will take place in Steinberg Hall Auditorium. It is free and open to the public.

The Eliot Trio consists of Seth Carlin, professor of music and director of the

piano program in Arts and Sciences at the University; David Halen, concertmaster for the St. Louis Symphony Orchestra; and John Sant'Ambrogio, the orchestra's principal cellist. The trio will discuss and perform Maurice Ravel's 1914 "Piano Trio," the composer's only work in that genre and a classic among 20th-century works for piano trio.

The trio's Feb. 19 concert will replace a performance previously scheduled for March 15. For more information, call 935-5285.



MARY BURTON

Taking flight

Junior Karen Yaloz (foreground), a double major in dance and philosophy in Arts and Sciences, and Angie Fleddermann, a student at Webster University, perform Paul Taylor's signature piece "Aureole." Fifteen students from Washington University, Webster University and Lindenwood College took part in a three-day choreographic workshop Feb. 2-5 with members of the Paul Taylor Dance Company, co-sponsored by Dance St. Louis and underwritten by a grant from the Lila Wallace-Reader's Digest Fund.

Cirque Éloize brings new show to Edison Theatre Feb. 13-14

Lightning is sure to strike when Montreal's Cirque Éloize brings its breathtaking combination of acrobatics, comedy, theater and dance to Edison Theatre for a special family event Friday and Saturday, Feb. 13 and 14. The troupe — whose name comes from a colloquial expression for "heat lightning" in their native Îles-de-la-Madeleine in Canada — will present a show titled "Excentricus" as part of Edison's 25th annual OVATIONS! series.

Described as a "circus in a suitcase" by the Montreal Gazette, Cirque Éloize (pronounced el-WAHZ) was founded in 1993 by artistic directors Jeannot Painchaud and Daniel Cyr. The seven original performers grew up together on the small islands in the Gulf of St. Lawrence and later were reunited as performers at the Montreal-based École Nationale de Cirque.

Like its larger cousin, Quebec's Cirque du Soleil, with which many of its members have trained, Cirque Éloize uses no animals and integrates the acrobatics, juggling and bicycling of a traditional circus into a coherent theatrical presentation.

For their Edison Theatre performances, Cirque Éloize will present an all-new show direct from its New York City premiere. Acts include six acrobats circling the stage on a single bicycle and a gravity-defying routine in which co-founder Cyr scales an unsupported ladder, balances at the top with his body parallel to the ground and then climbs back down the opposite side. Also on the program are Marc Gauthier's rope solo, in which he coils himself elegantly up and down a thick rope suspended from the ceiling.

Performances are at 8 p.m. Feb. 13 and 14. Tickets are \$23 for the general public and \$12 for children 12 and younger. Call for additional discounts. Tickets are available at the Edison Theatre box office, 935-6543, or through MetroTix, 534-1111. For more information, call 935-6543.

Members of Cirque Éloize also will present a "Tumbling Workshop" for children at 2:30 p.m. Feb. 14 on the Edison Theatre stage. The workshop, which will include members of Circus Flora's tumbling troupe, the St. Louis Arches, is recommended for children older than 6 who have some prior tumbling experience. Cost is \$5.

'Savage in Limbo' probes life's turmoil

The A.E. Hotchner Studio Theatre will be transformed into a Bronx bar when the Department of Performing Arts in Arts and Sciences presents John Patrick Shanley's 1984 drama "Savage in Limbo" this weekend and next.

Performances are at 8 p.m. Friday and Saturday, Feb. 13 and 14, and 2 p.m. Sunday, Feb. 15. They continue next weekend at 8 p.m. Feb. 19, 20 and 21. The A.E. Hotchner Studio Theatre is located in Mallinckrodt Center.

"Savage in Limbo" tells the story of Denise Savage, a "wild-haired, strong, belligerent, determined, dissatisfied and scared" 32-year-old virgin who passes a tumultuous evening with four old acquaintances in a decrepit New York bar.

"In many ways, this is just another Monday night at the bar," said Director Annamaria Pileggi, a seventh-year artist in residence in the department. "The characters arrive in a state of transition and leave in a state of transition and, though we've seen major events unfold in their lives, very little is actually resolved. Yet this is also a very hopeful play. I think that, for all the turmoil we're shown, the audience leaves with a renewed faith that these people will be able to survive whatever their futures hold in store."

Tickets are \$10 for the general public and \$7 for senior citizens and University faculty, staff and students and are available at the Edison Theatre box office, 935-6543, and all MetroTix outlets, 534-1111. For information, call 935-5858.

Sports

Compiled by Mike Wolf, asst. athletic director for media relations, and Kevin Bergquist, asst. director, sports information. For up-to-date news about Washington University's athletics program, access the Bears' Web site at rescomp.wustl.edu/~athletics/.

Women make history

The second-ranked women's basketball team rolled through a historic week during which the Bears extended their winning streak to 11 games. Senior guard Amy Schweizer became the University's all-time leading women's basketball scorer in a 95-51 victory over MacMurray College Feb. 3 at the WU Field House. Schweizer, who scored 15 points in the game, has scored 1,379 points as the most prolific scorer in women's history.

Current Record: 19-1 (9-0 UAA)

This Week: 6 p.m. (EST) Friday, Feb. 13, at Carnegie Mellon University (UAA), Pittsburgh, Pa.; 3 p.m. (EST) Sunday, Feb. 15, at Emory University (UAA), Atlanta, Ga.

Bears extend streak

With a 61-54 victory over the University of Rochester Sunday, Feb. 8 — its seventh straight victory — the men's basketball team stands alone in second place in the University Athletic Association, two full games behind unbeaten University of Chicago (9-0 UAA).

Current Record: 11-9 (7-2 UAA)

This Week: 8 p.m. (EST) Friday, Feb. 13, at Carnegie Mellon University (UAA), Pittsburgh, Pa.; 1 p.m. (EST) Sunday, Feb. 15, at Emory University (UAA), Atlanta, Ga.

Running records fall

Junior Claudine Rigaud posted an NCAA Division III automatic qualifying time and a pair of school records Saturday as the track and field teams competed at the Knox College Invitational. Rigaud placed second in the 55 meters in 7.27 seconds, breaking her own school record and registering an automatic qualifying time for the national meet. She won the 55-meter hurdles in 8.84 seconds and placed third in the 200 meters with a season-best time of 26.49 seconds. Junior Emily Richard also posted an automatic qualifying time in the 5,000 meters.

This Week: 5 p.m. Saturday, Feb. 14, at Augustana College Invitational, Rock Island, Ill.

Women's tennis opens

Coming off its most successful season in school history, the women's tennis team opened its 1998 season over the weekend, competing at the Southwest Missouri State University Invitational. Senior Rachel Sair advanced to the consolation championship in the C flight, while freshman Keli Leaf advanced to the consolation semifinals in the B flight. The Bears were one of only two Division III teams in the eight-team field.

Next: 10 a.m. Feb. 21 vs. Truman State University at Principia College, Elsah, Ill.



Celebrating the Chinese New Year

A fearsome dragon wends its way into Graham Chapel Saturday, Feb. 7, as a variety show caps a weeklong celebration of the Chinese New Year sponsored by the Chinese Student Association, the Asian Student Association, Garuda (the Indonesian Student Organization), the Hong Kong Student Association and the Taiwanese Student Organization.

Work, families and public policy are focus of interdisciplinary seminars

Critical contemporary issues such as how hospital mergers impact patient care, the role of micro-enterprises in fighting poverty and changing relationships between men and women are the topics of a seminar series sponsored by Washington University and offered to faculty and graduate students at all area universities.

The Brown Bag Seminars take place from noon to 1 p.m. Mondays on a biweekly basis from January through April in Room 300 Eliot Hall. The talks offer area academics a broad perspective on topics relating to labor, households, health care, law and social welfare. Featured speakers are faculty from universities throughout the United States.

Upcoming seminars are:

- Feb. 16 — "Does Entrepreneurship Pay?" by Barton Hamilton, Ph.D., John M. Olin School of Business;
- March 9 — "Microenterprises as an Anti-poverty Strategy," by Margaret Sherraden, Ph.D., University of Missouri-St. Louis;
- March 23 — "The Role of Cognitive

Skills in Today's Economy," by Richard Murnane, Ph.D., Harvard University;

- April 6 — "Skill Acquisition Among Minority Youths," by Derek Neal, Ph.D., University of Chicago;

- April 20 — "Trusting Fictive Kin," by Jean Ensminger, Ph.D., professor of anthropology in Arts and Sciences, Washington University.

Coordinators of the series are Robert Pollak, Ph.D., the Hernreich Distinguished Professor of Economics in Arts and Sciences and the John M. Olin School of Business, and Michael Sherraden, Ph.D., the Benjamin E. Youngdahl Professor of Social Development and director of the Center for Social Development in the George Warren Brown School of Social Work.

The business and social work schools, the Center for Social Development, the Department of Economics, the Graduate School of Arts and Sciences and the Committee on Social Thought and Analysis are sponsoring the series. For more information, call 935-4918 or 935-6691.

Integrating faith and professional life is topic of Catholic Student Center lecture

Sharon Homan, Ph.D., director of the Division of Biostatistics in the School of Public Health at Saint Louis University (SLU), will give an address titled "The Faith of a Scientist" at 12:30 p.m. Sunday, Feb. 15, at the Catholic Student Center. The event is part of the center's Newman Lecture Series.

Homan is a graduate of Quincy College. She received a master's degree in preventive medicine and environmental health and a doctorate in biostatistics, both from the University of Iowa. She worked at

SLU's School of Medicine and was a post-doctoral fellow in psychiatric epidemiology at the Washington University School of Medicine from 1989 to 1991.

Her research focuses on the disadvantaged. She has studied alcoholism, homelessness, substance abuse and the impact of family violence on women and children. She lectures widely and has published numerous scholarly articles.

The Newman Lecture Series focuses on the faith of the Catholic professional. For more information, call 725-3358.

Fashion students to show collections at 'Gowns in the Gallery' Feb. 17

Elegant evening wear will be the focus when fashion design students at the School of Art present "Gowns in the Gallery," an exhibit of their latest couture creations. The showing, which is free and open to the public, takes place at 7 p.m. Tuesday, Feb. 17, at cbk:milieu, 7425 Forsyth Blvd.

"Gowns in the Gallery" will feature ball gowns inspired by Cartier jewels and fairy tale heroines, as well as ready-to-wear jackets inspired by birds and beasts. The 15 junior and senior designers from the art school's fashion design program will be on hand to discuss the finer points of their work, such as color choices and construction details.

The show also will provide fashion-lovers an early glimpse of this year's Washington University Fashion Show, a full-blown Paris-style extravaganza of haute couture that will take place May 3 at the Saint Louis Galleria. The theme for that show will be "Fan-tastic Fashion," the pun in the title a tribute to fans, followers and supporters of haute couture.

Both the May fashion show and the more intimate gallery show provide valu-

able, 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 added, pointing out that in the fashion world, many 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 simply to trail the fashion industry pack but to anticipate trends and, when they can, 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."

For information, call the art school at 935-6470 or cbk:milieu at 862-2996.

Art history and archaeology lectures set

Respected art historians from across the country are the featured speakers in the spring 1998 lecture series sponsored by the Department of Art History and Archaeology in Arts and Sciences.

English curator Richard Kendall, who is perhaps best known for organizing the Art Institute of Chicago's 1996 exhibition "Degas: Beyond Impressionism," will speak on "The Tutu and the Glass Box: Degas' 'Little Dancer of 14 Years' and Its Audience" at 5:30 p.m. Wednesday, Feb. 11, at the Saint Louis Art Museum Auditorium. The museum is co-sponsor.

The series will continue as follows:

- Kirk Varnedoe, chief curator of painting and sculpture at the Museum of Modern Art, New York, will speak on "The Influence of Jackson Pollock on Contemporary Art" at 7 p.m. March 12 in Steinberg Auditorium. Varnedoe has been awarded a MacArthur Foundation Fellowship and is a Fellow of the American Academy of Arts and Sciences.

- Christopher Roy, professor of art history at the University of Iowa, will speak on "Signs and Symbols in the Art of the Black Volta River Region" at

5:30 p.m. March 26 in Room 116 Givens Hall. Roy is the author of "Art of the Upper Volta Rivers" (1987) and is director of an extensive project about art and life in Africa, funded by the National Endowment for the Humanities, that will be used for secondary school education as well as for training high school teachers.

- Amelia Jones, associate professor of art history at the University of California, Riverside, will speak on "Dispersed Subjects and the Demise of the 'Individual': Bodies and/in Art" at 5:30 p.m. April 16 in Room 200 Steinberg Hall. Jones is the author of "Postmodernism and the Engendering of Marcel Duchamp" (1994).

- Michael Leja, associate professor at the Massachusetts Institute of Technology, will speak on "Peirce's Visuality," an examination of the work of semiotician Charles S. Peirce, at 5:30 p.m. April 23 in Room 200 Steinberg Hall. Leja is the author of "Reframing Abstract Expressionism: Subjectivity and Painting in the 1940s" (1993), for which he received the Charles C. Eldredge Prize for Distinguished Scholarship in American Art from the National Museum of American Art.

Expanding minority contracting— from page 1

major construction and renovation projects on campus share the University's commitment to equal opportunity for women and members of minority groups.

To work toward this objective, Washington University will:

- Offer payment within 10 days of receipt of invoice to contractors that hire subcontractors from a minority business enterprise or a women business enterprise. This new system also will provide direct payment to subcontractors for their share of the invoice.

- Establish a new standard for pre-qualification of contractors and subcontractors, which will include a review of the company's history of hiring practices as it relates to women and minorities.

- Give preference to bidders with the best history of employment of minorities and women and the best current hiring program for minority and women participation.

- Perform a special pre-qualification for members of the Minority Business Council and make special effort to place these qualified contractors on bidder lists.

- Require all bidders on construction projects (contractors and subcontractors) to include a narrative describing the measures they will take to ensure minority and women participation.

- Continue its mission as an educational institution by undertaking a continuing effort to work with the Association of General Contractors, the Minority Business Council and other organizations and institutions that support training programs that will increase the number of women and minority participants in the

construction industry in St. Louis.

"Washington University is commencing a program that will increase the participation of minorities and women in our extensive construction activities," said Richard A. Roloff, executive vice chancellor. "A part of this program will be accomplished in conjunction with the Association of General Contractors and other groups that support training and development for minority- and women-owned business enterprises. We are committed to making this program a success."

Ralph H. Thaman, director of Facilities Planning and Management, said: "Washington University in the past has supported the participation of minority- and women-owned enterprises in its construction work, as well as emphasized participation by minority and women individuals on construction projects. We will continue to emphasize that in the future."

During the 1996-97 fiscal year, the University spent \$103.9 million on construction and capital outlays in the St. Louis metropolitan area. The University has added 757,715 square feet of new buildings on the Hilltop Campus and 1,368,000 square feet on the Medical School Campus over the past decade. As of June 30, 1997, the book value of the campuses and facilities of Washington University was estimated at \$1.2 billion.

Washington University has campuses and facilities in St. Louis County, the City of St. Louis, Clayton, University City and other locations in the metropolitan area. These facilities include about 200 buildings on more than 2,000 acres.

Campus Watch

The following incidents were reported to the University Police Department from Feb. 2-8. Readers with information that could assist in investigating these incidents are urged to call 935-5555. This release is provided as a public service to promote safety awareness and is available on the University Police Web site at <http://rescomp.wustl.edu/~wupd>.

Feb. 2

4:57 p.m. — A staff member reported the theft of a wallet, checkbook and keys from a purse left unattended under a desk in Eliot Hall.

Feb. 3

3:23 p.m. — A staff member reported vandalism in the bus shelter and a men's restroom at Mallinckrodt Center.

Feb. 7

4:30 p.m. — A University Police officer observed a person skateboarding in a South 40 parking lot. The officer recognized the subject as a former student who had been warned previously and told not to return. The subject fled as the officer approached.

There were no other reports of criminal activity.

Law students advance to national mock trial competition in March

Three Washington University law students recently defeated 19 other teams in a prestigious regional mock trial competition and will compete in the nationals next month, carrying on the School of Law's long-standing tradition of excellence in that setting.

The event, the Midwest Regional of the National Trial Competition, was co-sponsored by the Texas Young Lawyers Association and by the American College of Trial Lawyers.

"Washington University has the top winning record of any law school in the country in this competition, which is acknowledged to be among the most competitive of all the student lawyering skills competitions in the country," said Karen L. Tokarz, J.D., LL.M., professor of law and director of clinical education. "In the 20 years since the School of Law first entered the competition, we have finished first or second in the regionals and advanced to the nationals every year except two."

The 1998 Midwest Regional champions — second-year law student Becky Hirselj and third-year law students Kim Hobley and Stephen Palley — successfully conducted four two-and-a-half hour trials during the three-day competition. They will represent the law school at the national finals March 5-7 in San Antonio, Texas.

Team members said extensive practice — often several hours a day, five to six days a week — helped them clinch the regional title.

A second University team, composed of third-year law students Patrick Chavez, Melinda Maxson and Michael McNamara, made it to the final round of regional competition, placing third overall.

The various rounds of mock trials test students' advocacy skills and knowledge of both evidence and trial court procedures, as they present their cases before actual judges and members of the legal community. A student-run board, co-chaired by third-year law student Reuben Charles II and second-year student Kim Curran, helped administer this year's regional competition at the law school, held Jan. 29 through Feb. 1.

The regional competition, coordinated by Tokarz, relied on the assistance of 94 judges and evaluators and 125 witnesses and bailiffs — comprising faculty, staff, alumni and members of the local bench and bar.

Two law school alumni, who were themselves members of the trial team as students, the Hon. David Mason (JD '83) and St. Louis lawyer Mark Rudder (JD '91), coach the school's current trial teams. Mason, a judge in the 22nd Judicial Circuit of Missouri, was the 1983 national trial champion. Rudder, who has coached both undergraduate and law school trial teams, was a regional champion in 1990.

— Ann Nicholson

Memorial set for poet John Nelson Morris

A memorial tribute to John Nelson Morris, Ph.D., a distinguished poet and professor emeritus of English in Arts and Sciences, will be held Wednesday, Feb. 11, at Hurst Lounge in Duncker Hall.

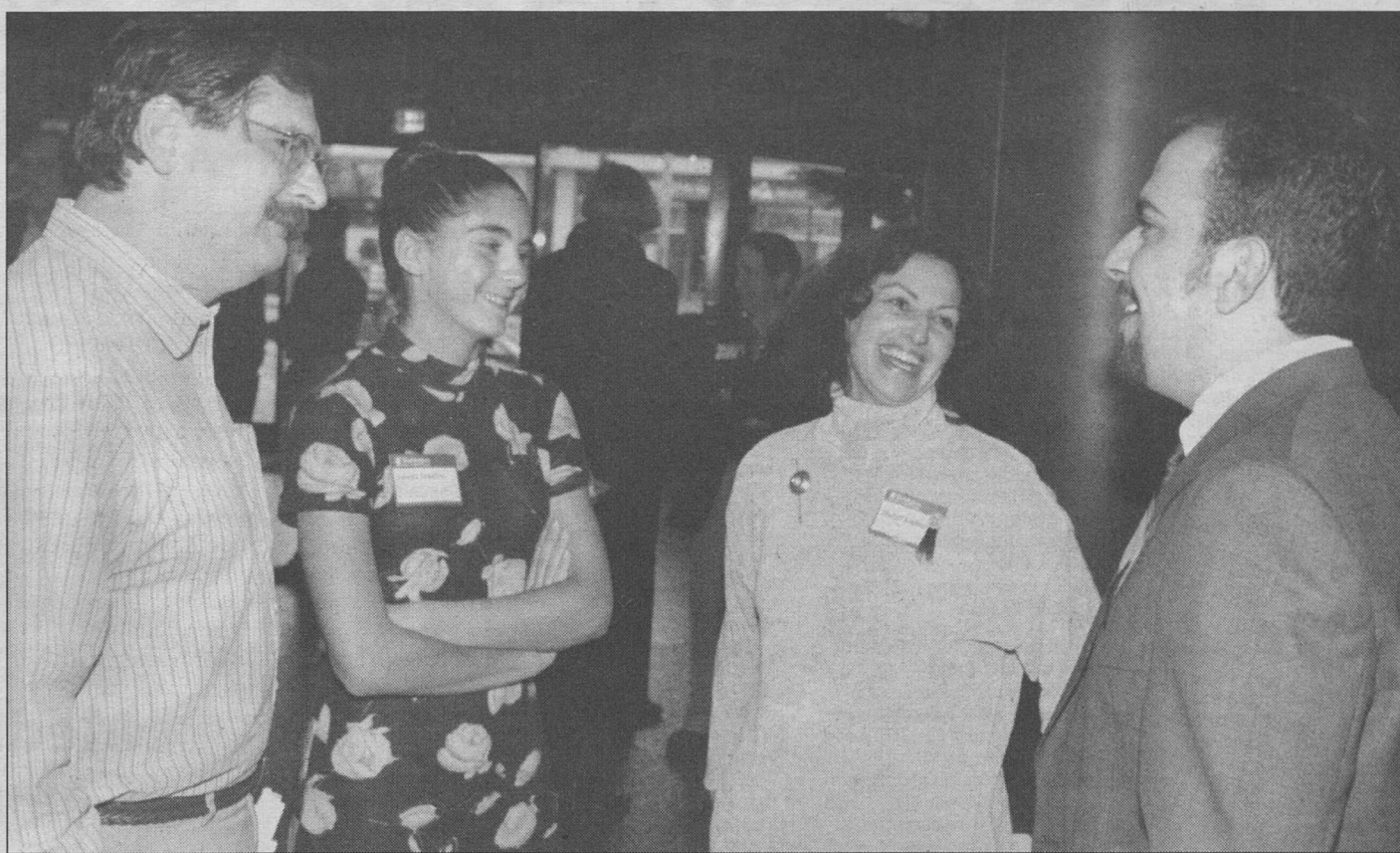
Morris died Nov. 25, 1997, of pancreatic cancer at his home in Pittsboro, N.C. He was 66.

The memorial will include readings from Morris' poetry and memoirs, as well as tributes from friends and colleagues.

Morris taught poetry and 18th-century British literature for nearly 30 years in the Department of English. He joined the department in 1967 as an associate professor and was made full professor in 1971. He retired in 1995.

Morris was the author of four books of poetry: "A Schedule of Benefits," "The Glass Houses," "The Life Beside This One" and "Green Business." His work was published in such magazines as Poetry, The New Yorker and The New Republic. In 1978, he was awarded a Guggenheim Fellowship, and in 1979 he won the Award in Literature from the American Academy and Institute of Arts and Letters.

For more information on the tribute, call 935-5190.



Golden opportunity

At a Feb. 1 undergraduate admissions event in Los Angeles, University sophomore Reza Zarghami (right) and alumna Sherrill Kushner (to Zarghami's right) discuss Washington University with a prospective student and her father. The event, held at the Director's Guild of America, drew about 400 prospective students and their parents wanting to learn about the University. Speakers included Chancellor Mark S. Wrighton; James E. McLeod, vice chancellor for students and dean of the College of Arts and Sciences; alumnus Bob Adler; and three current students from the Los Angeles area — sophomore Lisa Lewis, senior Bryan Lewis and Zarghami. Jay Roth and Sherry Grant, the parents of sophomore Gina Roth, hosted the event.

For The Record

For The Record contains news about a wide variety of faculty, staff and student scholarly and professional activities.

Of note

Scott A. Mirowitz, M.D., associate professor of radiology, recently received the 1998 Roentgen Centennial Fellow Award in Radiologic Innovation from the Radiological Society of North America. Mirowitz will use the \$100,000 award, presented at the society's annual meeting, to implement a training program on medical management for radiology residents. ...

Alan L. Pearlman, M.D., professor of cell biology and physiology and of neurology, has received a four-year \$771,460 grant from the National Eye Institute for a project titled "Functional Organization of the Visual System." ...

Dabeeru C. Rao, Ph.D., professor and director of the Division of Biostatistics and professor of genetics and of psychiatry, recently received the IGES Leadership Award at the annual meeting of the International Genetic Epidemiology Society. Among other accomplishments, Rao was instrumental in founding the society and served as original editor-in-chief for the society's journal, Genetic Epidemiology. ...

Catina Scott, a graduate student in the Department of Psychology in Arts and Sciences, was named a Ford Foundation Predoctoral Fellow. The award provides three years of support, with an annual stipend of \$14,000 to the fellow, as well as a cost-of-education allowance of \$7,500 to the graduate institution. The fellowship is administered by the National Research Council, under a grant from the Ford Foundation.

On assignment

Cynthia Weese, FAIA, dean of the School of Architecture, was appointed by St. Louis Mayor Clarence Harmon to the Downtown Development Task Force, the goal of which is to create a blueprint for revitalizing the city's downtown. The task force will work closely with members of the public, the Board of Aldermen, city departments and community-based organizations to make downtown again the symbol and focus of the region's identity.

Speaking of

Joan Cassell, Ph.D., research associate in anthropology in Arts and Sciences, and **Murray Wax, Ph.D.**, professor emeritus of anthropology, were invited to deliver

papers at a conference at L'Ecole Normale Supérieure, Fortenay/Saint Cloud. Cassell spoke about her anthropological research among women surgeons, while Wax discussed his graduate training at the University of Chicago and how it led to his current interests in psychoanalytic social psychology. ...

Curtis Milhaupt, J.D., associate professor of law, recently presented a paper, titled "The Market for Innovation in the United States and Japan: Venture Capital and the Comparative Corporate Governance Debate," at a faculty workshop at the New York University School of Law. He also presented a paper, which was published in the spring 1997 issue of the Northwestern University Law Review, at an international Corporate Law Teachers Conference held at the University of Melbourne Law School. ...

Mark Rollins, Ph.D., associate professor of philosophy, director of the summer

school and associate dean of University College in Arts and Sciences, gave a talk on "The Unrepresented Content of Visual Art: Some Evidence from Cognitive Science" at the American Society for Aesthetics national conference held in Santa Fe, N.M.

To press

William H. Gass, Ph.D., the David May Distinguished University Professor in the Humanities and director of the International Writers Center in Arts and Sciences, had an essay, titled "Cupples Station: A Tale of Unrequited Love," appear in the summer 1997 issue of the Missouri Historical Society's Gateway Heritage magazine. In addition, Gass illustrated the essay with his own photographs. He also has written the introduction for the new edition of "The Public Burning" by Robert Coover, to be published this year by Grove Atlantic Press.

Campus Authors

The following is 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 (School of Medicine).

From the Devotions

(Graywolf Press, St. Paul, Minn., 1998)

Carl Phillips, associate professor of English and of African and Afro-American studies and director of the Creative Writing Program in Arts and Sciences

With "From the Devotions," Carl Phillips takes us even further into that dangerous space he has already made



his own, where body and soul — ever restless — come explosively together. Speaking to a balance between decorum and pain, he offers here a devotional poetry that argues for faith, even without the comforting gods or the organized structures of revealed truth. Neither sage nor saint nor prophet, the poet is the listener, the mourner, the one who

has some access to the maddening quarters of human consciousness, the wry Sibyl. "From the Devotions" is deeply felt, highly intelligent and unsentimental and cements Phillips' reputation as a poet of enormous talent and depth.

(Text excerpted from jacket cover.)

The Blue Castrato

VI. To His Body at 42 (A Valentine)

Dear Vessel—Little Boat—of Me:
how lovely (still!) you are, resting
on water, you can't know. You know
no field, but drift toward one; there,
each blade of grass wears well its jacket
of dew my lord Dusk provides—I know,
I tasted, watched each one, formal, bend
then straighten ... years ago Surely
as songdom's Jesus loves you—yes,
I love you too. I wish you sails
of whatever is proof against storm
and what else tears. I wish you fanfare:
cymbals, and flutes; despite a life,
these still-immaculate-sounding notes.

(Excerpted from "From the Devotions")

Opportunities & personnel news

Hilltop Campus

Information regarding these and other positions may be obtained in the Office of Human Resources, Room 130, at West Campus. Job openings may be accessed via the World Wide Web at cf6000.wustl.edu/hr/home. If you are seeking employment opportunities and are not currently a member of the Washington University staff, you may call our information hotline at 935-9836. Staff members may call 935-5906.

Admissions Operations Manager

980193. Undergraduate Admissions. Requirements: bachelor's degree or equivalent work experience with two to three years supervisory experience; working knowledge of Mark IV, Infomaker, Focus, Microsoft Word and Excel; excellent communication and customer service skills; strong project management skills; ability to manage a diverse group of people and complex operation; long-range planning skills; ability to handle many concurrent tasks, to set priorities and to handle a changing environment; experience with budget development, management and forecasting; initiative; common sense. Position manages admissions operations to process and complete applications for undergraduate programs of the University.

Animal Caretaker 980197. Biology.

Requirements: high school education; effective communication skills; strong interpersonal skills; conscientious, trustworthy and reliable; ability to take direction yet work well independently; ability to be flexible to meet changing needs; commitment to the highest standards of laboratory animal care and husbandry; physical strength for lifting up to 50 pounds; willingness to work weekends/holidays as required. Primary responsibility is to assist with the daily care and feeding of animals in the Hilltop animal facility.

Administrative Assistant 980199.

Alumni and Development. Require-

ments: associate's degree; minimum five years general office experience including use of Microsoft Word, Excel, Lotus Notes, Filemaker Pro and PageMaker; highly motivated with expert administrative and office systems management skills; ability to work effectively and pleasantly with A&D staff members, outside vendors, alumni and parent volunteers; must excel at time management and be able to handle multiple projects simultaneously in an environment where priorities change often and unexpectedly; good organizational skills; able to complete time-sensitive tasks accurately and quickly; available to work overtime and weekends when necessary.

Administrative Assistant III 980201.

Performing Arts. Requirements: bachelor's degree or equivalent experience; computer skills (Microsoft Word); experience in budgeting and accounts payable; background in and appreciation of the arts preferred; people person and team player; interpersonal skills, initiative, self-sufficiency, organization and discretion; ability to manage and prioritize.

Contract and Grant Coordinator

980202. School of Social Work. Requirements: bachelor's degree with accounting background; experience with funded research and administration and with federal governmental agencies and foundations; experience with Washington University grants budgeting submission preferred; PC word processing and spreadsheet skills; ability to organize and work under pressure during grant deadline period; strong communication and interpersonal skills. Responsibilities include coordinating all grant and grant budget administration, ensuring application guidelines are followed and processing grant accounting for the social work school.

Departmental Accountant 980203.

Physics. Requirements: bachelor's degree preferred; working knowledge of WU systems including FIS, Focus, Perspay, GBUD; extensive experience with complex spreadsheets; flexibility

to use either a Mac or PC; willingness to learn new skills as required; ability to work in a fast-paced environment with constantly changing priorities; ability to work with a diverse population of contacts including those whose first language is not English; skills working in a team environment and independently; self-motivated and self-starter.

Manager, Administration and

Recruiting 980204. Business School. Requirements: bachelor's degree preferred; seven or more years of secretarial and office management experience; three years supervisory experience; PC literacy, Microsoft Excel and Powerpoint preferred; demonstrated ability to manage people and processes; interpersonal communication skills; ability to work independently and effectively with diverse population; problem-solving skills; ability to organize, generate and implement ideas, to prioritize workload and to delegate work among staff; ability to handle multiple projects simultaneously, to work with minimal supervision, to function in fast-paced environment and to produce high-quality work with speed and accuracy. Responsibilities include supervising department's non-professional staff.

Proposal/Profile Senior Specialist

980206. Accounting Services. Requirements: some college, bachelor's degree preferred; ability to read, understand, interpret and communicate agency guidelines; ability to work in a network system; ability to write reports in a fourth-generation database language such as Focus or Crystal reports; ability to work independently with a high degree of reliability; good interpersonal skills. Decisions made in this position have a Universitywide impact relative to all grant and contracted proposals administered.

Coordinator, Programming and All

Campus Events 980207. Student Activities. Requirements: graduate degree in student affairs; thorough grounding in student development

theory; experience with campus programming; entertainment industry and student group advisement; experience with large and small concert production; excellent organizational and communication skills; energy, creativity, flexibility and willingness to work nights and weekends; high tolerance for ambiguity and openness to change; team player with collaborative style; ability to build coalitions.

Administrative Assistant 980209.

Jewish and Near Eastern Studies. Requirements: some college or relevant experience, bachelor's degree preferred; familiarity with MS Word, Excel and Access preferred; typing skills, 50 wpm; ability to meet public in a pleasant and professional manner and to work with faculty, staff and students; ability to work with people from diverse cultural backgrounds; ability to prioritize multiple projects; excellent verbal and written skills; educational and not-for-profit experience preferred. Responsibilities include providing clerical support to Jewish and Near Eastern Studies, as well as Islamic Studies. This is a 10-month appointment.

Coordinator, Greek Affairs 980210.

Student Activities. Requirements: master's degree in higher education and student affairs; two to three years working with the Greek community; experience in fraternity/sorority affairs, advising student organizations and individual students; leadership training and organizational development; membership in a Greek organization preferred; energy, creativity, excellent organizational and oral and written communication skills; high tolerance for ambiguity and openness to change.

Residential College Director

980211. Housing and Residential Life. Requirements: bachelor's degree, master's degree in higher education or related field preferred; ability to communicate effectively with students, faculty, administrators and parents; initiative, creativity, enthusiasm, commitment and

excellent program coordination skills; ambitious, responsible and able to work effectively both as a member of a team and independently. Special consideration given to those with residence hall and student affairs experience.

Administrative Assistant (part time)

980214. Business School. Requirements: high school diploma; five years secretarial or administrative assistant experience, university experience preferred; thorough knowledge of secretarial functions and procedures; thorough knowledge of IBM-compatible computers, Office 97 and Windows 95; demonstrated interpersonal and communication skills; ability to work effectively with faculty, administrators and others in a patient, pleasant and effective manner.

Medical Campus

The following is a partial list of positions available at the School of Medicine. Employees interested should contact the medical school's Department of Human Resources at 362-7196 to request applications. External candidates may call 362-7195 for information regarding applicant procedures or may submit resumes to the Office of Human Resources, 4480 Clayton Ave., Campus Box 8002, St. Louis, MO 63110. Job openings also may be accessed via the World Wide Web at <http://medicine.wustl.edu/wumshr>.

Administrative Secretary 980587.

Requirements: high school diploma or equivalent, bachelor's degree preferred; four to five years experience working in a doctor's office with some patient contact; good typing skills, at least 60 wpm; strong organizational skills and ability to work in fast-paced environment. Responsibilities include providing administrative support to the department chief; performing secretarial duties associated with research projects, grants and academic prac-

tice; typing manuscripts and reviews; making arrangements for faculty recruitment; making travel arrangements; planning meetings.

Technician (part time) 980602.

Requirements: bachelor's degree; previous lab experience; knowledge of immunostaining of cells; physical stamina for standing and bending over close work. Responsibilities include general lab duties in neuroimmunology lab; cell culture; immunostaining cells; reverse-transcriptase PCR; general lab maintenance; ordering supplies.

Systems Manager 981033.

Requirements: bachelor's degree in computer science, electrical engineering or related field or equivalent experience (four years including work while in school); experience in management, use and programming of computers (Macs and PCs) and minicomputers (UNIX and SUN); excellent oral and written communication skills; good analytical skills; strong interpersonal skills. Responsibilities include managing heterogeneous network of Macintosh and PCs, IRIS, SUN and HP workstations; performing all levels of system management, maintenance and upgrades for lab and departmental computing equipment; networking software and hardware; providing technical/non-technical support for department users; maintaining department Internet infrastructure.

Grant Assistant II 981049.

Requirements: bachelor's degree in accounting or related field; five to six years experience in a university setting preferred; accounting skills; computer skills (FIS, Focus, Windows, Excel and Word); ability to organize and work independently; interpersonal skills. Responsibilities include performing all aspects of the pre-award process; following PHS guidelines; using FIS system to enter budgets online; preparing budget pages to be submitted with grants; monitoring expenditures; preparing financial spreadsheets and reports; performing all aspects of payroll/appointment process.

Total Quality Schools program applies business tools to education — from page 1

districts. Their issues range from improving cafeteria menus and moving the lunchroom line more quickly to opening up communication between home and school and among teachers.

TQS began at the University in January 1996 with financial support from philanthropist E. Desmond Lee, the Webb Foundation, A.G. Edwards and Sons Inc. and the Procter & Gamble Foundation. Since then, all levels and sizes of schools, from elementary through high school and with populations of 120 to 1,200 students, have participated.

The results of incorporating TQM into these schools have been striking. One school experienced an 80 percent reduction in after-lunch tardiness, and TQM has been credited both with enhancing communication between staff and students and with improving classroom behavior.

Another school gained approval of an honors-level math program initiated by its students and showed a significant rise in student scores on statewide tests.

One satisfied TQS customer is Rita Gram, principal of Flynn Park Elementary School in the University City School District. "TQS has lived up to my expectations and more," she said. "It's given us a framework for improvement, and it helps me remember to gather the data before I rush in to fix a 'problem.'"

It also has empowered parents who are encouraged that the time they volunteer to help the school is now used more effectively, Gram said. For example, a parent-initiated computer committee has succeeded in getting IBMs into every classroom and enough computers in labs to ensure simultaneous access to all students in a class. Parents also are helping write a school curriculum for computer study and a grant proposal to Microsoft. Having the student consultants' perspective is very helpful, Gram said.

And what do student consultants learn in the process? "Students are learning the organizational complexities of a public

school system," said Paulsrud, "and that there are no easy answers. They're seeing that 'work' is a big part of 'teamwork.' Also, because social work and business students work together as teammates, they learn from each other."

Kevin O'Connell, MBA '98, whose team is partnered with Venice (Ill.) High School, said, "I've learned a lot from the social work students. They can really look at the people factor of a problem very quickly, whereas I sometimes only look at a problem from a process standpoint." O'Connell, who is concentrating in finance and has a job with Koch Industries Inc. in Wichita, Kan., after graduation, said he was inspired to take TQS because he thoroughly enjoyed Kropp's Total Quality Management course. "I also wanted to do some non-traditional consulting," he added.

Social work students said they learn from the business students, too. "I didn't know anyone in the business school before this," said Suzanne Ross, MSW '99, whose team is partnered with St. Louis Career Academy. "Business students bring different skills to the table."

Ross added that seeing how a real school works is different from reading a textbook case. "You're right there on the front lines," she said, "and just setting foot in the door, the challenges are obvious. I think it's going to be a great learning experience."

This experiential learning combined with a commitment to community service is exactly the kind of learning Stuart I. Greenbaum, Ph.D., dean of the business school, endorses. He and his wife, Elaine Greenbaum, Ph.D., who volunteers as a member of the TQS planning team, helped create the TQS program at Northwestern University with Chicago public schools before coming to Washington University in 1995 and inspiring the St. Louis version.

"The program is a win-win situation," he said. "It trains public school leaders in ways to utilize quality management techniques to identify and to

address issues within the school environment, and it offers Washington University students a practical consulting experience through which they can enhance their leadership, communication and presentation skills."

Shanti Khinduka, Ph.D., dean of the social work school, said that all involved with TQS will benefit from its interdisciplinary approach to problem solving. "The increasingly complex challenges associated with education," he observed, "require the active involvement of professionals with varied backgrounds and expertise."

Panel finds computer upgrade needs — from page 1

attract top-notch faculty and enhance the student experience. Because these two groups are increasingly computer literate, the University must provide them with excellent technological facilities, said Edward S. Macias, Ph.D., executive vice chancellor and dean of Arts and Sciences. "We need to do all we can to increase our attractiveness to students," he said. Macias, a leader of the Teaching, Learning and Technology Task Force, recommended assisting faculty members with computing upgrades, saying, "Every faculty member needs to be connected to the network."

The task forces also acknowledged the reality that constant advances in technology make upgrading an ongoing effort. "This is kind of like painting the Golden Gate Bridge," said Dennis J. Martin, associate vice chancellor and associate dean of Arts and Sciences and a leader of the Linking and Supporting the Student Community Task Force. "As soon as we get finished, we have to start back on the other side."

Among the concerns and ideas the task forces presented are:

- adopting technological standards for building renovation and new construction on campus as well as continuing to update existing classrooms;
- determining whether to rebuild the

present systems or buy new ones;

- building into the budget a means to upgrade equipment every five years and funds to train faculty, staff and students;
- providing "self-service" online

access to human resources information so employees can make independent decisions about their benefits;

- meeting the National Institutes of Health requirement that all grant applications be transmitted electronically as of 2000;
- giving admissions offices the ability

to tailor brochures to an individual student's interests and to provide online discussion groups between faculty and current students and prospective students;

- providing computer links among departments, schools and external entities to share information and communicate more widely;
- expanding alumni outreach through

the World Wide Web, e-mail and listserves; and

- ensuring protection of intellectual property and enforcing copyright laws.

The task force reports will be reviewed by the group's Steering Committee, chaired by Shirley K. Baker, vice chancellor for information technology. A final report will be presented to Wrigton at a March 31 meeting.

— Martha Everett